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**TREATING
AUTOIMMUNE
DISEASE** *WITH*
**CHINESE
MEDICINE**

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WANZHU HOU
GUANGPI XU
HANJIE WANG

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Consulting Editor Jeffrey M. Gould

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自身免疫性
疾病之
中醫療法



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Commissioning Editor: Mary Law/Karen Morley

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Designer: Kirsteen Wright

Illustration Manager: Bruce Hogarth

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Wanzhu Hou CMD LAc DiplAC DiplCH (NCCAOM)

Director and Chief Attending Physician and Associate Professor,
Nanjing University of Traditional Chinese Medicine and its affiliated hospital,
Department of Internal Medicine, Department of Liver Illness, China
Licensed Acupuncturist and Diplomate of Acupuncture and Herbology, USA
CEO, All Natural Medicine Clinic, USA

Guangpi Xu CMD DiplAc DiplCH (NCCAOM)

Associate Professor and Attending Physician, Nanjing University of Traditional
Chinese Medicine and its affiliated hospital, Department of Chinese Herbal
Medicine, China
Diplomate of Acupuncture and Chinese Herbology, USA
Director, All Natural Medicine Clinic, USA

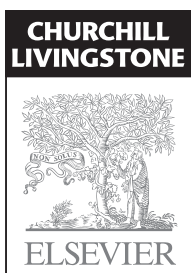
Hanjie Wang MD

Medical Doctor, Shandong University of Medicine, China
Consultant, All Natural Medicine Clinic, USA

CONSULTING EDITOR

Jeffrey M. Gould MAcOM LAc DiplAc DiplCH (NCCAOM)

Licensed Acupuncturist and Chinese Herbalist, Johns Hopkins Integrative
Medicine and Digestive Center, Johns Hopkins University, USA



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PREFACE

All medical research arms clinical practitioners in their battle to serve patients' health needs. This includes research based on Chinese medicine, which has one of the most ancient histories of all medical theory bases, with clinical techniques that have been used, adapted and modified over a 5000-year period.

Fortunately, the discoveries made by classical Chinese medicine and from its modern research have led to greater wisdom and the best techniques to be used by practitioners to protect and save lives.

The daily work of the Chinese medicine practitioner is just like that of a life-guard who watches over, protects and saves swimmers in a sea full of perils by returning them safely to shore. Or it is like that of a general who directs soldiers on the battlefield – in treating patients, every single herb, acupuncture point and other Chinese medical technique, such as moxabustion, cupping, tuina and guasha, are our weapons. To win the conflict against illness and disease requires that the healing soldiers have every possible weapon. We must be able to tap into the vast pool of medical wisdom to battle step by step. In China there is an adage that says, 'Just like the leader of a country who must deal with multiple, severe conditions, a doctor must deal with multiple, severe diseases'. We must cautiously consider every situation that may arise with a patient.

It is easy to be a leader in one's own 'small country' of the private clinic, working day by day to promote the health of our patients. However, interactions with several people may have occurred and changed our thoughts and our tranquil lives. One friend had a heart transplant due to an autoimmune attack, but after the transplant she still lacked any quality of life. A second person, had a lung transplant, but only lived for 4 years, leaving behind a small child. She had written in her diary about her difficult suffering, her feelings and her treatment after surgery¹ until she could not write any more. She had been told that if she did not have the lung transplant, she would live for only 5–6 years. Yesterday, a special patient came to our clinic. She had a liver transplant 12 years ago because of autoimmune hepatitis. One year ago, her doctor found that she had lung cancer that had metastasized to the brain; the function of her donated liver had failed completely. She had jaundice, nausea, anxiety, depression, insomnia, fatigue and suffering, suffering . . . and suffering. Essentially, she was waiting for the ending of her days.

Does ancient Chinese medicine or integrative medicine have the wherewithal to do something for such patients before the development of such suffering, or after such suffering has arisen?

There is another Chinese adage that says, 'If you are a leader but you do not help your citizens, then you should return to your farm to plant sweet potatoes'. This

1. Yang Guan. Walk out from dark. China: Publisher of Public Arts, 2005.

means that you are not fit to fill that position. In order to become better leaders, we as practitioners need to study more vigorously, research more actively, and combine the most ancient knowledge with modern scientific understanding so that we may plumb the greatest Chinese medical secrets.

Chinese medicine is our occupation. It is based on theory that has been practised and developed for thousands of years. The language is difficult to understand and there is no single standard for practising it, which makes it easy to result in clinical misunderstanding. For this reason, we have tried here to explain the process of Chinese medical treatment in conjunction with Western medical theory and hypotheses in order to understand more fully why ancient Chinese medical practitioners described the pathologies, differentiations and treatments that they did. By following the hypotheses of ancient Chinese medicine and modern Western medical thought, we have personally attained successful results.

However, we caution the reader. Herein we discuss specific pathologies and illustrate them with particular case studies. Although we have striven to express the natural process of patient treatment and have provided specific clinical suggestions, we realize that no two patients' conditions and pathological changes are exactly the same. All differentiations, treatment principles and treatment protocols must be individualized to the individual patient.

The writers of this text – Wanzhu Hou, Guangpi Xu and Hanjie Wang – all have both a Chinese and a Western medical background, and currently work in the USA at the All Natural Medicine Clinic.

We would like to express our deep appreciation to: Jeffrey M. Gould, an educator and Chinese medicine practitioner, who contributed to the editing of the whole book; Jie Chen, who assisted us in the writing of the book; Dr Shouren Hou, a medical professor in China, who provided us with expert advice and support, as well as strong medical technique; and the many others who aided us in our work, including our patients, whom we thank for the lessons they taught us.

Chinese medicine is a profound theoretical system that cannot always be explained by Western medical theory. Yet sometimes its clinical results are obvious to all. Our combined clinical experience, just a little testimonial on paper here, is but a drop in the ocean that is Chinese medicine. It is our wish that through this book we will arouse the reader's great interest in Chinese medicine and encourage them to discover more of its amazing secrets.

*Wanzhu Hou
Guangpi Xu
Hanjie Wang*

All Natural Medicine Clinic
20 December 2006

INTRODUCTION

The clinical practice of Chinese medicine is more than 5000 years old. The ideal way to learn Chinese medicine in its modern form would first be to learn ancient Chinese medical language and classical medical theory. In this way, the classical medical language would become both a tool and a key to open the intellectual door of this ancient science in service to humans living in the contemporary world. As not all students of Chinese medicine are able to study the classics in such detail, at a minimum one must learn basic Chinese medical theories, including *Bian Zheng* 辨证, the differentiation of symptoms. However, to be truly effective in the treatment of diseases such as immune system disorders, one must also learn basic Western medical science, including the differential diagnosis of diseases. By understanding both paradigms, one guarantees the accuracy of the Chinese medical differentiation and proper treatment. And serendipitously, Western medical theory's explanation for some of the pathological changes occurring in disease may help to explain the manner in which Chinese medicine works.

Therefore, modern-day Chinese medical practitioners must undertake a great load. On the one hand, they must emulate their ancestral forebears and bring Chinese medicine unchanged to their generation. On the other hand, and practically speaking, they must apply modern Western medical theory to explain and develop it further. To succeed in this goal, modern practitioners must be proficient in Chinese medicine and must also excel in basic Western medicine. Consequently, in the clinic the initial diagnosis will often be based on Western medicine; the subsequent differentiation will be based on Chinese medicine. The resulting treatment will be based wholly on Chinese medicine or on an integrative theory that is a combination of Chinese and Western medicine, with the goal of obtaining the optimal clinical outcome while minimizing potential misdiagnosis and mistreatment by Chinese medicine alone.

Chinese medicine stipulates that both normal physiological processes and abnormal pathological changes express themselves as external symptoms and signs. To assess these, Chinese medicine uses four methods to gather information, analyse pathological changes, make a diagnosis and then decide on treatment. These methods are: *Wang* 望, or seeing, *Wen* 闻, or smelling, *Wen* 问, or asking, and *Qie* 切, or palpation, which includes pulse palpation as well as palpation of the skin and assessment of its temperature, and palpation of the abdomen. Western medicine also has methods to assess and diagnose pathological changes in external symptoms and signs. For this reason, the Chinese medical practitioner must know more about Western medicine and combine this knowledge with Chinese medicine to promote better results in the clinic.

For example, consider a patient with chronic headaches. Of course, Chinese medicine describes different types. One must first determine whether the condition is excess or deficient; is the pain due to Blood stasis, Liver Qi stagnation, or deficiency of Blood and Qi? However, if the headache is caused by a tumour,

the practice of Chinese medicine could actually delay the opportunity for the correct diagnosis and treatment necessary to save the patient's life. Yet headache is just a symptom in Western medicine, not a disease. Numerous diseases can cause headaches, such as the common cold, stress, migraine, insomnia and, yes, even brain tumours. Although Chinese medicine divides headache into different categories, the lack of a Western medical diagnosis may lead to Chinese medicine misdiagnosis and mistreatment.

When Wanzhu Hou was a student in China, her programme adviser told her that practitioners must always be cautious in the clinic; often, based on few symptoms or signs, one must give a Chinese medicine differentiation and then depend on that differentiation to determine the treatment plan. One can never know the differentiation before treatment with 100% accuracy. Therefore, we say the unlucky doctor treats at the beginning of the disease; the lucky doctor treats at the end of the disease. The second doctor is in a position to avoid the first doctor's failure and can find another way to treat future patients; a third doctor can avoid the failures of the preceding two doctors, etc. Here is the problem: how does one use an infinitely small number of symptoms and signs to differentiate and create a prescription? One answer is that it becomes easier as one gains greater clinical experience. Truly, greater clinical experience does result in greater clinical accuracy and performance. However, if we could also refer to Western medical diagnosis and its description of pathological changes to inform our practice of Chinese medicine, our treatment would have more specific goals. For instance, the treatments for degenerative and rheumatoid arthritis are different, as are those for viral hepatitis and autoimmune hepatitis, yet signs and symptoms may be very similar. We cannot depend only on symptoms and signs to differentiate such diseases if we wish to treat them appropriately.

Thus, Chinese medicine faces a future in which practitioners must develop modern theories that can also integrate well with those of Western medicine, because as society develops there may be fewer people who fully comprehend classical Chinese medicine and its terminology. At a minimum, one should become proficient in the use of Western medical theory to explain the phenomenology of Chinese medical theory and treatment. This is particularly so, as ancient knowledge and theories are insufficient to explain the Western medical diagnosis of some diseases, such as autoimmune diseases. Therefore, Chinese medical theory must evolve in order to explain modern diseases and employ the best treatment. Another way of saying this is that we can utilize Western medicine's scientific approach to verify what we know and understand – Chinese medicine has proven its empirical efficacy over thousands of years of clinical practice.

A friend once told Wanzhu Hou something that clearly resonated with this philosophy. He compared Chinese medicine to an antique gun. When one uses an antique gun to shoot birds resting on a tree, the bullets spread out, making it difficult to target a single bird, and the noise then frightens the birds and they all fly away. He suggested to her that Chinese medicine is similarly without a clear target, making it difficult to treat diseases. Was her friend's representation of Chinese medicine accurate? Thirty years have passed since he gave that analogy to Wanzhu Hou, and she has never forgotten it. Through many years of clinical experience and study, she has concluded that his words were wrong. Using the

Chinese medicine paradigm, we can not only treat diseases diagnosed by Western medicine but we can also treat multiple diseases that cannot be diagnosed by Western medicine. In reconsidering her friend's words, she now sees the Chinese medicine treatment of diseases as more like 'shooting many hawks with a single arrow'. This is especially the case in treating autoimmune diseases.

We wish to point out three important historical aspects of Chinese medicine. First, Chinese medicine has a long, distinguished history of clinical practice; ancient practitioners described how to use Chinese medicine to treat diseases, promote health and extend human life. Second, within the past 100 years, clinical and experimental research in China has discovered a number of mechanisms to explain how and why Chinese medicine works. Third, although Chinese medicine has treated hundreds of millions of people effectively, the discipline still needs more research to discover targets for its intervention and to explain further how and why it works.

Chinese medical treatment depends upon the use of clinical symptoms and signs to differentiate diseases. This is called *Bian Zheng Shi Zhi* 辨证施治, or diagnosis and treatment based on the overall analysis of all symptoms and signs. In practice, this includes the illness and the patient's physical condition as described by the basic theories of Chinese medicine.

According to current clinical research, it appears that most patients with autoimmune disease experience symptoms and signs corresponding to a Yin deficiency condition. This view is shared by Pian Shen who wrote *Clinical Research of Lupus in Traditional Chinese Medicine*.¹ Once this type of condition becomes chronic, a patient may experience any of the following syndrome patterns: Yin deficiency Heat, Yin and Blood deficiency, both Qi and Yin deficiency, and finally, should the disease continue to progress, a combination of Yin and Yang deficiency. Thus, deficiency is the underlying essence of the basic pathology of many autoimmune diseases according to Chinese medicine. However, in some instances, autoimmune diseases may present as excess conditions, such as Heat in the *Qifen*, or Qi level, Heat in the *Yingfen*, or nutritive level, and Heat in the *Xuefen*, or Blood level.² Other syndromes that may present include Fire flaring up, Heat-Toxin, Fire-Toxin, Phlegm-Dampness, Phlegm-Heat, Wind-Dampness and oedema. Regardless of whether an autoimmune disease presents as a deficient or excess condition, its clinical picture is often further complicated, because Blood stasis generally runs through the whole disease process of autoimmune diseases.

What does all this mean from a Western medicine perspective? In this book we try to explain Chinese medical theory and its methods of treatment utilizing both Chinese and Western medicine concepts. Through the use of patient cases describing pre-treatment symptoms and signs and post-treatment results, the reader will understand how Chinese medicine works when it is used to treat a patient with a Western medical diagnosis.

1. Shen P. Clinical research of lupus in traditional Chinese medicine. China: Publishing House of People's Health, 1997.

2. For more information on four-level differentiation and warm disease theory see, for example: Liu G. Warm diseases: a clinical guide. Seattle: Eastland Press, 2001.

Basic immunology and immune system disorders

CHAPTER 1

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The immune system is a Western medical concept. Chinese medicine never discusses immunity directly. Instead it describes the clinical symptoms of the body's response to an invasion by external pathogens in terms of *Zheng Qi*, vital Qi, which protects human health by fending off invasion.¹

In Western medical theory, the immune system has a defensive function; the cells of the immune system work together with different proteins to seek out and destroy anything foreign or dangerous that enters the body. It may take some time for the immune cells to be activated – anywhere from minutes to days – but once they are operating at full strength there are very few hostile organisms that stand a chance against them.

The immune system protects against infection by killing pathogens and eliminating foreign substances. It detects pathogens, including viruses, bacteria and

parasites, and distinguishes them from the organism's normal cells and tissues. Detection by the immune system is sometimes frustrated as pathogens adapt and evolve new ways in which they can successfully infect the host organism.

The first response of the immune system to infection is inflammation. The symptoms of inflammation are redness, swelling, heat and pain. This reaction is caused by increased blood flow to the affected tissue. Infected cells, injured cells or fragments of cells produce eicosanoids and cytokines. Eicosanoids include prostaglandins that produce a feeling of heat, fever and the dilatation of blood vessels; cytokines include interleukins that are responsible for communication between white blood cells.

I. The immune system process

The immune system is a complex of organs and tissues that includes highly specialized cells and even a circulatory system separate from the cardiovascular system. These all work in concert to clear infection and cancer cells from the body. The organs of the immune system, which are called lymphoid organs, are positioned throughout the body and include lymph nodes, the spleen, thymus, tonsils and appendix.

The specialized cells of the immune system, lymphocytes, initially form in the bone marrow and then differentiate into two major classes, T cells and B cells. T cells mature in the thymus, high in the chest behind the sternum, and B cells grow to maturity in the bone marrow. T cells are involved in a process called cell-mediated immune response. B cells are involved in a process called humoral immune response, which refers to immunity conferred by proteins called antibodies.

(I) Cell-mediated immunity

All T cells, also called thymocytes because of the location of their maturation, originate from stem cells in the bone marrow. The least mature thymocytes express neither CD4 nor CD8, an abbreviation for specific cluster differentiations. Cluster differentiations are various molecular substances that exist on the surface of T and B cells. Initially, T cells are classed as double-negative ($CD4^- CD8^-$) cells. As they develop, they become double-positive thymocytes ($CD4^+ CD8^+$). Finally they mature to single-positive ($CD4^+ CD8^-$ or $CD4^- CD8^+$) thymocytes that are then released from the thymus to peripheral tissues, where they circulate until needed, awaiting activation by other immune system cells.

A macrophage is one type of cell that can activate T cells. Macrophages are large immune system scavenger cells that travel through the body. When a macrophage comes into contact with an antigen, or foreign protein in the body, it engulfs the antigen. Once engulfed, the macrophage processes the antigen internally and then displays parts of the molecule on the cell surface together with some of its own proteins. This process of displaying parts of an engulfed antigen sensitizes T cells, essentially turning them on to recognize the antigens.

One factor that allows T cells to recognize an almost infinite number of antigens is their cluster differentiation (CD). Various molecules coat the surfaces of all cells, including immune system cells. Every T and B cell has about 10^5 (100 000)

molecules on its surface, one type of which is CD. There are more than 160 CD types, each of which is a different chemical molecule. T cells have CD2, CD3, CD4, CD28 and CD45R, as well as other non-CD molecules on their surface. B cells are coated with CD21, CD35, CD40 and CD45 in addition to other non-CD molecules.

The large and varied number of molecules existing on the surface of lymphocytes results in huge variability in the shape of their receptor sites, with which they bind to antigens. Additionally, as lymphocytes mature, their receptor sites develop random configurations, resulting in some 10^{18} possible structurally different receptors. Essentially, any antigen may find a near-perfect fit on a lymphocyte receptor, although, given the possible number of antigens in the world, that near-perfect fit may be with a very small number of lymphocytes, perhaps as few as one or two. Once a T cell has bound to an antigen, it communicates with other cells in the immune system, ordering them to assist in the fight against the antigen.

T cells have two major roles in immune defence: regulation and communication. In the role of regulation, one type of T cell, regulatory (or suppressor) T cells, are essential for orchestrating the response of an elaborate system of immune cells. In the role of communication, another type of T cell, helper T cells, also known as $CD4^+$ T cells, alert B cells to start producing antibodies. They also can activate other T cells, including $CD8^+$ T cells, and macrophages, and influence the type of antibody that is produced. Once activated, $CD8^+$ T cells can transform into killer T cells that attack and destroy infected cells. Killer T cells are also called cytotoxic T cells or cytotoxic lymphocytes (CTLs). Killer T cells directly attack other cells carrying foreign or abnormal antigens on their surface.

Regulatory T cells (T_{reg} cells), also known as suppressor T cells, are a specialized subpopulation of T cell, the job of which is to suppress continued activity of the immune system. They thereby maintain immune system homeostasis and tolerance to self-antigens; that is, they recognize which cells and proteins comprise the self and which are foreign. Their major role is to shut down T cell-mediated immunity towards the end of an immune reaction and to suppress the function of autoreactive T cells, as described below, that have escaped the process of negative selection in the thymus. Two major classes of T_{reg} cells have been described in the literature: naturally occurring and adaptive T_{reg} cells. Naturally occurring T_{reg} cells (also known as $CD4^+ CD25^+ FoxP3^+ T_{reg}$ cells) arise in the thymus, whereas adaptive T_{reg} cells (also known as Tr1 cells or Th3 cells) may originate during a normal immune response. Understanding of the naturally occurring T_{reg} cell is important, because mutations of an intracellular molecule unique to T_{reg} cells called the *FOXP3* gene can prevent regulatory T-cell development, causing the fatal autoimmune diseases discussed later in this book.

Helper T cells regulate both innate and adaptive immune responses and help to determine the immune response to a particular pathogen. Innate immunity results from natural barriers to pathogens created by all epithelial surfaces in the body: skin, the lining of the gastrointestinal and genitourinary tracts, and the lining of the nasal passages and lungs. Adaptive immunity is triggered in vertebrates when a pathogen evades the innate immune system and generates a threshold level of antigen. Helper T cells control the immune response by directing other cells to perform the tasks of killing infected cells and clearing away pathogens from the body.

Once a macrophage has engulfed and processed an antigen, it displays fragments of the antigen combined with a major histocompatibility complex (MHC) class II protein on its surface. The antigen–protein combination attracts the helper T cell and promotes its activation to produce antibodies. In organ or tissue transplant situations, the most rapid and severe rejection of foreign tissue occurs when there is a failure to match the donor and recipient properly for the MHC molecules. There are two categories: class I and class II.

Killer T cells are $CD8^+$ T cells that have been activated by helper T cells. They kill cells infected with viruses and other pathogens, or that are otherwise damaged or dysfunctional. Killer T cells become activated when their T-cell receptor (TCR) binds to a specific antigen in a complex with the MHC class I receptor of another cell. Recognition of this MHC–antigen complex is aided by a co-receptor on the T cell, called CD8. The T cell then travels throughout the body in search of cells with MHC class I receptors that bear this antigen. When an activated T cell contacts such a cell, it releases cytotoxins that form pores in the target cell's plasma membrane, allowing ions, water and toxins to enter. This causes the target pathogen or diseased cell to undergo lysis.

Memory T cells are a subset of antigen-specific T cells that persist long after an infection has resolved. They quickly reproduce large numbers of effector memory T cells upon re-exposure to their cognate antigen, thus providing the immune system with 'memory' against past infections. Memory T cells comprise two subtypes: central memory T cells (T_{CM} cells) and effector memory T cells (T_{EM} cells). Memory cells may be either $CD4^+$ or $CD8^+$.

To clarify, the relationship between killer T cells, helper T cells, regulator T cells, and memory T cells and their functions are:

- Cytotoxic or killer T cells ($CD8^+$) work by releasing cytotoxins, which cause cell lysis.
- Helper T cells ($CD4^+$) serve as managers, directing the immune response. They secrete chemicals called lymphokines that stimulate cytotoxic T cells and B cells to grow and divide, attract neutrophils (a phagocytic white blood cell), and enhance the ability of macrophages to engulf and destroy microbes.
- Regulator T cells inhibit the production of cytotoxic T cells once they are no longer needed, to stop them from causing more damage than necessary.
- Memory T cells are programmed to recognize and respond to a pathogen after it has invaded and been repelled.

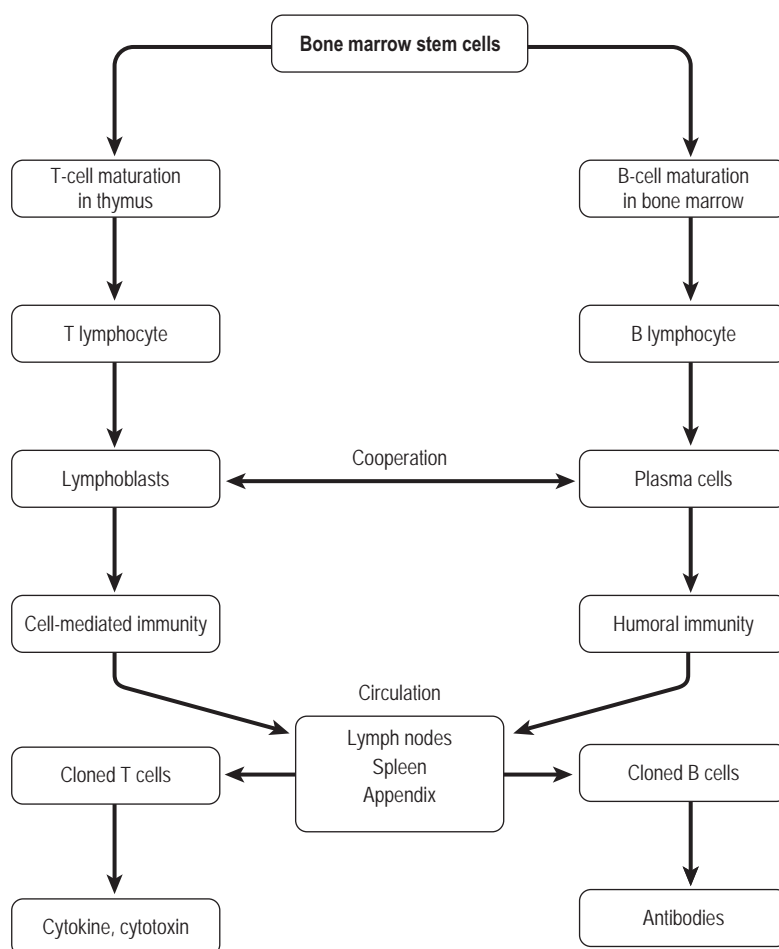
(2) Humoral immunity

B cells are produced in the bone marrow of most mammals and distributed throughout the body via the lymph nodes (Figure 1.1). B cells respond to foreign antigens by producing specific antibodies. Antibodies are complex proteins that are released into the bloodstream and carried to the site of infection. B cells do not fight pathogens directly like T cells, but bind to the surfaces of the offending antigens.

A B cell uses one of its receptors to bind to its matching antigen, which the B cell engulfs and processes. The B cell then displays a piece of the antigen, bound to a class II MHC protein on its surface. This whole complex then binds to an

Figure 1.1

T- and B-cell formation and action.



activated helper T cell. This binding process stimulates the transformation of the B cell into an antibody-secreting plasma cell.

Antibodies, also called immunoglobulins, constitute the γ -globulin part of blood. "They are soluble proteins secreted by the plasma offspring (clones) of primed B cells. The antibodies inactivate antigens by: (1) complement fixation, in which proteins attach to the antigen surface and cause the formation of holes (i.e. cells lyse); (2) neutralization, in which the antibodies bind to specific antigen sites to prevent their attachment to other cells – this is the same as taking their parking space; (3) agglutination, or the clumping of particles, whereby the presence of an antibody causes antigens such as bacteria or red blood cells to clump together and become inactive; and (4) precipitation, or forcing the antigens into an insoluble state so that they come out of solution."²

Constituents of γ -globulin are immunoglobulin (Ig) G 76%, IgA 15%, IgM 8%, IgD 1% and IgE 0.002%. This latter immunoglobulin is responsible for immune-disordered responses such as allergies and asthma, and diseases such as rheumatoid arthritis, multiple sclerosis and systemic lupus erythematosus".²

IgG is the only antibody that can cross the placental barrier to the fetus; it is responsible for the 3–6-month immune protection of newborns that is conferred by the mother. IgM is the dominant antibody produced in primary immune responses, and IgG dominates in secondary immune responses. IgM is physically much larger than the other immunoglobulins.

The B cells work as follows: a B cell identifies a pathogen when antibodies on its surface bind to a specific foreign antigen. This antigen–antibody complex is taken up by the B cell and processed by proteolysis into peptides. The B cell then displays these antigenic peptides on its surface MHC class II molecules. This combination of MHC and antigen attracts a matching helper T cell, which releases cytokines and activates the B cell. As the activated B cell then begins to divide, its offspring secrete millions of copies of the antibody that recognizes this antigen. These antibodies circulate in blood plasma and lymph, bind to pathogens expressing the antigen, and mark them for destruction by complement activation or for uptake and destruction by phagocytes. Antibodies can also neutralize challenges directly, by binding to bacterial toxins or by interfering with the receptors used by viruses and bacteria to infect cells.

An overactive immune response comprises the other end of immune function (i.e. dysfunction), which can lead to the development of autoimmune disorders. Here, the immune system fails to distinguish properly between self and non-self, and attacks its own tissues. Under normal circumstances, many T cells and antibodies react with 'self' peptides. This is simply a fact of normal metabolism, or the new superseding the old. This becomes problematic only when the immune system fails to recognize self or becomes overactive. One of the functions of specialized cells located in the thymus and bone marrow is to present young lymphocytes with self-antigens produced throughout the body and to eliminate cells that would recognize and attack self-antigens, thereby preventing an autoimmune response.

2. Antigens

An antigen is any substance that causes the immune system to produce antibodies against it. An antigen may be a foreign substance from the environment, such as chemicals, bacteria, viruses or pollen. Antigens may also be formed within the body, as occurs with bacterial toxins or tissue cells. They can be classified in order of their origins, as described below.

(I) Exogenous antigens

Exogenous antigens are antigens that have entered the body from the outside, for example by inhalation, ingestion or injection. They are taken into antigen-presenting cells (APCs) and processed into fragments by endocytosis or phagocytosis. An APC is any cell that displays foreign complexed antigen with MHC on its surface.

T cells may recognize this complex via their T-cell receptor. APCs then present the fragments to T helper cells ($CD4^+$) by the use of class II MHC molecules on their surface. Some T cells are specific for the peptide–MHC complex. They become activated and start to secrete cytokines, which are substances that can activate cytotoxic T lymphocytes (CTLs), antibody-secreting B cells, macrophages and other particles.

(2) Endogenous antigens

Endogenous antigens are antigens that have been generated within the cell as a result of normal cell metabolism, or because of viral or intracellular bacterial infection. The fragments are then presented on the cell surface in the complex with MHC class I molecules. When recognized by activated cytotoxic $CD8^+$ T cells, the T cells begin to secrete various toxins that cause the lysis or apoptosis of the infected cell. To prevent cytotoxic cells from killing 'self' cells, self-reactive T cells are deleted from the repertoire as a result of tolerance (also known as negative selection, which occurs in the thymus). Only those T cells that do not react to self-peptides to which they have been presented in the thymus are allowed to enter the bloodstream.

(3) Autoantigens

An autoantigen is usually a normal protein or complex of proteins (and sometimes DNA or RNA) that is recognized by the immune system of patients suffering from a specific autoimmune disease. Under normal circumstances, these antigens should not be the target of the immune system. However, as a result of genetic or environmental factors, the normal immunological tolerance for such an antigen has been lost.

(4) Tumour antigens

Tumour antigens are those presented by MHC class I or II molecules on the surface of tumour cells. These antigens are sometimes presented only by tumour cells and never by normal cells. In this case, they are called tumour-specific antigens (TSAs) and typically result from a tumour-specific mutation. More common are antigens presented by tumour cells that are called tumour-associated antigens (TAAs). CTLs recognize these antigens and may be able to destroy the tumour cells before they proliferate or metastasize.

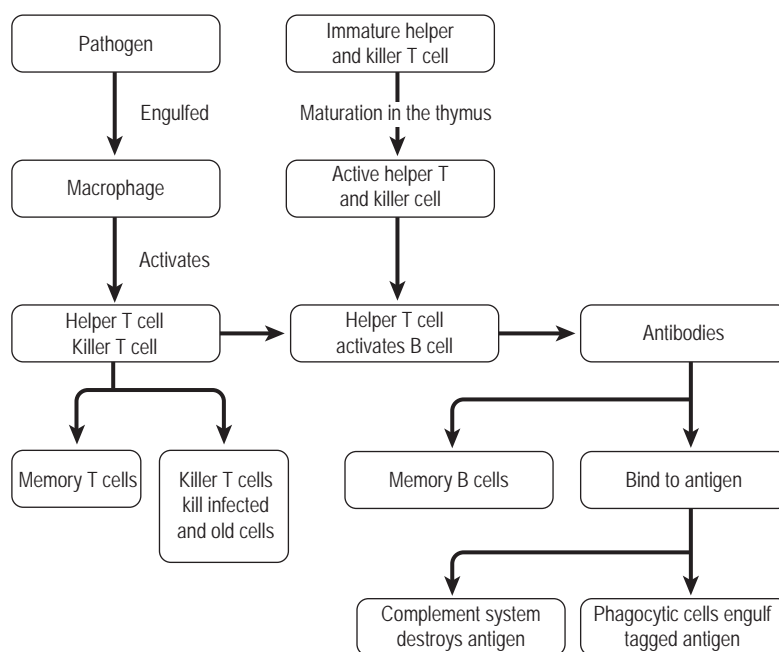
Tumour antigens can also be on the surface of the tumour in the form of, for example, a mutated receptor, in which case they will be recognized by B cells.

3. Antibodies

Antibodies are γ -globulins produced by B cells. A special region of B cells that is highly specific for targeting a given antigen serves as the template for production of antibodies. In clinic, we measure IgG, IgA, IgM, IgE and IgD antibodies to determine the strength of humoral immunity.

Figure 1.2

The process of T- and B-cell interaction with antigen.



4. Complement

When some antibodies combine with antigens, they activate a cascade of nine proteins, known as complement, that circulate in an inactive form in the bloodstream (Figure 1.2). The function of the complement system is to help clear pathogens from an organism. It is derived from many small plasma proteins that work together to disrupt the target cell's plasma membrane, leading to cytolysis. The complement system consists of more than 35 soluble and cell-bound proteins, 12 of which are directly involved in the complement pathways. The complement system is involved in the activities of both innate and acquired immunity. Activation of this system leads to cytolysis, chemotaxis, opsonization, immune clearance and inflammation, as well as the marking of pathogens for phagocytosis.

5. Hypersensitivity (allergies)

Hypersensitivity is an immune response that damages the body's own tissues. It results when the body overreacts to a previously encountered antigen, causing tissue damage or even whole body impairment. It is divided into four types, I–IV, based on the mechanisms involved and the time course of the hypersensitivity reaction.

Type I hypersensitivity is an immediate or anaphylactic reaction, often associated with allergy. Symptoms can range from mild discomfort to death. Type I hypersensitivity is mediated by IgE released from mast cells and basophils. Type II hypersensitivity occurs when antibodies bind to antigens on the person's own cells, marking them for destruction. This is also called antibody-dependent (or cytotoxic) hypersensitivity and is mediated by IgM and IgG antibodies. Type III hypersensitivity is triggered by immune complexes (aggregations of antigens, complement proteins, and IgG and IgM antibodies) deposited in various tissues. Type IV hypersensitivity (also known as cell-mediated or delayed-type hypersensitivity) usually takes between 2 and 3 days to develop. It is involved in many autoimmune and infectious diseases, but may also involve contact dermatitis, such as occurs following exposure to poison ivy. These reactions are mediated by T cells, monocytes and macrophages. More detail about the four types of hypersensitivity is provided below.

(I) Type I hypersensitivity: immediate (atopic or anaphylactic)

Type I hypersensitivity is an allergic reaction. Exposure to the allergen may be by ingestion, inhalation, injection or direct contact. The difference between a normal immune response and a type I hypersensitivity response is that plasma cells secrete IgE antibodies that bind to mast cells and basophils that then release histamines, a vasodilator, and heparin, a blood thinner. These cause inflammation at the site as blood flow to the affected tissues is increased. The reaction may be either local or systemic. Symptoms vary from mild irritation to sudden death from anaphylactic shock. This is why allergies are manifested as red and watery eyes, runny nose and hives. Asthma is a form of anaphylaxis, as a combination of oedema and airway constriction prevents tissues from getting sufficient oxygen.

Examples of type I hypersensitivity include:

- allergic asthma
- allergic conjunctivitis
- allergic rhinitis ('hay fever')
- anaphylaxis
- angio-oedema
- atopic dermatitis (eczema)
- eosinophilia
- urticaria (hives).

Chinese medicine treats asthma attacks essentially by breaking the connection between an antigen and IgE. Usually, the practitioner selects herbs such as **Huang Qin** *Scutellariae Radix*, **Mu Dan Pi** *Moutan Cortex* and **Dong Chong Xia Cao** *Cordyceps*, and acupuncture points such as Dingchuan (extra) and Ren-22 Tiantu.

If patients have itchy skin, anti-allergy herbs such as **Di Fu Zi** *Kochiae Fructus*, **Bai Xian Pi** *Dictamni Cortex*, **Huang Qin** *Scutellariae Radix* or **Dang Gui** *Angelicae sinensis Radix* can be selected, and acupuncture points such as SP-6 Sanyinjiao, SP-10 Xuehai, LI-11 Quchi and Baichongwo (extra).

(2) Type II hypersensitivity: antibody-dependent cytotoxicity

Type II antibody-dependent cytotoxic hypersensitivity causes cytotoxic T cells to lyse body cells because IgG and IgM antibodies mistakenly recognize an antigen on the body's own cell surface as pathogenic. The antigens recognized in this way may either be intrinsic ('self' antigens, innately part of the patient's cells) or extrinsic (adsorbed on to the cells during exposure to some foreign antigen, possibly as part of infection with a pathogen). IgM and IgG antibodies bind to these antigens to form complexes for eliminating cells presenting foreign antigens. That is, mediators of acute inflammation are generated at the site and membrane attack complexes cause cell lysis and apoptosis. The reaction takes hours to a day. For example, in autoimmune haemolytic anaemia, penicillin acts as an allergen as it binds to erythrocytes and induces death when antibodies attach to the penicillin and draw the attention of CTLs.

Another form of type II hypersensitivity is called antibody-dependent cell-mediated cytotoxicity (ADCC). Here, cells exhibiting the foreign antigen are tagged with antibodies (IgG or IgM). These tagged cells are then recognized by natural killer (NK) cells and macrophages, via IgG bound to the cell surface receptor, which in turn kill these tagged cells.

Examples of type II hypersensitivity include:

- autoimmune haemolytic anaemia
- erythroblastosis fetalis
- Graves' disease
- Hashimoto's thyroiditis
- haemolytic disease of the newborn
- immune thrombocytopenia
- myasthenia gravis
- pemphigus
- pernicious anaemia (autoimmune)
- rheumatic fever
- transfusion reactions.

Chinese medicine treats these types of disease by using herbs that nourish Blood and replenish Qi, as well as those known to suppress antibodies and modulate the immune response, such as **Mu Dan Pi** *Moutan Cortex*, **Ku Shen** *Sophorae flavescentis Radix* and **Hu Zhang** *Polygoni cuspidati Rhizoma*. One can also use acupuncture points such as BL-17 Geshu, LI-11 Quchi and SP-10 Xuehai.

(3) Type III hypersensitivity: immune complex initiated

Type III immune complex-initiated hypersensitivity occurs when antibodies bind to floating antigens. These soluble immune complexes (aggregations of antigens and IgG and IgM antibodies) form in the blood and are deposited in various tissues (typically the skin, kidney and joints), resulting in death and apoptosis; they may trigger an immune response according to the classical pathway of complement activation. The reaction takes hours to days to develop.

Examples of type III hypersensitivity include:

- immune complex glomerulonephritis
- rheumatoid arthritis
- serum sickness
- subacute bacterial endocarditis
- symptoms of malaria
- systemic lupus erythematosus.

Chinese medicine usually uses herbs such as **Sheng Di Huang** *Rehmanniae Radix*, **Xuan Shen** *Scrophulariae Radix*, **Ku Shen** *Sophorae flavescens Radix*, **Yu Jin** *Curcumae Radix* and **Dan Shen** *Salviae miltiorrhizae Radix* to remove the complexes and protect target tissues. Local acupuncture points such as SP-6 Sanyinjiao, SP-10 Xuehai and LIV-2 Xingjian may be chosen.

(4) Type IV hypersensitivity: cell mediated (delayed-type hypersensitivity)

Type IV cell-mediated or delayed-type hypersensitivity (DTH) occurs 2–3 days after exposure to an allergen, because this process relies partially on suppressor T cells, which have to travel from the lymph nodes to the affected tissue. CD8⁺ cytotoxic T cells and CD4⁺ helper T cells recognize antigen in a complex with either class I or 2 MHC. The antigen-presenting cells in this case are macrophages that secrete interleukin (IL)-1, which stimulates the further proliferation of CD4⁺ T cells. CD4⁺ T cells secrete IL-2 and interferon- γ , further inducing the release of other type 1 cytokines, thus mediating the immune response. Activated CD8⁺ T cells destroy target cells on contact, whereas activated macrophages produce hydrolytic enzymes and, when presented with certain intracellular pathogens, transform into multinucleated giant cells.

An example of this allergy is poison ivy. Chemicals in poison ivy cause contact dermatitis (skin inflammation) once the T cells have released cytokines that attract monocytes, which subsequently turn into macrophages and lead to inflammation.

Examples of type IV hypersensitivity include:

- contact dermatitis, such as poison ivy rash
- symptoms of leprosy
- symptoms of tuberculosis
- temporal arthritis
- transplant rejection.

Chinese medicine treatments are not only antibacterial, antiviral and antifungal. They can also modulate the disordered immunity that may result from infection. For this, herbs such as **Jin Yin Hua** *Lonicerae Flos*, **Lian Qiao** *Forsythiae Fructus*, **Huo Xiang** *Pogostemonis Agastaches Herba*, **Tu Fu Ling** *Smilacis glabrae Rhizoma* and **Wu Wei Zi** *Schisandrae Fructus* may be selected, and acupuncture points such as Ren-22 Tiantu and KI-3 Taixi.

In summary, the allergic reactions in type I hypersensitivity rely on IgE and basophils; in type II cytotoxic T cells and mostly IgG and IgM; in type III antigen–antibody

complexes reacting with tissues; and in type IV suppressor T cells. They all result from a relationship between an antigen and an antibody.

6. Immune tolerance

Immune tolerance is achieved under conditions that suppress the immune reaction; it is not just the absence of an immune response. The latter is a process of unresponsiveness to a specific antigen to which a person is normally responsive.

Self-tolerance is the immune system's ability to recognize what is 'self' and not react against or attack it. If immunological self-tolerance is lost, the body develops an autoimmunity against its own tissues and cells, which become the source of the autoimmune disease. Self-tolerance plays a key role in the prevention and treatment of immune disorder diseases, especially autoimmune diseases.

The application of natural medical methods, such as acupuncture and Chinese herbal medicine, integrated with Western medicine in the treatment of autoimmune diseases produces good clinical results. One of the reasons for treatment success is that Chinese medicine can mediate disordered immunity through the elimination of inflammation and possibly the masking or hiding of offending antigens, which are the targets of the immune system. More research is needed to explain the complicated mechanisms of action of Chinese medical treatments for immune system disorders.

Reference

1. Maciocia G. The foundations of Chinese medicine: a comprehensive text for acupuncturists and herbalists, 2nd edn. London: Churchill Livingstone, 2005.
2. <http://uhaweb.hartford.edu/BUGL/immune.htm#cellmed>

Overview of Chinese medicine and autoimmune diseases, and the role of Yin deficiency

CHAPTER 2

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To clarify the view of autoimmune diseases in both Chinese and Western medicine, this chapter briefly highlights several Western diagnoses of autoimmune diseases within the context of Chinese medicine. As further illustration, these diagnoses are juxtaposed with diseases that are not the result of an autoimmune process, but still have a component of Yin deficiency.

1. Yin deficiency in autoimmune diseases

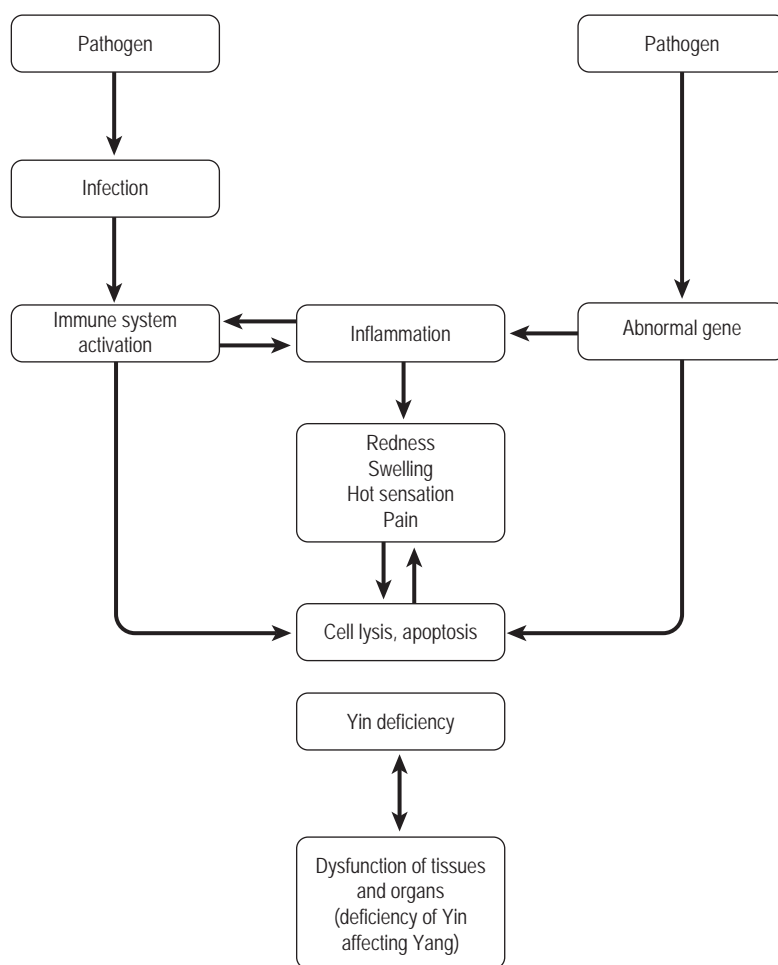
Yin deficiency plays a central role in autoimmune diseases (Figure 2.1). Specifically, a deficiency of Yin affects cells negatively and may lead to tissue degeneration, apoptosis (programmed cell death), and Qi and Yang deficiency, as well as stasis of Blood and the body's greater susceptibility to pathogens.

To maintain effective immunity, good health and normal physiological function, a person must have healthy reserves of Yin, which must be in harmony with Yang, as Yin and Yang are always in a state of dynamic flux. Yin refers to formed substances, such as organs, tissues, cells and body fluids, that is, visible and measurable things. Yang refers to the physiological function of visible things, such as the ability of hydrochloric acid and enzymes to digest food in the stomach or the function of thyroxine in regulating metabolism. Physiological function is based on substance. Without substance, there would be no source for function. Without physiological function, substance exists as nothing more than an inanimate entity. If Yin and Yang separate from each other within the body and become incapable of aiding or assisting one another, life ends.

Zheng Qi, or vital Qi, represents the energy of the body and the function of the organs. As Yin is the foundation from which it is formed and is the basic substance of life, if Yin becomes damaged for any reason, vital Qi will become deficient. For instance, should thyroid cells be destroyed they will be unable to produce thyroxine and the person will present with feelings of cold, fatigue and oedema. Chinese medicine would differentiate these symptoms and signs as Qi and Yang deficiency, although they result from an underlying Yin deficiency. Using another example, should brain cells be destroyed, a patient may experience insomnia, emotional disorders, seizures or amnesia. Chinese medicine would diagnose these symptoms and signs as Kidney Yin is insufficient to nourish the Sea of Marrow.

Figure 2.1

Yin deficiency is a cause and a result of autoimmune disease.



Yin can be damaged by both excess and deficient Heat. Both can cause symptoms and signs of Heat and Fire flaring. This Fire can burn the Blood, causing Blood stasis. If the Qi is damaged and becomes stagnant, it cannot perform its function of promoting Blood circulation in the vessels, which can also cause Blood stasis. Or, if Qi is deficient, it can neither warm nor pump the Blood, nor govern the Blood in the vessels very well, leading the Blood to extravasate, which can also cause Blood stasis. Therefore, any pathology that affects the otherwise smooth and normal movement of Blood in the vessels will cause Blood stasis.

The crucial point is that Yin deficiency may eventually develop into Damp-Heat or Blood stasis, or lead to internal Wind. This is referred to as 'excess pathogenesis caused by deficiency'. Yin deficiency can also cause other physiological changes,

leading to Qi, Blood and even Yang deficiency. Pathological change is at the cellular level, but as different cells, tissues and organs may be damaged, different pathologies will present with different symptoms and signs. Our forefathers tell us to 'treat tenacious disease by removing Blood stasis; treat stubborn illness by eliminating Phlegm'. Here Blood stasis and Phlegm are pathological products resulting from cellular damage and/or pathological change.

In some instances, there are close similarities between the theories of Chinese and Western medicine. In other cases, only some components of the theories are similar. After all, Chinese medicine is quite complicated and often difficult to explain using the language of Western medicine. We will try to explain this issue based on modern research in China, coupled with our clinical experience.

Zhu Danxi, who practised around 1347 CE during the Jin-Yuan Dynasty, said: 'Yin is ever deficient and Yang is ever excess in the human body'. How does one understand this? As explained above, Yin includes cells, tissues, organs, fluid and the body itself; it includes all visible substances. As Yin declines with age, a person's skin becomes thinner and wrinkles develop; their stature becomes shorter; they may develop blurry vision, tinnitus and insomnia, and even a short temper. These changes can also be explained by Western medicine's concept of cellular apoptosis. Apoptosis releases cytokines that trigger immune cells to engulf fragments of the apoptotic cells, causing inflammation and a heat sensation, which Chinese medicine calls Heat. Such Heat caused by cell apoptosis arises from Yin deficiency, and is called deficient Heat due to Yin deficiency.

Here, let us define the word apoptosis, or programmed cell death – a form of cell lysis. This Western medical term may be able to explain Chinese medicine's description of Yin deficiency, because Yin includes cells.¹

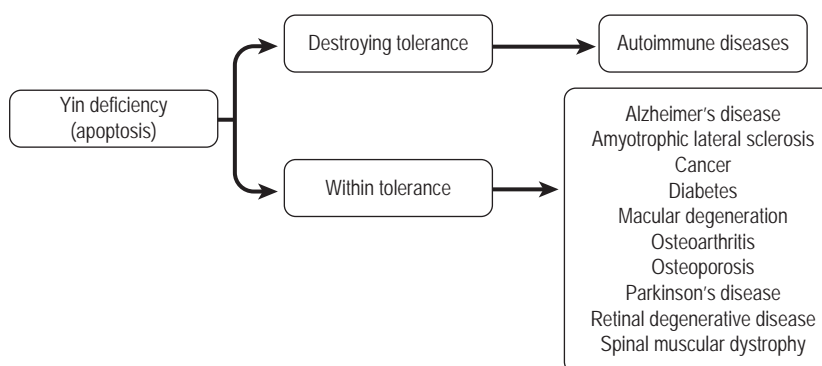
'A major mechanism of cellular destruction is apoptosis, a highly organized form of cell death that is critical for maintaining homeostatic function in a variety of tissues in normal condition.'² This modern theory mirrors Zhu Danxi's idea that 'Yin is even deficient' in the normal process of life.

Although apoptosis is an intrinsic process present in all cells, it can be regulated by extrinsic factors, including growth factors, cell surface receptors, cellular stress, hormones, etc. In normal conditions, apoptosis plays a central role in regulating not only the development of lymphocytes but also their homeostasis. In fact, there is evidence of apoptosis in normal tissue probably as part of homeostatic regulation of cell number and differentiation.³

This process, which maintains the tissues in their normal size and function, sounds like the way in which Chinese medicine describes how the body maintains the balance of Yin and Yang. Apoptosis is a physiological mechanism that occurs continuously at impressive rates. Dedicated phagocytes, such as monocytes and macrophages, remove apoptotic cells very effectively via phagocytosis, in which foreign particulate matter is engulfed and destroyed. Rapid elimination of apoptotic cells is important as it prevents the release of toxic cell constituents such as cytolytic enzymes. When the numbers of apoptotic tissues are in homeostasis with the number of naturally growing tissues, everything is balanced and the body is healthy. However, if the frequency of apoptosis is greater than normal cell growth, the body begins to degenerate, but may still be within tolerance. If apoptosis

Figure 2.2

Diseases with Yin deficiency.



progresses beyond body tolerance levels, the process may trigger the development of autoimmune diseases. This is because numerous antigens are newly exposed in the cell membranes of apoptotic cells. To maintain health, the prevention of excessive autoantigenic exposure requires the removal of apoptotic cells.

A breakdown in apoptosis-related signalling mechanisms can result in the development of autoimmune disorders by causing apoptosis to exceed tolerance. There is increasing evidence that the presence and accumulation of these apoptotic cells can result in autoimmunity. We illustrate cellular apoptosis in several autoimmune and degenerative diseases using the Chinese medicine concept of Yin deficiency (Figure 2.2).

A. Yin deficiency and systemic lupus erythematosus

In systemic lupus erythematosus (SLE), immune tolerance can be destroyed by an increased number of apoptotic cells. Should immune tolerance be compromised, the body produces autoantibodies that will bind to antigens whenever they become exposed on the cell membrane. The presence of these autoantibodies allows interaction with Fcγ receptor-binding cells. This will result in Fc receptor-mediated phagocytosis, which induces the release of pro-inflammatory cytokines. This cascade of events leads to the development of the inflammation characteristic of many autoimmune diseases.

In Chinese medical theory, we liken this process to the impairment of Yin, specifically as results in Yin deficiency. We describe the inflammation caused by apoptosis as Fire flaring up as a result of Yin deficiency. This deficiency Fire, in turn, further impairs Yin; that is, inflammation also causes apoptosis, resulting in still more tissue damage, exacerbating the disease process. Once one understands these apoptotic and inflammatory processes, one can apply Chinese medical theory to intervene and treat autoimmune-mediated disorders, thus reducing the morbidity and mortality of patients suffering from these diseases.

B. Yin deficiency and Hashimoto's thyroiditis

Apoptosis plays an important role in all autoimmune diseases, including Hashimoto's thyroiditis. In Hashimoto's thyroiditis, Fas-mediated apoptosis of thyrocytes in thyroid tissue is due to at least two separate mechanisms. The first mechanism is the infiltration of activated T cells that destroy thyroid cells, and the second is that FasL-positive thyrocytes induce cellular suicide.

Evidence is accumulating that modifications of autoantigens during apoptosis lead to the development of autoantibodies by bypassing the normal mechanisms of tolerance. As explained above, tissue homeostasis is maintained through a balance between cell proliferation and apoptotic cell death. This theory explains why treating Hashimoto's thyroiditis with thyroxine replacement does not resolve a hypofunctioning thyroid, because it does not resolve the autoimmune reaction.

C. Yin deficiency and autoimmune hepatitis

Autoimmune hepatitis (AIH) is classified as either type I or II, type I being the most common form. Type I commonly combines with other autoimmune disorders, such as type 1 diabetes, proliferative glomerulonephritis, Hashimoto's thyroiditis, Graves' disease, Sjögren's syndrome, autoimmune anaemia and ulcerative colitis. Type II AIH is less common, typically affecting girls aged 2–14 years, although adults can have it, too. Regardless of the type, the basic pathogenic change in AIH is due to hepatocyte apoptosis.⁴ Chinese medical theory describes this process as hyperactive Fire due to Liver Yin deficiency.

D. Yin deficiency and Sjögren's syndrome

Sjögren's syndrome is an autoimmune disorder in which immune cells attack and destroy the glands that produce tears and saliva. Sjögren's syndrome is also associated with rheumatic disorders such as rheumatoid arthritis. The hallmark symptoms of the disorder are dry mouth and dry eyes resulting from the destruction of salivary acinar cells, even though ductal cells are frequently spared. In addition, Sjögren's syndrome may cause skin, nose and vaginal dryness, and may affect other organs of the body including the kidneys, blood vessels, lungs, liver, pancreas and brain. Beyond all doubt, these symptoms, signs and pathogenesis belong to the Chinese medicine description of Lung, Stomach, Liver and Kidney Yin deficiency.

E. Yin deficiency and scleroderma

Yamamoto and Nishioka⁵ of the Department of Dermatology, Tokyo Medical and Dental University School of Medicine, have elucidated the role of apoptosis in cutaneous sclerosis. Using animal models, they examined the induction of apoptosis and expression of Fas, Fas ligand and caspase-3 in a murine model of bleomycin-induced scleroderma. Dermal sclerosis was induced by local injections of bleomycin (1 mg/mL) in C3H/HeJ mice. Induction of apoptosis was examined by TUNEL (terminal deoxynucleotidyl transferase-mediated deoxyuridine triphosphate nick end-labelling) assay and DNA gel electrophoresis. There is no question that apoptosis is the causal factor in an autoimmune attack of local cells leading to fibrosis proliferation. The essential pathological change in Chinese

medical theory is that Yin deficiency induces deficiency Fire to flare up (chronic inflammation), which sines the Blood and becomes Blood stasis (scleroderma).

F. Yin deficiency and multiple sclerosis

Several recent studies have provided evidence that apoptosis is an important feature in the pathogenesis of multiple sclerosis (MS), an autoimmune disease of the central nervous system. Apoptosis presumably plays a role in the immunoregulation via activation-induced T-cell death and in local processes of tissue damage.⁶ In MS the central nervous system is impaired when the myelin coating of neurons is damaged in a process called demyelination. Myelin is damaged and replaced by scar tissue that lacks the insulating function of healthy myelin. This essentially results in bioelectricity leakage, resulting in improper stimulation of cells, tissues and organs, and causing MS symptoms. Myelin is a kind of fatty tissue that is visible and is also considered Yin. This process of remyelination is the treatment for degenerating protein and fibrosis. In Chinese medicine, we call remyelination nourishing Yin and removing Blood stasis (degeneration and fibrosis). Chinese medical theory says that the causes of MS relate to internal and external pathogenic factors, for example six external pathogens encroach on the human body and over a long period of time destroy Yin and create Blood stasis.

G. Yin deficiency and rheumatoid arthritis

Rheumatoid arthritis (RA) is characterized by pronounced hyperplasia of the synovial tissue, cell infiltration and periarticular osteoporosis. Enhanced Bcl-2 expression and NF- κ B nuclear translocation of synovial cells are induced by inflammatory cytokines and/or growth factors. These synovial cells become resistant to apoptosis triggered by various stimuli. The infiltrated cells that are defective in activation-induced cell death can cause autoimmunity by allowing the survival of autoreactive T and B cells. The proliferative synovial cells secrete more and more fluid. If the condition exists mainly with inflammation, we call it Damp-Heat Bi syndrome; if it exists mainly with exudation, we call it Cold-Damp Bi syndrome; and when the disease progresses and results in deformity of the joint coupled with osteoporosis, we say that there is Yin deficiency with Blood stasis. However, Yin deficiency always exists throughout the progression of the illness. Yet when there are pathogens such as Damp-Heat or Cold-Damp, we are prohibited from nourishing the Yin, because we will exacerbate the effect of the pathogens.

These examples suggest that apoptosis might be implicated in the pathogenesis of autoimmunity, although the mechanisms may be distinct in each autoimmune disease.

In the authors' clinical experience, patients with autoimmune diseases almost always present with Yin deficiency symptoms and signs. This clinical observation mirrors clinical studies on treating autoimmune diseases with Chinese medicine, such as discussed by Zhou & Zhou.⁷

Western medicine also describes specific pathogeneses that result in autoimmune diseases. Excessive apoptosis and cell fragments trigger the immune system to attack tissues and organs, producing chronic inflammation locally or systemically. Although Western medicine names each disease based on its unique signs and symptoms and its pathological changes, the Chinese medicine concept of Yin and Yang observes the commonality of the different autoimmune diseases.

Therefore, regardless of the specific disease, Chinese medicine can treat them all with similar prescriptions and methods.

Yin deficiency is not unique to autoimmune diseases. However, according to Chinese medicine, the pathogenesis is often the same. Thus, the treatment of Yin deficiency should be the same regardless of the disease. In Chinese medicine we call this *Tong Bing Yi Zhi* 同病异治, *Yi Bing Tong Zhi* 异病同治, or treating similar diseases with different methods, but treating different diseases with the same method. For instance, one finds that in treating Sjögren's syndrome there are two distinct presentations. In the first, a patient has dry mouth. The prescription will be to nourish Stomach Yin, because the Stomach opens on the mouth. In the second presentation there is the symptom of dry eyes. The prescription for this manifestation is to nourish Liver Yin, because the Liver opens on the eyes. Therefore, even for the same disease, the treatment and prescription may differ. Yet, consider two different diseases, such as hyperthyroidism with symptoms of tachycardia, anxiety and insomnia, and infertility with raised levels of follicle stimulating hormone (FSH). In Western medicine, these two diseases have different causes, but according to Chinese medicine the first one is due to Liver and Kidney Yin deficiency with Liver Fire rising. The second condition is caused by degeneration of ovaries possibly consistent with perimenopause, with symptoms of insomnia, night sweats, increased basal body temperature and hot flushes. These result from deficient Fire due to Liver and Kidney Yin deficiency. Although two different diseases, they both result from Yin deficiency. Therefore the treatment method is the same: to nourish Yin. To reiterate, Yin deficiency is not unique to autoimmune diseases; it also exists in other diseases.

2. Yin deficiency in non-autoimmune diseases

In Western medicine, the terminology of apoptosis includes morphological changes such as cellular shrinkage, nuclear condensation, DNA fragmentation, membrane blebbing and the generation of apoptotic vesicles. In comparing the two medical theories, one can say that Yin deficiency is equivalent to Western medicine's description of the activity of apoptotic cells. In general, the phagocytes of the immune system remove apoptotic cells rapidly so as to avoid the major inflammatory tissue reactions that may result in necrosis. As apoptosis is an active process of self-destruction, it requires the activation of a genetic programme that may lead to changes in cell morphology and DNA fragmentation. Apoptosis can be triggered in several ways and affect many cellular functions. The mechanism provides protection from the possible consequences of uncontrolled cell proliferation, which could lead to neoplasia. Cell death is a factor in the pathogenesis of several diseases besides autoimmune disorders, such as cancer, acquired immune deficiency syndrome (AIDS), Alzheimer's disease, Parkinson's disease and neurodegenerative diseases.

Cellular senescence, or age-related degeneration, is caused by DNA damage. As cells age and mature, they either senesce or self-destruct (apoptosis). If numerous damaged cells become irreparable, the result is degenerative diseases or illnesses related to ageing and the elderly.

Chinese medical theory explains that people age and degenerate as the result of Kidney deficiency and Yin deficiency.⁸ Generally speaking, Yin deficiency is the

primary cause of any number of common diseases. In fact, there is evidence of degeneration and apoptosis in normal tissue and organs, probably as part of homeostatic regulation of cell number and differentiation.

The crucial point here is that the basic pathogenesis of many degenerative diseases is similar to the pathogenesis of autoimmune diseases. Therefore, it makes sense to apply theory related to the treatment of Yin deficiency for both autoimmune and degenerative diseases.

For example, let us look at Alzheimer's disease. Researchers have discovered that the brains of people with Alzheimer's disease contain dying neurons that display some characteristic signs of apoptosis, such as DNA breaks and activation of enzymes called caspases that carry out the predetermined cellular death process.⁹ Many neurons in Alzheimer's disease exhibit terminal deoxynucleotidyl transferase (TdT) labelling for DNA strand breaks with a distribution suggestive of apoptosis.¹⁰ Chinese medicine would describe this process as the Kidney Yin being insufficient to nourish the Sea of Marrow, resulting in symptoms including amnesia, poor memory and compromised cognition.

Consider also Parkinson's disease, which is different from Alzheimer's disease in clinical symptoms and signs. However, there are similarities, because they both result from the degeneration of brain cells. Various evidence supports the idea of an apoptotic contribution to the neuronal loss associated with Parkinson's disease, particularly in the area of the substantia nigra. Recent findings suggest that the multiple caspase-dependent or caspase-independent signalling pathways that mediate apoptotic nuclear degradation determine the morphological features of apoptotic nuclear degradation.¹¹ Chinese medicine would describe this process as a result of Liver Yin deficiency. Yin insufficiency cannot nourish the Jing, leading to the recognised symptoms such as shaking limbs and head.

Should cells proliferate sufficiently to recover from apoptosis, a patient can continue in good health or recover from an illness. On the other hand, if apoptosis exceeds cellular proliferation, it may lead to autoimmune or degenerative diseases. Or, if proliferation exceeds apoptosis, benign or malignant cancer may result. Of course, this dynamic state of apoptosis versus proliferation depends on multiple factors. Additionally, excess cell apoptosis causes different symptoms based on the tissue in which it occurs.

Western medicine has realized that T-cell activation plays a pivotal role in immunopathogenesis. Lymphocyte processes are tightly controlled by molecules that activate either proliferation or apoptosis. An imbalance in apoptotic function and increasing autoreactive cells may lead to persistent autoreactive phenomena.¹²

3. Blood stasis is both a pathological product and an aetiological agent that may aggravate an illness

Blood circulates continuously in the vessels throughout the body. Normal circulation results from the mutual action of the Heart, Lung, Spleen and Liver. If a pathogen compromises the function of these organs, Blood stasis results. Blood stasis means that Blood does not circulate smoothly through the vessels. In extreme cases, it blocks the vessels or leaves the vessels entirely.

Blood is a formed, visible substance belonging to Yin. Blood stasis can be caused by numerous pathologies: excess or deficient Heat burns the Blood, causing it to congeal and become Blood stasis; Qi stagnation leads to Blood stasis; deficiency of Qi makes Qi too weak to push the Blood through the vessels, causing Blood stasis; accumulation of pathogenic Cold or Qi and Yang deficiency cannot warm the vessels, causing Blood stasis. Once formed, the Blood stasis aggravates the underlying disease's condition aetiologically. First, the formed Blood stasis blocks the vessels, so Qi and Blood cannot flow smoothly, further aggravating Blood stasis; with the vessels blocked, the four limbs cannot be nourished, resulting in cold limbs and, in extreme cases, purple fingers and toes. Additionally, Blood stasis can compromise the formation of new Blood, resulting in Blood deficiency.

Theories of Chinese and Western medicine have a homologous meaning for circulation, which is blood flowing smoothly through the vessels, and for Blood stasis. However, Chinese medicine also includes the Western medical concepts of inflammation, fibrosis, deposition of collagen (a protein normally found in tendons, bones, connective tissue and scar tissue) and proliferation of other tissues and complexes.

With regard to Chinese medicine and autoimmune diseases, Blood stasis may be (1) the result of an autoimmune reaction, or (2) the cause of an autoimmune disease process. To treat Blood stasis, one can do any of the following: (1) clean out complex to protect cells that may be at risk; (2) reduce fibrosis by interrupting or cutting short the deposition of fibrotic protein; or (3) improve microcirculation to help reduce inflammation and the number of apoptotic cells, in order to reverse the process or recover cellular function.

Fibrosis is a condition that causes irreversible scarring of damaged tissue. The replacement of normal tissue by scar tissue hampers Blood flow through the damaged tissue. This decreased Blood flow makes it increasingly difficult for affected organs and tissues to perform essential functions. Blood stasis rarely causes signs and symptoms in its early stages, but becomes apparent once tissues and organs lose normal function. Examples of diseases resulting from fibrosis include pulmonary fibrosis, also called idiopathic pulmonary fibrosis, and liver cirrhosis.

4. The phenomenon of Fire manifests as inflammation within the body

Fire, a manifestation of Yang, is of two types in Chinese medicine: excess and deficient. Excess Fire results from any of six exopathic factors. It is characterized by sudden onset, superficial location, mild symptoms and short course. If vital Qi is not strong enough to fight them, then the exopathic factors cause febrile disease and transmit the pathogen deeper into the body. When this happens, the result is acute Fire and Heat-Toxin diseases. If the body must fight the febrile disease for an extended period, the pathogenic Fire destroys Yin and the illness may evolve into a chronic disease. One will then observe Yin deficiency symptoms. Should the disease become chronic, Fire will eventually become deficient and, with Yin too damaged to suppress it, it will worsen.

One way to understand more about excess and deficient Fire is by observing the dynamic changes that take place in pathological inflammation from a Chinese

medicine perspective. Inflammation is a complex biological response of vascular tissue to a harmful stimulus, such as pathogens, damaged cells and/or irritants. Inflammation can be classified as either acute or chronic.

(1) Acute inflammation is equivalent to Fire flaring up with Heat-Toxins

Acute inflammation is the initial response of the body to harmful stimuli and is achieved by the increased movement and infiltration of plasma and leukocytes from the blood into the injured tissues. It is a short-term process characterized by the classical signs of inflammation: swelling, redness, pain, heat and loss of function. The cascade of biochemical events that propagates and ends in the inflammatory response involves the local vascular system, the immune system and various cells within the injured tissue.

It becomes clear that these separately described phenomena are actually identical. This redness and heat sensation are symptoms of what Chinese medicine refers to as excess Fire and Heat-Toxin.

(2) Chronic inflammation is equivalent to Fire flaring up due to Yin deficiency

Chronic inflammation is a prolonged condition that leads to a progressive shift in the types of cell that are present at the site of inflammation. It is characterized by simultaneous destruction and healing of the local tissue from the inflammatory process. The presence of destroyed tissue and apoptotic cells triggers an immune response, specifically the mobilization of monocytes, macrophages, lymphocytes and plasma cells to clean up the fragments caused by injury, resulting in chronic inflammation. In chronic inflammation, tissue destruction occurs faster than cellular regeneration, causing pathological fibrosis to replace physiological apoptotic cells. Eventually, the tissue's function will be reduced or even lost. In chronically inflamed tissue, the stimulus of the immune system is persistent. Therefore, recruitment of monocytes is maintained, existing macrophages are tethered in place, and proliferation of macrophages is stimulated continuously. In this chronic process, the local redness and heat sensation are less severe than in the acute process and are characterized as empty Fire and Yin deficiency.

(3) Qi and Yang deficiency may occur later in the disease process

In autoimmune diseases, sometimes a self-antigen is closely mimicked by an extrinsic molecule. Despite the similarities, it differs sufficiently from the self that the immune system still recognizes it as foreign. Mimicking antigens may enter the body initially as invading pathogens, or even by alteration of endogenous antigens due to infection, environmental chemicals or drugs.

Obviously, different cells, tissues and organs have unique functions. Should any of these be damaged, their functions would be affected and clinical symptoms would materialize. For example, if heart tissue were damaged, it would affect the heart's vascular ability to pump and circulate blood. We call this Heart Yang deficiency due to Heart Yin deficiency. Damaged thyroid tissue would result in reduced metabolism and a colder body. We call this Spleen Qi and Yang or Kidney Qi and Yang deficiency due to Yin deficiency. In these examples, specific body

substances have been damaged, causing reductions in corresponding function. Therefore, we refer to these conditions as a deficiency of Yin affecting Yang.

Excess Yang can be due to ageing, as bodily substances are often impaired by injury or simply the act of living, so that the tissue simply repairs more slowly than it is damaged or from six pathogens invasion Empty Fire (Yang) always results from Yin deficiency; excess Fire always impairs Yin. The Western concept of inflammation is clearly explained by Chinese medical theory of the transformation between Yin and Yang, specifically the waning and waxing of Yin and Yang. An understanding both theories aids clinical practice.

5. Phlegm-Dampness and Fluid retention are pathological products in autoimmune disease

Phlegm-Dampness and Fluid retention are pathological products that result from metabolic disorders occurring in the course of some illnesses. Retention of Phlegm-Dampness and Fluid is characterized by accumulation of Dampness resulting from disturbed distribution of water metabolism. In describing fluid physiology, Chinese medicine identifies thick, turbid Dampness as Phlegm and the thinner, clearer Dampness as Fluid.

How does the theory of Chinese medicine compare with that of Western medicine with regard to retention of Phlegm-Dampness and Fluid? During an autoimmune reaction there are two different sources producing Phlegm-Dampness and Fluid. Both come from tissue exudation. Exudation is the slow escape of liquids and serous fluid from blood vessels through pores or breaks in the cell membrane.

- 1 In fluid exudation due to acute inflammation, the pressure in postcapillary venules may overcome the osmotic pressure of plasma proteins, thereby forcing fluid and low molecular substances to penetrate into the surrounding area. From the venules, this fluid infiltrate can include any or all components of plasma, such as metabolized administered drugs and herbal medicines. This fluid exudate is a visible substance and belongs to the category of Fluid in Chinese medicine.
- 2 Cellular exudation is formed during the second and third phases of inflammation – acute and chronic cellular responses. If tissue (antigen) damage is slight, an adequate supply of neutrophils is derived from those naturally circulating in the blood. If tissue damage is extensive, stores of neutrophils, including some immature forms, are released from bone marrow to increase their absolute count in the blood. Thus, a number of different cell types are recruited into the area where damage has occurred, and these are responsible for inactivating and removing invading infectious agents, removing damaged tissues, inducing the formation of new tissue and reconstructing the damaged cell matrix, including basement membranes and connective tissue. This process mirrors the concept of Phlegm-Dampness.

6. Yin grows when Yang generates

This is a very important concept in Chinese medicine. It suggests that tonifying Qi and Yang can help promulgate Yin. However, as will be described in later chapters,

one must be careful in tonifying Qi and Yang in autoimmune diseases, because doing so can also engender Heat, which can exacerbate an autoimmune disease.

What are Qi and Yang? Qi and Yang are metaphors for naturally occurring phenomena. Although invisible, they reflect basic substances in the world and their effect can be experienced. There are two distinct concepts describing Qi and Yang. The first refers to the vital energies coursing through the human body and maintaining its activities, drawn from such substances as the Qi of water and food, the Qi of breathing and the Qi of other sources of life. The other refers to the physiological functions of the viscera and bowels and channels and collaterals, such as the Qi of the Heart, Lung, Spleen, Kidney, Stomach, etc. This latter Qi refers specifically to the physiological function of the organs. Qi is a function of Yang, so we often refer to Yang Qi together.

Research into the function of Yang and Qi has shown that tonifying Qi and warming Yang also have the effect of strengthening immunity, especially increasing the number of T cells. For example, in clinic we treat human immunodeficiency virus (HIV)-positive patients with the tonifying method with the result being an increase in patients' CD4/CD8 ratio. Following this improvement in laboratory results, patients' symptoms also often improve. This immune enhancement effect is found both in clinic and in the laboratory, as reported in China using tonification in animal models. Research shows that herbs such as **Bai Bian Dou** *Lablab Semen album*, **Dang Shen** *Codonopsis Radix*, **Huang Qi** *Astragali Radix*, **Lu Rong Cervi Cornu** *Pantotrichum* and **Zi He Che** *Hominis Placenta* increase the number of T cells.

How are tonifying methods used to treat diseases caused by immune disorder? To understand this treatment more easily, let us first look at the treatment of diseases arising from an external antigen – asthma and allergies. Following that, we will look at an example explaining how to treat autoimmune diseases that arise from an autoantigen.

(I) Treatment of immune-related diseases, such as type I hypersensitivity

Asthma and allergies are not autoimmune diseases, but disorders of immune function, although there is some overlap between patients with autoimmune disorders and patients with type I hypersensitivity. Patients with these diseases almost always have a high level of immunoglobulin (Ig) E level in their blood. This raised IgE concentration makes the patients sensitive to antigens in the air, food or many other factors external to the body, causing symptoms of asthma and/or allergy.

Tonifying Qi and warming Yang to raise the T-cell count can help inhibit B cells and reduce IgE levels. Although one must take care not to tonify Qi and warm Yang during an acute flair, as this would have the side-effect of astringing an acute pathogen, making the illness difficult to treat or aggravating it.

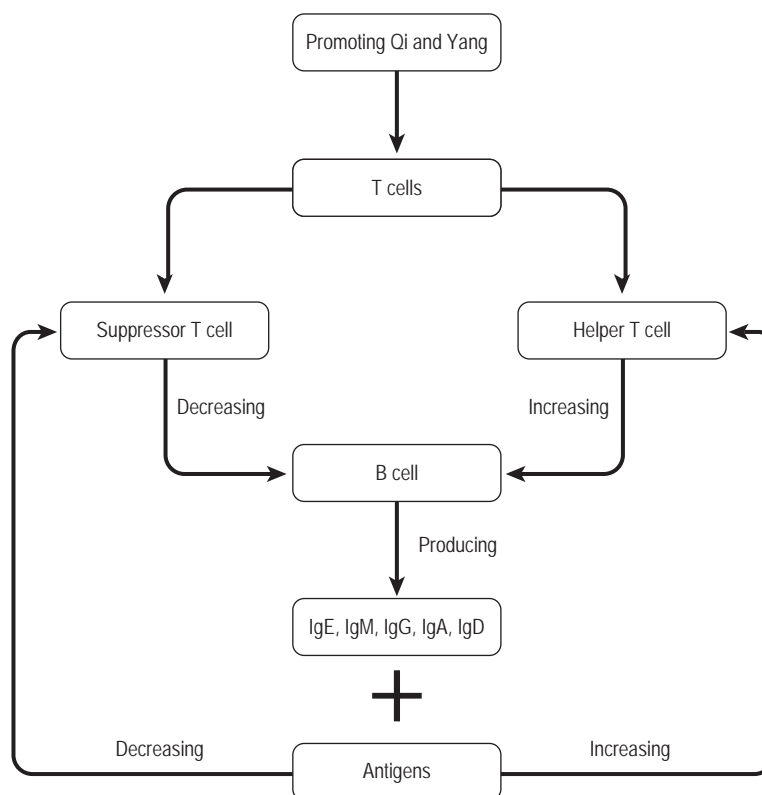
Allergic rhinitis, commonly called hay fever, and asthma are both diseases of a malfunctioning immune system. The common symptoms are sneezing, stuffy or runny nose, itchy eyes, nose and throat, a nasal-sounding voice, difficulty breathing, poor appetite, snoring during sleep and coughing with or without phlegm. These symptoms may occur seasonally or during the entire year. Sometimes the condition is simply diagnosed as allergy. However, some more severely affected patients receive a diagnosis of bronchial asthma.

An elevated level of IgE is the essential pathogenic change that occurs in type I hypersensitivity. It can result in bronchial asthma occurring when patients inhale or come into contact with allergens such as pollen, dust, insects, germs, seafood, nuts, etc. While different people may react to different allergens, the process of the antigen–antibody reaction is the same for everyone. Should treatment focus exclusively on the antibody (IgE) or histamine, symptoms will be relieved, but treatment must be repeated year in and year out. On the other hand, using Chinese medicine, if we are able to affect suppressor T cells in order to control B cells, we may also be able to control the hyperactive production of IgE and prevent the need for continual treatment for symptom relief.

With regard to treatment there are two important aspects: (1) resolve the immediate symptoms when a patient is experiencing an allergy or asthma attack; and (2) resolve the underlying problem, which is disordered immune function. [Figure 2.3](#) helps us to understand this more easily. When an antigen is present, for instance during the allergy season when there is a high density of pollen, if we promote Qi and/or Yang the patient's condition may get worse. The reason for this is that promotion of Qi or Yang while antigens and antibodies are in high concentration or during an

Figure 2.3

Promoting Qi and Yang to support immune function.



autoimmune disease flare will cause the antibodies to attack the antigens. In these circumstances, both suppressor and helper T-cell counts will increase. Helper T cells will stimulate more B-cell growth in order to eliminate the antigens and clear them out. In this case, an increase in the number of antibodies fighting the antigens will aggravate the inflammation, making the illness worse.

However, a high level of antigens would reduce the number of suppressor T cells and increase helper T cells, thereby increasing the B-cell concentration. The presence of antibodies coupled with antigens increases the ability to stimulate the circulation of helper T cells. This process of ever-increasing T-cell numbers responding to increased antibodies and antigen is like a circle – never ending.

To break down this circular situation, Chinese medicine has a way of assessing acute symptoms and treating the problem. Acute symptoms are external phenomena, and once external symptoms are under control the underlying problem can be treated by finding a way to increase suppressor T cells and prevent B cells from producing antibodies. When there is a low level of, or no, antigens is treatment by replenishing Qi and warming Yang to raise the T-cell count, including both suppressor and helper T cells. During the non-allergy season, there is no need to be concerned with antigen-stimulating antibodies. The treatment involves supporting suppressor T cells and reducing B cells. When the allergy season comes, there will be closer to normal levels of antibodies to fight the antigens, and the illness will improve or even be healed.

A. Treatment of symptoms

During an asthma attack, the airway becomes constricted and inflammation and excess mucus production block the bronchi, resulting in laboured breathing. This process occurs when elevated levels of IgE react to allergens in the environment. If we attempt to address the problem by increasing the production of T cells, we may actually exacerbate the symptoms. This is because additional T cells stimulate B-cell production, which will further increase IgE levels. Instead, we should work on reducing inflammation, dilating the airway, reducing smooth muscle spasm and preventing mast cells from releasing histamine.

B. Treatment of underlying causes

To help airways and membranes that are already damaged, it is important to mediate the disordered immune system that causes asthma and allergies. Pathologically, the airway appears to have been remodelled with a variety of features, including increased smooth muscle damage, mucous gland hyperplasia, persistence of chronic inflammatory cellular infiltrates, release of fibrogenic growth factors along with collagen deposition, and elastolysis.

T cells, especially suppressor T cells, play an important role in the process of asthma and allergy. They determine IgE levels in the bloodstream, which means that treating them affects the prognosis of asthma and allergies. Therefore, in the remission phase, treatment is concerned with the relationship between the Lung and Kidney; the Lung governs breath and the Kidney governs the receiving of Qi. In the acute phase, the treatment will be to eliminate Wind-Cold, to clear Dampness and to calm the symptoms of asthma. The purpose is to dispel the pathological substance and reduce symptoms. In the remission phase, Spleen Qi is replenished and Kidney Yang is tonified to treat the underlying causes.

The Spleen is the origin of the postnatal, or acquired, constitution and is the organ that directs the growth and development of the human body after birth. In Five Elements theory, the Spleen belongs to the Earth; it is the mother of Metal, the Lung. When the Lung has deficiency symptoms we need to tonify and replenish the mother of Metal, which is the Earth, or Spleen.

The Kidney is the origin of the prenatal, or congenital, constitution. Its essence is the foundation of reproduction and development of an individual. When Kidney function is deficient, clinical symptoms grow progressively worse each year. In Five Elements theory, the Kidney belongs to Water and the Lung belongs to Metal. Their relationship is that of son and mother. When Lung deficiency affects the Kidney, we call this mother's illness affecting the son. The treatment is to tonify the Kidney and strengthen the son to help the mother recover from illness.

Thus allergies, including food allergies and seasonal bronchial asthma triggered by external antigens, should be treated in two phases. The first phase addresses the symptoms. Phase two is applied when there are no symptoms. In this latter phase, Chinese medicine will boost T cells, especially suppressor T cells that mediate B cells, which produce IgE. As patients grow increasingly less sensitive to antigens, their disease will eventually be cured. We call this theory of treating symptoms in acute or emergency cases 'treating *Biao*' 治标, or the branch. We call the treatment of chronic cases 'treating *Ben*' 治本, or the root.

(2) Treating autoimmune diseases

Autoimmune diseases are different from allergies and asthma owing to their different sources of antigen. The antigens of allergies and asthma come from outside the body. In autoimmune diseases, the antigens come from the patients themselves. Therefore, the above treatment does not fit the treatment of autoimmune diseases, especially the method of replenishing Qi and Yang. The exception is the treatment of the acute phase and relieving symptoms, which is similar to that for disorders of immune system function.

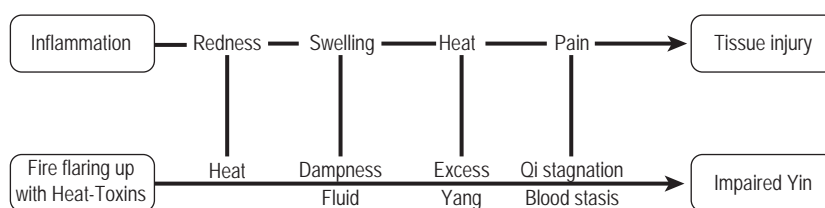
A. Acute phase

Flare-up of autoimmune disease is due to antigens being attacked by antibodies. The pathogenesis is antigen apoptosis, which causes inflammation. The local pathognomonic character of inflammation is that the area is red, swollen, hot and painful. (Figure 2.4 provides a comparison of acute inflammation and Fire flaring up with Heat-Toxins.) The inflammation can be acute or chronic; it can be severe, mild or asymptomatic. Chinese medicine realizes that external symptoms and signs are exact expressions of internal pathological change, and for this reason it uses symptoms and signs to diagnose diseases and prescribe treatment.

Autoimmune disorders occur mostly when the immune system mistakenly assails the body's own tissues and organs, causing cells to die and organs to atrophy. Generally speaking, the aetiological factors in autoimmune disorder are viral or bacterial infection, genetic predisposition and gender. Chinese medicine cannot alter genetics and gender, but it can prevent and treat viral and bacterial infections, and the inflammation they may cause.

Figure 2.4

Comparison of acute inflammation and Fire flaring up with Heat-Toxins.



When an acute autoimmune disorder manifests, it may attack different tissues and organs and present with different symptoms and signs, depending on anatomy, physiological function and pathogenesis. In Chinese medical theory, if the trigger is an epidemic febrile disease caused by one of the six External Evils, the pathogen will sink to the interior and cause symptoms such as cold or fever. If it goes deep into the interior, the pathogen will cause fever and inflammation. Such pathogens transfer readily to the interior in patients who have a constitutional Yin deficiency.¹³ Recently, the Chinese medical field has realized that Yin deficiency is a prerequisite for a patient to develop an autoimmune disease. If there is no Yin deficiency, an autoimmune disease may not occur.

According to Ye, Tian Shi 叶天士, as espoused in his *Wenbing 温病/Warm Disease Theory*, these diseases progress through four levels of transition: *Weifen* or protective level, *Qifen* or Qi level, *Yingfen* or nutritive level, and *Xuefen* or Blood level. Or, the pathogen may follow *Shang Han Lun 伤寒论/On Cold Damage* theory and progress in another way – through six-channel transmission.

Wei, Qi, Ying and Xue syndromes refer to the four stages in the course of an epidemic febrile disease and reflect the four locations in which pathogenic factors intrude from exterior to interior. Therefore, the four syndromes that may occur during an epidemic febrile disease indicate the location and severity of the pathological changes of the disease.

Weifen syndrome indicates that the disease is less serious; the initial invasion resides at the level of the body surface. It is an exterior invasion and causes dysfunction of the defensive Qi and obstruction of the Lung Qi. The manifestation includes fever, slight intolerance of wind and cold, sweating, red tongue tip, and a floating and rapid pulse. There may also be headache, thirst, cough and sore throat.

Qifen syndrome indicates a serious condition; the invasion now resides in the interior. The pathogenic factors affect a wide range of *Zangfu* or viscera and bowel organs. This syndrome manifests with internal Heat or Fire rising from the invasion of the viscera and bowels by pathogenic factors. Symptoms are due to the fierce conflict between vital Qi and the excess pathogens and hyperactivity of Yang Heat. The actual manifestation depends on which organ and tissue have been damaged. The symptoms and signs are primarily high fever, intolerance to heat, heavy sweating, extreme thirst, reddened tongue with a yellow coating, a full and rapid pulse, irritability and dark urine. The symptoms

and signs differ depending on which tissues have been violated by Heat and Fire. For instance, symptoms such as cough and dyspnoea, pain in the chest and yellow, thick sputum result from stagnation of Heat in the Lung; if the symptoms are spontaneous perspiration, dyspnoea, restlessness, extreme thirst, rapid pulse, and a dry and yellow tongue coating, they are due to stagnation of Heat in the Lung and Stomach; if the symptoms are a sensation of stuffiness on the chest, thirst, diarrhoea and delirium, the condition is due to invasion of the Large Intestine by Heat.

Yingfen syndrome indicates a more serious level of an epidemic febrile disease; Ying circulates with Blood in the blood vessels that connect to the Heart. Impairment of Ying and Yin disturbs the mind. The manifestation includes fever with a higher temperature at night, thirst with no desire to drink, irritability or delirium, faint skin rashes, crimson tongue, and a thready and rapid pulse.

Xuefen syndrome indicates a critical level in an epidemic febrile disease where the pathogen has penetrated deep into the Blood. Heat in the Blood impairs Yin, causes bleeding and aggravates Blood stasis. It manifests with skin rashes that are dark or purple in colour, haematemesis, haematochezia, haematuria, epistaxis, subcutaneous haemorrhage, a crimson tongue, and a deep and rapid pulse. The syndrome is due to Heat in the Blood impairing or injuring blood vessels. The manifestations include fever at night, flushed face, dry mouth, red eyes, tinnitus, deafness, burning sensation in the chest, palms and soles, and a feeble and rapid pulse.

A patient's condition can improve and Heat can be reduced with the correct treatment. When this occurs, the patient enters a remission phase. The patient may have no clinical symptoms, but a latent pathogen may still exist in the body and can be reactivated when the body is challenged by a new external pathogen. Should this occur, the clinical symptoms and signs will again become acute, as in the case above. We call this *Xin Gan Yin Dong Fu Xie* 新感引动伏邪. Xin Gan means there has been a new invasion by an exopathogen causing an exterior syndrome with aversion to Wind and Cold. Yin Dong means trigger, and in this case refers to the exopathogen, which then triggers Fu Xie, an antibody attacking an antigen in autoimmune disease. Thus, the Weifen syndrome begins again. Thus, Weifen, Qifen, Yingfen and Xuefen syndromes may move in a circle, circulating back and forth between acute flare, chronic phase and remission.

These four syndromes can induce the development of all autoimmune diseases at any phase, including initial infection, immune reaction, breakdown of immune tolerance and the occurrence of tissue damage. However, ancient Chinese medical practitioners never mentioned that Yin deficiency was the underlying interior pathological change that can trigger and aggravate autoimmune disease. Yin deficiency causes it to become more severe and can extend the chronicity of the illness. These ancient teachers also did not mention that in these cases Blood stasis is due to Yin deficiency and excess Heat; Fire burns and impairs the Blood and it becomes Blood stasis. Realizing this important concept in Chinese medical theory helps us to treat the illness with more success.

B. Remission phase

Chinese medical theory is a solid foundation for understanding the pathogenesis of autoimmune disease and how to deal with it correctly. Regardless of whether the treatment is acupuncture or Chinese herbal medicine, the basic theory is the same. Although classical Chinese medical theory described acute infections and 'latent pathogens', it did not tell how to treat patients in the remission phase.

Between the acute phase and latent pathogen phase, there is a phase called remission in Western medical terms. According to Chinese medicine, if the disease is acute, one treats its symptoms; once those symptoms have been reduced, the treatment should address the underlying root of the problem. In this way, we can say Chinese medicine already treats the remission phase; that is, we need to treat the primary cause of the problem. What is the underlying disharmony that causes autoimmune diseases? In this case, it is fine to use Western terminology to explain and understand the Chinese medical process. If we still observe this principle of 'treating symptoms in an emergency condition and treating the underlying cause if there is no urgency', we should nourish Yin and remove Blood stasis, because it is the main pathogenesis in autoimmune disorders. Through this treatment, further disease flare-ups can be prevented and the remission phase can be extended.

Patients with autoimmune diseases almost always have a constitutional Yin deficiency causing Fire to flare up. Patients in remission may have no symptoms, but the self-antigen and its corresponding antibody still exist. Tissue and cell apoptosis are occurring continually and cell fragments may trigger an immune reaction. Once a patient has a new infection or the cell fragments accrue, an acute flare recurs.

One important point to restate is that cells are formed substance and so belong to Yin; the function of cells, tissues and organs belong to Yang. For instance, the Heart's muscles, tissues and cells belong to Yin, but its constriction and blood pumping function belong to Yang. The Liver organ belongs to Yin, but its function of smoothing Qi, and its upward and downward movement, are Yang. The Spleen organ belongs to Yin, but its function of transporting and transforming nutrition belongs to Yang. The Lung organ belongs to Yin, but its functions to govern breath and distribute water belong to Yang. The Kidney organ belongs to Yin, but its function to govern the anterior and posterior orifices, the urethra and anus, belong to Yang.

Therefore, the progression of each autoimmune disorder may impair different organs, tissues and cells, causing the function of specific organs to be reduced. The reduction in function of relevant organs occurs for three reasons: inflammation (acute or chronic), tissue apoptosis and fibrosis. In Chinese medical terminology, we call this 'deficiency of Yin affecting Yang'. The primary problem is Yin impairment. Based on the above theory, if we see only Yang deficiency and treat it by warming Yang and nourishing Qi, even in the remission phase, the results may cause a flare-up of autoimmune disease.

Note that the remission of autoimmune diseases is different from that of allergy and asthma. During remission of the latter no antigen exists, so the treatment of allergy and asthma can include increasing Qi or Yang to stimulate T cells to mature; this increases the number of suppressor T cells that can suppress the

development of B cells in order to reduce IgE production during remission. In this way patients' symptoms can be reduced or even eliminated when the allergy season arrives. In Chinese medical terms, this is called 'tonifying the mother organ when the son organ is deficient'. However, nourishing Qi and warming Yang are inappropriate for autoimmune diseases in remission. This is because the antigen that may be the cause of an autoimmune disease is still in the body, even in remission. Chinese medicine realizes that such patients have a special constitution that makes them susceptible to the flaring up of Fire due to Yin deficiency. Nourishing Qi and warming Yang can undoubtedly impair Yin more strongly. Chinese medical theory indicates that physiological Yang Qi maintains normal life but abnormal and excessive Yang Qi will damage and impair the body by damaging Yin. Therefore, one should not warm Yang or nourish Qi even in the remission of an autoimmune disease. In the remission phase one needs to do the following:

- Protect tissue and cells from continuing damage.
- Prevent viral and bacterial infections that may trigger the illness to flare.
- Support any medication being prescribed and work towards eventually reducing it.
- Reduce the side-effects of prescribed medication.
- Resolve any other health problems that may be caused by the disease itself or medication side-effects.
- Mediate disordered immunity.

7. Chinese medicine treatment of autoimmune diseases

Ancient Chinese medical terminology never described specific autoimmune diseases, but it did enumerate symptoms that are similar to those that exist in autoimmune diseases, as well as their treatment. The situation is that Western medicine has produced more detailed research on the pathology and mechanism of illness development, but less in the way of treatment; Chinese medicine has had thousands of years of empirical clinical experience, but has produced fewer experimental data to explain and support its theories. If we combine both Chinese and Western medicine, we assure the best solution for patients' medical problems. Therefore, we are applying treatments described in ancient texts to treat autoimmune diseases for successful results. Based on our clinical experience and experiments and clinical reports from China, we realize that there are differences in the treatment of autoimmune diseases between Chinese and Western medicine. The Chinese medicine mechanism of treatment follows.

(I) Protecting or 'masking' antigens that are the body's own tissues and cells, and that may have a high risk of being damaged by disordered immunity

Generally speaking, cell apoptosis plays a central role in autoimmune diseases, regardless of which type of hypersensitivity response occurs in disordered immune-related diseases. The response is the same: an antibody reacts to an antigen and then causes cell, tissue and organ damage that finally leads to disordered

organ function. Consider it like this: if we could devise a treatment method that masked all or part of the antigens that are targets of disordered immunity, then the specific reacting antibody could not find those antigens. The number of reactive antibodies in the bloodstream would decline and the result would be a reduction in symptoms or, better still, healing of the disease itself.

This hypothesis is based on one method of treating allergies and asthma. To avoid an allergy or asthma attack, doctors usually advise patients to avoid antigens such as those from dogs and cats, or to use medications like antihistamines or steroids to treat or prevent recurrence of the condition. These treatments focus on symptom relief but not the primary cause. But Chinese medicine is not like that: when there is an allergy or asthma attack, we determine what are the different symptoms and prescribe herbal medicine and/or acupuncture to solve the problem; once those symptoms have disappeared, meaning that the illness is in remission, the treatment continues, but changes focus to the cause of the illness—disordered immunity. Chinese medicine elaborates on this with another method called ‘treat winter diseases in the summer’. Chinese medicine has a treatment in summer that specifically treats asthma and allergy. It includes using a paste of herbal medication on acupoints and blister therapy that causes infection on skin and even pus production with the clinical purpose of replenishing Qi and warming Yang. Actually, this treatment acts to stimulate T-cell increase and the production of more suppressor and helper T cells. This is because during the summer there are fewer antigens such as pollen. Thus, antigens have less opportunity to stimulate helper T cells to produce more IgE. Therefore there will be no symptoms, and suppressor T cells will cause a decrease in the number of active B cells, leading to less production of antibodies, including IgE. When the presence of antigens such as pollen recurs, normal IgE levels will not trigger a recurrence of allergy and asthma, finally healing the illness. To understand this hypothetical process better, see [Figure 2.5](#).

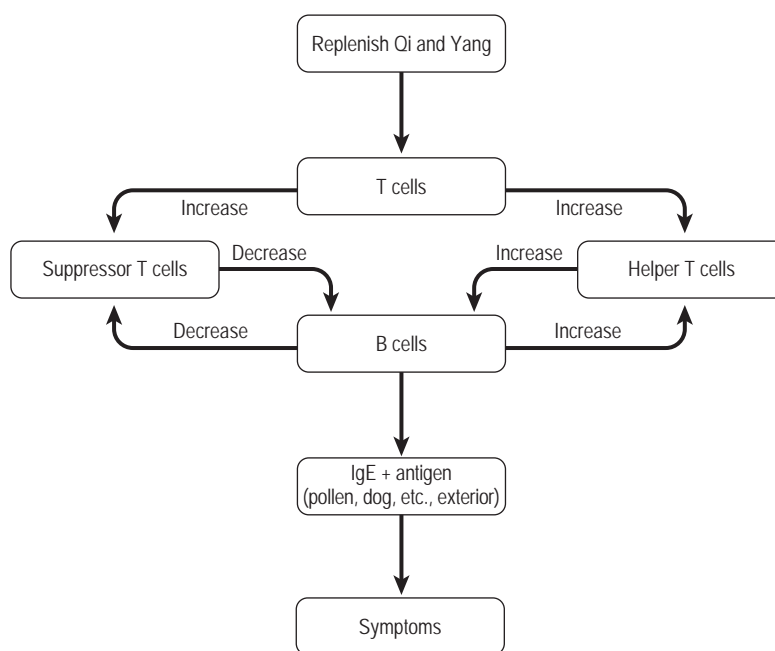
However, the antigens of autoimmune diseases are different to those that respond to the external antigens causing asthma and allergy. Autoimmune antigens come from the self and cause the creation of autoantibodies. Therefore, even in remission, the antigens still exist in the body, unlike exterior antigens. When allergies and asthma are in remission, there are fewer or no antigens to stimulate production of more antibodies. Therefore, in remission we replenish Qi and warm Yang to stimulate both helper and suppressor T cells. As there are no antigens in remission, when we stimulate T cells, helper T cells increase in number but cannot produce more antibodies, and suppressor T cells increase and suppress B cells so they do not produce more antibodies. Antibodies may decline to normal levels and, when patients are exposed to the triggering antigen, their symptoms become mild or disappear.

Yet autoimmune diseases are different. If one replenishes Qi and warms Yang, B cells will certainly produce more antibodies, leading to an autoimmune disease flare-up. There is recent clinical experience that cautions us to be careful in replenishing Qi and Yang in treating autoimmune diseases, even when there are Qi and Yang deficiency symptoms and signs.¹⁴

This raises the question of whether or not we can ‘mask’ antigens to reduce antibody production, thereby mitigating autoimmune diseases. We can answer this

Figure 2.5

Replenishing Qi and warming Yang to treat immune disorders.



question through clinical reports, experiments and Western medical pathological findings.

As discussed above, cells, tissues and organs are formed substance, belonging to Yin. Anything that causes damage and apoptosis to formed substance also causes Yin deficiency. We can see the symptoms and signs of Yin deficiency in the clinic. Seeing such deficiency, we can use herbs that stabilize and bind to protect Yin and avoid damage from antibodies.

Some clinical reports have shown that by nourishing Yin, antibodies are reduced.¹⁵ These results concur with results from our practice. For example, when levels of aspartate aminotransferase (AST) and/or alanine aminotransferase (ALT) enzymes are increased beyond normal levels, there is evidence of damage to liver cells. The reason could be infectious diseases such as hepatitis A, B or C, autoimmune hepatitis, or fatty liver where fatty tissues extrude and damage liver cells. Regardless of the cause of liver cell damage and apoptosis, we usually use Yin nourishing herbs like **Nu Zhen Zi** *Ligustri lucidi Fructus*, and stabilize and bind herbs like **Wu Wei Zi** *Schisandrae Fructus* to reduce enzyme levels and at the same time treat the underlying cause. From our clinical data on autoimmune hepatitis, when we nourish Liver and Kidney Yin, we see liver enzymes reducing, but when we cease nourishing Yin, levels of liver enzymes may rise again. In patients with Hashimoto's thyroiditis we witness the dynamic reaction to Yin-nourishing treatment. First we see T4 and T3 return to normal range. Then

thyroid stimulating hormone (TSH) concentration becomes normal. Finally, antibody levels decline and may also go into normal range. The treatment should affect the antigen, not the antibody.

Chinese medicine discusses how Yin may protect against faulty cell apoptosis. This is an important method of treating autoimmune and other degenerative diseases to reduce cell death. Although Yin deficiency is the pathological change existing in the progression of almost all autoimmune diseases, we should not only nourish Yin to treat all autoimmune diseases. This is because when different tissues and cells with different functions become impaired they produce different clinical symptoms and signs. Therefore, when treating in the clinic we must be concerned with the different condition, symptoms and signs that patients have and provide a treatment that considers: (1) which stage the patient is in (acute, chronic or remission); (2) Yin deficiency, which may coexist with Fire flaring up, or Dampness, Blood stasis, or Qi and Yang deficiency; and (3) whether or not the patient already uses medication and what it treats. Our treatment may target the primary disease or the side-effects of medication, or some other problem. It must also be determined by differentiation of symptoms and signs, also using laboratory results, and the knowledge that prescriptions may be causing symptoms.

According to this hypothesis, we nourish Yin to treat autoimmune diseases and this method works very well. As Chinese herbal medicine and acupuncture are based on the same theory, our treatments of autoimmune disease follow the same principle as basic Chinese medicine theory.

(2) Removing Blood stasis may improve the cellular environment

Removing Blood stasis may improve the cellular environment by effects on physical, temperature, pressure or chemical changes, or changes in blood sugar, blood urea nitrogen (BUN) or creatinine levels.

When cell apoptosis produces fragments that also trigger immune cell attack and damage more tissues, the process leads to inflammation of the local tissue. In turn, this leads to abnormal fibrosis. Therefore, it is important to treat collagens and overproliferating tissues by breaking down collagenous protein and softening the organs to treat abnormal fibrosis and restore impaired tissue function to normal or near-normal levels. Regulation of apoptosis in cells undergoing proliferation is the key to reversing the natural progression of these disorders.

As explained above, Yin deficiency is the basic factor in the pathology of autoimmune diseases. Yin deficiency usually causes Fire to flare up, Blood stasis and Qi deficiency. Removing Blood stasis is a common and important treatment method in treating autoimmune diseases. Blood stasis is not only a pathological substance but also a pathogen that affects recovery from illness.

According to our clinical experience, removing Blood stasis may be able to reduce inflammation, pain and swelling. In addition, it may increase the level of C3 and C4 in the bloodstream, which is usually decreased when antibodies destroy antigens using complements. These factors all demonstrate that the immune reaction in the damaged tissue is improving. Therefore, removing Blood stasis may help clean the pathological substances in impaired tissue to create a better environment for new cells to grow and prevent abnormal apoptosis.

Liang¹⁶ researched the relationship between humoral immunity, cellular immunity and a purple tongue (a sign of Blood stasis). Forty-eight (70%) of 69 patients with raised IgA and IgG levels had a purple tongue. The study showed that disordered immunity has a close relationship with the Chinese medicine concept of Blood stasis. Li¹⁷ introduced the method of moving Qi and removing Blood stasis, or *Mei Tong Ning*, to treat scleroderma. Of 311 patients, 95% who also had Raynaud's phenomenon had satisfying results. Measurement of microcirculation of the nail fold showed that vessel function had improved. In 164 patients with localized scleroderma and 147 with systemic scleroderma, skin softened. Biopsies showed not only that closed blood vessels had reopened but also that the phenomenon of exudation was reduced and collagenous fibres had become looser. Following these changes, sweat glands had also improved and returned to a normal condition.

Removing Blood stasis may induce the following results:

- 1 Expansion of blood vessels and increased blood flow, improving blood circulation. The overall benefit is the improvement of tissue condition, reduction in ischaemia and hypoxia, and an increase in the recovery of impaired tissues.
- 2 Reducing the condition of Blood stasis in local areas and reducing platelet aggregation.
- 3 Mediating vascular permeability. Some of the herbs that remove Blood stasis, like **Dang Gui** *Angelicae sinensis Radix*, **Hong Hua** *Carthami Flos*, **Tao Ren** *Persicae Semen*, **Mu Dan Pi** *Moutan Cortex* and **Hu Zhang** *Polygoni Cuspidati Rhizoma*, could reduce vascular permeability. Therefore they could remove Blood and reduce swelling. Some herbs could increase vascular permeability; for instance **Dan Shen** *Salviae miltiorrhizae Radix*, **E Zhu** *Curcumae Rhizoma*, **Ru Xiang** *Olibanum* and **Mo Yao** *Myrrha* increased the speed of healing of haematomas.
- 4 Degrading fibre protein. Removing Blood stasis could help prohibit scar tissue proliferation, benefiting impaired tissues and promoting cell recovery.
- 5 Removing Blood stasis may be able to remove and clean circulating immune complex (CIC), preventing antigen–antibody complex deposition on tissues that impairs their function.

A review of Chinese medicine theory suggests that you should remove Blood stasis first before treating Wind symptoms, such as itchy skin. The Wind naturally calms down when Blood flows well. We know that for most skin problems caused by immune function disorder, removing Blood stasis can affect immune function positively, because skin problems are almost always related to hypersensitivity allergy types I and IV.

Removal of Blood stasis is very common in the treatment of autoimmune diseases. However, one must be careful about herb dosage when using it for patients who already have a tendency toward bleeding or who are using anticoagulant Western medication such as heparin or Coumadin (warfarin), because this method may cause or increase the symptoms of bleeding.

(3) Clearing Heat can help protect Yin and prevent further damage to Yin

Chinese medicine realizes that promotion of the balance of Yin and Yang improves general health. Overactive Yang can damage Yin. Here there are two different meanings of hyperactive Yang: internal excess Yang and internal hyperactive Yang due to Yin deficiency. *Tiao Jin Lun* 调经论, a chapter in the *Huang Di Nei Jing Su Wen/Yellow Emperor's Inner Classic of Medicine Simple Questions*, says: 'if there is an external Cold sensation, it is caused by Yang deficiency; if there is an internal Heat sensation, it is caused by Yin deficiency If there is an external Heat sensation, it is caused by Yang excess; if there is an internal Cold sensation, it is caused by Yin excess'. Chinese medicine states that Heat syndromes are caused by an imbalance of Yin and Yang. In the clinic, excess Yang manifests with excess Heat symptoms; deficient Yin manifests with Heat due to Yin deficiency.

I. Infection induced by pathogens causes excess Heat in the body

When a pathogen causes infection, it induces white cells to release biochemical endogenous pyrogens. Through serial pathological change they stimulate the body's heat regulation centre to raise the temperature beyond the normal range. The resulting fever is said to be induced by one of the six exogenous factors, Wind, Cold, Summer Heat, Dampness, Dryness or Fire, invading the body through one of the six channels, *Taiyang*, *Shaoyang*, *Yangming*, *Taiyin*, *Shaoyin* or *Jueyin*, through one of the *San Jiao*, *Shang Jiao*, *Zhong Jiao* or *Xia Jiao*, or through one of the four levels, the *Weifen*, *Qifen*, *Yingfen* or *Xuefen*, and transforming into some illness. These febrile diseases are called *Zhuang Huo* 壮火, or excess pathological Fire. This type of pathological Fire can cause illness and impair Yin. The treatment method for febrile illness is called clearing Heat.

In Chinese medicine research, herbal medicines such as **Jin Yin Hua** *Lonicerae Flos*, **Lian Qiao** *Forsythiae Fructus*, **Pu Gong Ying** *Taraxaci Herba* and **Chai Hu** *Bupleuri Radix* were combined with **Huang Qin** *Scutellariae Radix* in animal experiments where there was fever. Four hours after administering these herbs, body temperature declined with satisfying results.¹⁸ Needling acupuncture points LI-11 Quchi and Du-14 Dazhui on animals was also able to reduce a high temperature.¹⁹

II. Pathological morphogenesis and function change

When pathogens invade the body and induce an imbalance between Yin and Yang, the imbalance causes the channels to be blocked by Blood stasis and Qi stagnation. Furthermore, the pathological product of this stagnation in the channel or organ induces Fire and Toxin, affecting the tissues and causing acute inflammation, cell apoptosis and atrophy.

The four most prominent pathological features of inflammation are redness, swelling, heat sensation and pain. An antigen and antibody reaction causes inflammation in local areas or the whole body. As a result of the inflammation and Fire flaring up and damaging Yin, cell apoptosis occurs and the normal function of the tissue or organ is compromised.

III. Pathological change of immunity

For the patient who has fever caused by disordered immunity, it is usually easy to catch one of the six exogenous factors, and viral and bacterial infections. The herbal medicine and acupuncture points used to clear excess Heat also improve the immune function, enhancing the ability of the body's antipathogenic system and accelerating impaired tissue recovery. Herbs with an ability to clear excess Heat include **Huang Qin** *Scutellariae Radix*, **Huang Lian** *Coptidis Rhizoma*, **Jin Yin Hua** *Lonicerae Flos*, **Ban Lan Gen** *Isatidis/Baphicacanthis Radix* and **Shi Gao** *Gypsum Fibrosum*. They can also enhance the abilities of the body's phagocytes.

The other functions of clearing excess Heat is to protect Yin and prevent its deficiency.

(4) Tonicifying Qi helps Yin to grow

When is the ideal time to use this method when treating autoimmune disease? *Huang Di Nei Jing* 黄帝内经/*The Yellow Emperor's Inner Classic of Medicine* tells us: 'humans do not easily contract illness when their vital Qi is strong enough to prevent invasions'. Vital Qi is produced by the Spleen and Kidney, which is why Chinese medicine thinks the Spleen and Kidney, along with the Wei, or protective Qi, are the source of growth and development of the human body. Therefore, we think the Spleen and Kidney have a very close relationship with immunity as described by Western medicine.

In the 1970s, Chinese clinical research showed that patients diagnosed with Spleen Qi deficiency who had low cellular immunity laboratory findings improved after receiving treatment to improve Spleen Qi. Later, during the 1980s, Sun²⁰ researched inpatients and divided them into two groups: patients with and those without Spleen deficiency. He found that patients with Spleen Qi deficiency had lower levels of cellular immunity than the other group, and that they were more likely to have anaemia and hypoproteinaemia. Yin²¹ researched patients with Spleen Qi deficiency and chronic stomach illness and compared them with normal patients. The laboratory findings of those with Spleen Qi deficiency indicated lower cellular immunity and their lymphocyte conversion test results showed that the transformation rate was lower than in the normal group ($P < 0.01$). In addition, patients with chronic gastritis who had been diagnosed with Spleen and Stomach Qi deficiency had a lymphocyte conversion rate lower than that of normal people. This condition is similar to chronic hepatitis and chronic colitis. Such patients also have a lower rate of lymphocyte conversion.

In Chinese medical theory, Qi deficiency is considered to be milder than Yang deficiency. Does this concept match the findings of clinical research in Western medicine?

Lu²² studied 50 patients diagnosed with multiple diseases and who were also diagnosed with Spleen and Kidney Yang deficiency. He found evidence that those with Kidney Yang deficiency had lower cellular immunity. In addition, Kidney-deficient patients had lower than normal suppressor T-cell activity.

The thymus gland is the principal organ of the immune system; it is the site of T-cell maturation. However, under normal conditions the activity of the thymus gland and its hormones begins to degenerate after the age of 20 years, and after

50 years of age the activity level is even lower.²³ When compared with normal people of the same age, Kidney-deficient patients, including those with Yin and Yang deficiency, have a lower activity of thymus hormones, especially in the age group of 20–40 years old. The research demonstrated that Kidney-deficient patients have reduced thymus gland secretion. Interleukin (IL)-2, a non-specific lymphokine, is an important indicator of immune reaction and immune mediation. Thus, research on IL-2 levels is of particular clinical significance in measuring Kidney deficiency. As one ages, the level of active IL-2 declines, and the activity level of IL-2 of Kidney-deficient patients is lower than that of the normal person ($P < 0.01$).

Recent research has shown that apoptosis of T lymphocytes is a fundamental process regulating antigen receptor selection during T-cell maturation and homeostasis of the immune system. T-cell apoptosis occurs in at least two major forms: antigen driven and lymphokine withdrawal. These forms of death are controlled in response to local levels of IL-2 and antigen in a feedback mechanism. Active antigen-driven death is mediated by the expression of death cytokines such as FasL and tumour necrosis factor (TNF). These death cytokines engage specific receptors that assemble caspase-activating protein complexes. These signalling complexes regulate cell death tightly, but are vulnerable to inherited defects.²⁴

In brief, Spleen Qi and Yang and Kidney Qi and Yang deficiency may be equivalent to the Western medical concepts of T-cell deficiency and apoptosis (see Figure 2.3). Therefore, we can see that nourishing Qi and warming Yang may stimulate T-cell production, causing an increase in suppressor T cells that act to reduce B-cell attack against target tissue. This gives target tissue (Yin) a chance to recover. This seems to characterize the Chinese medicine idea of Yin development being based on the growth of Yang. These theories guide us in applying correct treatment with none or fewer side-effects when treating immune system-related diseases such as allergy, asthma, chronic bronchitis and autoimmune disease. Yet some clinical reports provide evidence that nourishing Qi and warming Yang exacerbate symptoms of autoimmune diseases. Why is this method not fit for all immune system-related diseases? What is the key point we need to follow? According to Western medical theory, we know that autoimmune diseases are different from allergies and seasonal asthma as their antigens arise from different sources: the antigens responsible for allergy come from outside the body, as opposed to the antigens in autoimmune diseases, which come from inside the body. Differentiation of the sources of antigens suggests that we use different methods and treatments. Therefore, we must not only differentiate symptoms and signs according to Chinese medical principles, we must also use Western medical theory to differentiate aetiological and pathological differences.

(5) Eliminating Dampness is one of the treatments in autoimmune disorders

Retention of Phlegm and Fluid is a pathological process that may occur in autoimmune diseases. Phlegm and Fluid are Yin pathogens in Chinese medical theory caused by abnormal liquid metabolism. In consistency, the thicker of the two is called *Tan* 痰, or Phlegm, and the thinner *Yin* 饮, or Fluid. Usually they are called

Tan Yin together, because they are from the same pathogen, Dampness. Ancient Chinese medical doctors said that strange or difficult-to-treat diseases were caused by *Tan Yin*. Pathogenic Phlegm and Fluid can flow through the entire body, obstructing the channels and disturbing the smooth flow of Qi, thus damaging organs and tissues.

Pathogenic Phlegm and Fluid affecting different organs and channels cause different diseases and symptoms. Phlegm affecting the Heart causes chest pain, tenderness and palpitations; Phlegm in the Lung causes cough with more sputum. In chronic cases, it leads to symptoms of asthma, difficulty sitting up and oedema in the legs; Phlegm in the Spleen and Stomach leads to nausea, vomiting, diarrhoea and indigestion. Phlegm rising upward to the head leads to dizziness, headache and even unconsciousness, dementia and manic-depressive psychosis. Phlegm sinking downward to the knees and legs leads to swelling and oedema.

Fluid is almost always due to deficient Qi in the Lung, Spleen and Kidney, or to weak Qi transformation in the *San Jiao*. Fluid accumulation in the Upper Jiao leads to pleural effusion; in the Middle Jiao it leads to ascites; in the Lower Jiao it leads to oedema.

Phlegm and Fluid can be the result of an autoimmune disease and they can also be aetiological agents that cause more problems and symptoms. They may be caused by inflammation that blocks circulation in a local area leading to exudation; in a disordered autoimmune attack, the function of some organs and tissues to pump blood well may be decreased or induce the serous fluid to effuse locally. Therefore, eliminating pathogenic Phlegm and Fluid helps to speed recovery from some illnesses.

(6) Treatment may be based on differentiation of symptoms and signs or on differentiation of diseases, or a combination of the two

To select the best treatment, Chinese medicine follows differentiation of symptoms and signs. Chinese medicine believes that all internal physiological and pathological changes are expressed as external symptoms and signs. However, some diseases, such as mild autoimmune hepatitis, pulmonary hypertension and Hashimoto's thyroiditis, may not produce external symptoms and signs which might be picked up by a western doctor. With no symptoms and signs in the earlier stage of a disease, the treatment we provide must rely on Western medical diagnosis, laboratory results and changes in pathology resulting from prescribed Chinese medicine. This is called differentiation of diseases, and is a method of integrative medicine.

I. Differentiation of symptoms and signs

Differentiation of symptoms and signs to determine appropriate treatment has been an integral practice of Chinese medicine for more than 5000 years. For instance, Cold is used to treat Warm disease; Heat is used to treat Cold disease. This is correct and it works. However, autoimmune diseases follow a specific process during acute flares. For instance, as stated above, disordered autoimmunity attacks certain tissues and organs, causing apoptosis that results in signs and symptoms that are similar to Yin deficiency. According to Chinese medical theory,

Yin and Yang regenerate each other. Replenishing Qi will aid in Yin regeneration. However, to do so would be inappropriate, for the reasons described above. This is because Chinese medicine has another theory called ‘excess Qi leads Fire to flare up’; nourishing Qi would aggravate internal Heat, making the illness worse. From the perspective of Western medical theory, replenishing Qi stimulates T cells and increases the number of suppressor and helper T cells, so worsening the disease (see [Figure 2.3](#)).

Therefore, we must follow the Chinese medical theory of differentiation of symptoms and signs, but we must also know more about research on single herbs and acupuncture points, and more importantly we must understand the significance of pathological changes according to Western medicine.

II. Differentiation of diseases

Ancient Chinese medical documents base treatment methods on symptoms and signs, but also sometimes use symptoms to name diseases, such as vomiting, diarrhoea, headache, etc. These symptoms can be caused by different diseases. For example, vomiting is a symptom that can be caused by acute bacterial or viral infection, neuropsychiatric factors or side-effects of chemotherapy. However, patients with diseases such as hyperthyroidism, treated by methimazole, or hypothyroidism, treated by thyroxine, may have no clinical symptoms. With this in mind, treatment must be based on both Chinese and Western medical theory, particularly in the case of autoimmune diseases, which, although not specifically named in ancient documents, have symptoms that have been described. Differentiation of diseases is an important method, because it can enhance clinical results.

Different autoimmune diseases have different pathological changes during their progression, depending on which tissue is affected. In hyperthyroidism, for example, the output of the thyroid gland increases so that excess thyroxine is produced. This results in symptoms characterized by Liver Yang rising. If the treatment we offer only descends Liver Yang and clears Fire, then the clinical result will merely resolve the symptoms, not delve more deeply into treating the primary problem. Autoimmune disease can also impair different tissues at the same time, for example Sjögren’s syndrome combined with rheumatoid arthritis. Both of these are autoimmune diseases, but they each impair different tissues and cause different symptoms. Therefore their treatment will be different. Sjögren’s syndrome damages glandular tissue that has a moistening function, causing Yin deficiency symptoms; but rheumatoid arthritis damages the joint’s synovium and causes Fluid retention, resulting in stagnation of Phlegm-Dampness symptoms. So there is a big contradiction in the treatments: nourishing Yin while not exacerbating Dampness; resolving Dampness, but not damaging Yin further. However, if we understand both Western and Chinese medical theory, we can choose the treatment that does not damage Yin and also does not aggravate Dampness. Therefore, differentiation of diseases in individual cases is crucial for determining appropriate treatment.

III. Integrative medicine

Usually patients who come to us have already had a Western medical diagnosis. Many have already received treatment and arrive carrying pharmaceuticals and laboratory results. Sometimes patients have diagnoses without any symptoms.

For instance, Graves' disease, also called hyperthyroidism, involves an antibody-induced stimulation of the thyroid gland and causes hypermetabolic symptoms. As there is no good method for inhibiting the role of the immune system in this overproduction of thyroid hormone, treatment commonly used involves eliminating thyroid tissue entirely. The first method is the administration of radioactive iodine to destroy the thyroid, and the second is surgical excision. Once the gland has been destroyed or removed, the patient receives an exogenous source of thyroid hormone for the rest of his life. In some cases, a patient may receive a beta-blocker to reduce hyperthyroid symptoms. However, none of these treatments addresses the primary problem, which is that the pathological process still exists; the antibodies are still positive and continue to destroy the thyroid tissue.

Similarly with Hashimoto's thyroiditis, patients take medication to replace thyroid function and the symptoms of hypometabolism are relieved. But later on a patient may require an increased dosage, depending on the severity of the tissue damage, because the primary problem still exists. To treat such patients, on the one hand we must allow them to continue their medications. On the other hand, we must address the underlying problem, which is to resolve the primary cause of the disease. In this case, the primary cause can be described using the terminology of Western pathology and we must rely on laboratory data to determine our treatment strategy and effect, not just symptoms and signs. If we were to apply Chinese medical theory by itself, that of 'reducing excess and replenishing deficiency', we would treat Graves' disease by reducing and Hashimoto's thyroiditis by replenishing, and mediating disordered immunity. Once the impaired tissue has recovered from autoimmune disease, the medication can be reduced or even stopped. Therefore, differentiation of diseases is very important when treating autoimmune diseases and the use of integrative medicine is necessary. We must use this method to determine the prescription and then monitor the treatment results using Western laboratory tests.

Integrative medicine has the great advantage of helping to reduce the side-effects of medication while increasing the effectiveness of the medication. Use of Western medicine alone increases the difficulty of resolving some of these problems. For instance, in the treatment of hypothyroidism Western medicine always employs hormone replacement therapy, which reduces the patient's symptoms, but also reduces the feedback function that normal people have. This can lead to further atrophy of the patient's thyroid gland.

By preventing invasion by the six exogenous pathogens, Chinese medicine helps to avoid the triggering of autoimmune diseases; when a patient uses steroids, Chinese medicine may help to protect antigens and reduce their fragmentation, which could otherwise trigger an immune response, causing a continuing attack on target cells and tissues. Through these processes, Chinese medicine may help to speed the natural progression of illness so that a disease that has flared up will go into remission more quickly. Chinese medicine mediates immunity; it does not simply suppress the immune system as Western medicine does. Chinese medical treatment combined with Western medicine and its theory has great benefit to patients in treating autoimmune diseases.

8. Keeping Yin and Yang balanced is the key to preventing and treating autoimmune diseases

Keeping Yin and Yang in balance is a huge topic that involves all Chinese medical theory and treatment. Yin generates Yang; Yang generates Yin; Yin and Yang regenerate together and help each other. Autoimmune diseases defer to this principle: Qi, Yang deficiency are usually appearances when the normal tolerance of the body is broken and disordered immunity attacks the body's own cells, autoimmune disease occurs. Diabetes mellitus, rheumatoid arthritis, lupus and multiple sclerosis are examples of autoimmune disease. In Chinese medical theory they are all the result of an imbalance of Yin and Yang. Chinese medical treatment for autoimmune diseases is based on the theory of balancing the Yin and Yang, and resolving the symptoms and signs, as well as the primary problem.

Summary

An autoimmune disorder occurs when an individual's immune system begins to attack the individual's own tissues and cells. The trigger for the attack may be due to infection, gender, hormones and/or genes. It causes serious and complicated symptoms. However, regardless of the type of autoimmune disease, the basic pathological change is that attacked tissues and cells become apoptotic, for example in lupus, leading to a reduction in the function of the attacked tissue. Or in some cases, the attack stimulates the target cells to proliferate, for example in Graves' disease, leading to an increased function of the attacked tissue. In autoimmune diseases, the pathological relationship is between antigens and antibodies. Each autoimmune disorder manifests differently and often multiple diseases appear, entirely unrelated to one another, despite a common basis for the immune attack. For example, early-onset diabetes (type I) results in hunger, weight loss, excessive urination, fatigue and other symptoms. Connective tissue diseases may result in pain, stiffness and swelling in the joints. Sjögren's syndrome results in dryness of the eyes and mouth. So it can be said simply: the symptoms of an autoimmune disease depend on which tissues and cells are the target of attack by the immune system.

The name given to an autoimmune disease depends on what tissue (or tissues) has been impaired. Chinese medicine treatment is based on an analysis of symptoms and signs, but Western medical pathological change must also be considered. Below is a summary that briefly discusses how Chinese medicine treats modern illness, specifically autoimmune diseases.

(I) Preventing invasion by the six external pathogens

Generally speaking, many Chinese medical ideas emerge from the concept of external pathogens – climactic influences such as Cold and Wind, that can enter the body. Once in the body, it may be possible to expel them. However, with autoimmunity, the external pathogens may trigger the immune cells to attack normal tissues and cause autoimmune disease.

Autoimmune disorders, because of their chronic nature, are understood to be based on an underlying deficiency syndrome, as has been explained by Lin²⁵ and

Zhou & Zhou.²⁶ In brief, it is the deficiency that permits pathogens to manifest in the first place in the Weifen. If the vessels are full of Qi and Blood, and the organs work properly and are full of Essence, a person will be healthy or, at worst, suffer minor and short-term diseases. Instead, the deficiency condition allows external pathogenic influences to enter and permits a disease to progress, transform and become serious because of inadequate resistance to this process by vital Qi.

Genetic factors involved in diseases are often associated with the Chinese concept of Essence deficiency, specifically Kidney Essence deficiency. Diseases that progress with ageing are also attributed to deficiencies of Kidney and Liver, and involve Essence deficiency. The potential role of viruses or other infectious agents in triggering the disease process (as indicated by some modern investigations) corresponds, in part, to the failure to repel the external pathogen. Therefore, preventing and treating invasion by external pathogens is an important method for preventing triggering autoimmune diseases from flaring up. We have designed **SNIFF & RELIEVE**, a herbal aromatherapy remedy (formulated by the All Natural Medicine Clinic) that prevents invasion by the six pathogens and thereby blocks the triggering of an autoimmune disease.

(2) Yin and Yang balance

Nourishing Yin is critical for treating autoimmune diseases. According to common approaches to disease treatment, tonification of deficiencies would be part of the therapy throughout treatment, as the effect of other therapeutic approaches would be boosted by the presence of adequate Qi, Blood and Essence. Tonification would be especially important during remission as there would be no immediate need for intensive alleviation of inflammation, swelling, pain or other acute symptoms. During an acute syndrome, it would usually be a secondary part of treatment.

Nourishing Yin works especially well in reducing or preventing apoptosis and in reducing the amount of cell fragmentation. Specific antibodies cannot find corresponding antigens, so the antibody levels decline or even disappear. The evidence for this hypothesis is based on the clinical research of Zhou, Shen and Zhou & Zhou,²⁶ and is identical to the experience of patients in the clinic.

However, with acute inflammation causing local swelling, exudation and pain, nourishing Yin may be insufficient to affect local tissue and improve symptoms. Therefore, this treatment must be combined with another to resolve the inflammation, Blood stagnation and pathological Phlegm.

(3) Vitalizing or removing Blood stasis

Autoimmune diseases cause inflammation that damages local microcirculation and impairs the cellular environment. Addressing Blood stasis prevents the antibody and circulating immune complex from attacking the antigen and destroying it. It also prevents and reduces the proliferation of fibrotic protein. Chinese medicine states that removing Blood stasis can treat difficult diseases.

(4) Eliminating Phlegm and Dampness

Fluid metabolism can become disordered in the autoimmune disease process. Inflammation causes exudation and damage to tissues, and also affects cellular fluid.

(5) Clearing Heat

Heat has two phases: excess Heat and deficient Heat. Excess heat may be due to infection by viruses and/or bacteria. Deficient Heat may be due to chronic infection and/or apoptosis, when cellular fragmentation triggers inflammation. This latter is called Heat due to Yin deficiency.

To summarize, Chinese medicine performed in the clinic is not ‘an old fashioned type of gun that shoots in every direction and has no specific target’. Rather, every single herb or acupuncture point has its own function and target. Therefore, in this book we hope to illustrate how Chinese medicine works and how in its practice ‘no bullets are wasted’.

9. Treatment

Immune system disorders involve four types of hypersensitivity, two of which will be discussed here. The symptoms of each are different, as are the treatments. However, they may overlap.

(I) Treatment of type I hypersensitivity

Type I hypersensitivity is an allergic reaction. For instance, allergic rhinitis (commonly called hay fever) and asthma are diseases of disordered immune function. The common symptoms are sneezing, stuffy or runny nose and eyes, itchy nose and throat, sometimes a nasal-sounding voice, difficulty breathing, poor appetite, snoring during sleep and coughing with or without phlegm. These symptoms may occur seasonally or throughout the whole year. Type I hypersensitivity is sometimes simply called allergy. In some patients it is more severe and develops into bronchial asthma.

Bronchial asthma is an episodic, allergic pulmonary disease. The attack is mostly the result of inhalation of or contact with allergens, such as pollen, dust, insects (such as mites) and microbes. During the attack, patients have severe dyspnoea, which is due to spasm of bronchial smooth muscles, swelling of the bronchial mucosa and hypersecretion of mucus, leading to bronchial obstruction. When the attack is sustained for a long time without relief, it is called ‘status asthmaticus’. This disease is attributable to the categories of *Xiao* 哮, bronchial wheezing, and *Chuan* 喘, dyspnoea.

On laboratory examination, the eosinophilic leukocyte count may increase markedly during an attack of both of allergy and asthma – up to 5–15% or more in the differential count. Sputum examination may reveal more eosinophilic leukocytes and rhomboid crystals in the sputum. Serum concentration of IgE may be increased. Skin tests for the specific allergen are helpful to determine the triggering agent, but an allergy test may actually provoke a dangerous asthma or allergy attack, and should therefore be performed very carefully.

With regard to treatment, there are two important components:

- to solve the problem during the allergic or asthmatic attack by relieving symptoms
- to solve the root of the problem – this requires mediating the disordered immune function.

A. Treatment of symptoms

The immunological processes involved in the airway inflammation of asthma are characterized by the proliferation and activation of helper T lymphocytes (CD4⁺) of the Th2 subtype. Th2 lymphocytes mediate allergic inflammation in atopic asthmatics by a cytokine profile that involves eosinophils that are frequently present in the airway of asthmatics and membranes of allergic individuals, and these cells produce mediators that can exert damaging effects on the airway and membranes. Treatment in this phase is to prevent infection and inflammation, reduce spasm of smooth muscles and prevent mast cells from releasing histamine.

As examples, we recommend using the formulas below to treat specific conditions.

Herbal treatment

- *Cold wheezing*

SHE GAN MA HUANG TANG or XIAO QING LONG TANG *variation*

Belamcanda and Ephedra Decoction or Minor Blue Dragon Decoction

Ma Huang *Ephedrae Herba*

Gui Zhi *Cinnamomi Ramulus*

Xi Xin *Asari Herba*

Gan Jiang *Zingiberis Rhizoma*

Jiang Ban Xia *Pinelliae Rhizoma preparatum*

Xing Ren *Armeniacae Semen*

Chen Pi *Citri reticulatae Pericarpium*

Zi Wan *Asteris Radix*

Kuan Dong Hua *Farfarae Flos*

Zi Su Zi *Perillae Fructus*

Bai Jie Zi *Sinapis Semen*

Lai Fu Zi *Raphani Semen*

Hou Po *Magnoliae officinalis Cortex*

Xuan Fu Hua *Inulae Flos*

Ting Li Zi *Lepidii/Descurainiae Semen*

- *Heat wheezing*

DING CHUAN TANG *variation*

Arrest Wheezing Decoction

Ma Huang *Ephedrae Herba*

Huang Qin *Scutellariae Radix*

Zhi Mu *Anemarrhenae Rhizoma*

She Gan *Belamcandae Rhizoma*

Xing Ren *Armeniacae Semen*

Sang Bai Pi *Mori Cortex*

Zhu Li *Bambusae Succus*

Zhi Ban Xia *Pinelliae Rhizoma preparatum*

- *Deficient wheezing*

PING CHUAN GU BEN TANG *variation*

Arrest Asthma to Tonify the Kidney

Dang Shen *Codonopsis Radix*

Wu Wei Zi *Schisandrae Fructus*

Shan Zhu Yu *Corni Fructus*

Zi Shi Yin *Fluoriturum*

Chen Xiang *Aquilariae Lignum resinatum*

Zi Su Zi *Perillae Fructus*

Zi Wan Asteris *Radix*

Ke Zi *Chebulae Fructus*

Ban Xia *Pinelliae Rhizoma preparatum*

Kuan Dong Hua *Farfarae Flos*

Acupuncture

Dingchuan (extra), BL-13 Feishu, BL-12 Fengmen, Du-14 Dazhui, LU-7 Lieque and ST-40 Fenglong.

B. Treatment of primary causes

In treating the underlying cause of asthma and allergy, it is important to help damaged airways and membranes remodel and to mediate the disordered immune system. Pathologically, airway remodelling appears to have a variety of features that include an increase in smooth muscle damage, mucous gland hyperplasia, persistence of chronic inflammatory cellular infiltrates, release of fibrogenic growth factors along with collagen deposition, and elastolysis.

T cells, especially suppressor T cells, play an important role in the process of asthma and allergy. They determine IgE levels in the bloodstream. This means that treatment is related to the prognosis for asthma and allergies.

Allergies, including food allergies, and bronchial asthma, are treated in two different phases: when the condition is acute, treat the symptoms; if there are no symptoms, Chinese medicine will boost T cells, particularly suppressor T cells that mediate B cells, which produce IgE. This reduces patients' exposure to antigens, making them less sensitive to antigens, and thereby curing the disease. We call this 'treating symptoms in an emergency case and treating the primary problem in chronicity'.

Herbal treatment

- *Qi deficiency*

YU PING FENG SAN *and* GUI ZHI JIA HUANG QI TANG *variation*

Jade Windscreen Powder, and Cinnamon Twig and Astragalus Decoction

Dang Shen *Codonopsis Radix*

Huang Qi *Astragali Radix*

Bai Zhu *Atractylodis macrocephalae Rhizoma*

Fang Feng *Saposhnikoviae Radix*

Gui Zhi *Cinnamomi Ramulus*

- *Both Qi and Yin deficiency*

SHENG MAI SAN *variation*

Generate the Pulse Powder

Ren Shen *Ginseng Radix*

Mai Men Dong *Ophiopogonis Radix*

Wu Wei Zi *Schisandrae Fructus*

Huang Qi *Astragali Radix*

Huang Jing *Polygonati Rhizoma*

Bai He *Lilii Bulbus*

Yu Zhu *Polygonati odorati Rhizoma*

- *Spleen and Kidney deficiency*

LIU JUN ZI TANG *and* JIN GUI SHEN QI WAN *variation*

Six Gentlemen Decoction and Kidney Qi Pill from the Golden Cabinet

Dang Shen *Codonopsis Radix*

Huang Qi *Astragali Radix*

Fu Ling *Poria*

Bai Zhu *Atractylodis macrocephalae Rhizoma*

Zhi Fu Zi *Aconiti Radix lateralis preparata*

Rou Gui *Cinnamomi Cortex*

Shu Di Huang *Rehmanniae Radix preparata*

Shan Zhu Yu *Corni Fructus*

Acupuncture

Ren-22 Tiantu, BL-13 Feishu, ST-36 Zusanli, LU-9 Taiyuan, SP-3 Taibai and Front headline 1 (extra: make a line upward from the inner canthus 0.5 cun inside the hairline).

(2) Treatment of autoimmune diseases

Autoimmune diseases are different from type I hypersensitivity as the antigen comes from a different source – it comes from inside the patient's own body and tissues.

A. Treatment of symptoms

In the acute process, disordered immunity attacks different tissues and cells, leading to inflammation in the local tissue and affecting its function. In the chronic process, damaged and apoptotic tissues and cells trigger immune cells to clean the area, leading to chronic inflammation. In the acute phase, the treatment is to eliminate Heat in order to protect Yin. In the chronic phase, the treatment is to nourish Yin and clear deficient Heat.

Herbal treatment

- *Pathogens in the Weifen*

YIN QIAO SAN *variation*

Honeysuckle and Forsythia Decoction

Jin Yin Hua *Lonicerae Flos*

Lian Qiao *Forsythiae Fructus*

Dan Zhu Ye *Lophatheri Herba*

Niu Bang Zi *Arctii Fructus*

Fang Feng *Saposhnikoviae Radix*

Jing Jie *Schizonepetae Herba*

Bo He *Menthae haplocalycis Herba*

- *Pathogens in the Qifen*

BAI HU TANG *and* HUANG LIAN JIE DU TANG *variation*

White Tiger Decoction and Coptis Decoction to Relieve Toxicity

Sheng Shi Gao *Gypsum fibrosum*

Zhi Mu *Anemarrhenae Rhizoma*

Huang Lian *Coptidis Rhizoma*

Huang Qin *Scutellariae Radix*

Huang Bai *Phellodendri Cortex*

Zhi Zi *Gardeniae Fructus*

- *Pathogens in the Yingfen and Xuefen*

QING YING TANG *and* XI JIAO DI HUANG TANG *variation*

Clear the Nutritive Level Decoction and Rhinoceros Horn and Rehmannia Decoction

Sheng Di Huang *Rehmanniae Radix*

Xuan Shen *Scrophulariae Radix*

Mai Men Dong *Ophiopogonis Radix*

Dan Shen *Salviae miltiorrhizae Radix*

Huang Lian *Coptidis Rhizoma*

Mu Dan Pi *Moutan Cortex*

Shui Niu Jiao *Bubali Cornu*

Acupuncture

Du-20 Baihui, BL-17 Geshu, BL-18 Ganshu, LI-11 Quchi, SP-10 Xuehai, SP-6 Sanyinjiao and LIV-2 Xingjian.

B. Treatment of primary causes

Antigens come from within the body; autoimmune diseases are different from type I hypersensitivity, because the antigen arises either from cell apoptosis or

from a post-infection event when a pathogen imitates some part of a patient's tissue and that tissue becomes the target of the immune system. Therefore, in treating the primary problem, it is important to prevent this antigen from becoming a target of the immune system and to protect it, so that it cannot be recognized by immune cells. Of course, this is only a hypothesis regarding the treatment process of Chinese medicine, but this treatment principle does have excellent clinical results. Some patients' antibodies decrease to normal levels; cell damage appears to be prevented; and the treatment also works in major problems when a patient has simultaneous impairment of multiple tissues, although the treatment should address only one problem at a time so as not to complicate matters.

Herbal treatment

- *Yin deficiency*

ZUO GUI WAN *variation*

Restore the Left Kidney Pill

Sheng Di Huang *Rehmanniae Radix*

Gou Qi Zi *Lycii Fructus*

Shan Zhu Yu *Corni Fructus*

Niu Xi *Achyranthis bidentatae Radix*

Tu Si Zi *Cuscutae Semen*

Gui Ban *Testudinis Plastrum*

Dang Gui *Angelicae sinensis Radix*

Wu Wei Zi *Schisandrae Fructus*

- *Fire flaring due to Yin deficiency*

ZHI BAI DI HUANG WAN *variation*

Anemarrhena, Phellodendron and Rehmannia Pill

Zhi Mu *Anemarrhenae Rhizoma*

Huang Bai *Phellodendri Cortex*

Sheng Di Huang *Rehmanniae Radix*

Shan Zhu Yu *Corni Fructus*

Shan Yao *Dioscoreae Rhizoma*

Mu Dan Pi *Moutan Cortex*

Fu Ling *Poria*

Acupuncture

Ren-22 Tiantu, BL-17 Geshu, BL-18 Ganshu, BL-20 Pishu, BL-23 Shenshu, BL-40 Weizhong and KI-3 Taixi.

However, the antigen in some autoimmune diseases comes from an external source; viral and bacterial infections, such as hepatitis B, hepatitis C, Lyme disease, etc., can lead to post-infectious autoimmune diseases. On the one hand, the treatment must inhibit the infection. On the other hand, the treatment must

address the underlying problem that has caused the autoimmune disease to be able to occur, as described above.

To summarize, the overall treatment principle to address autoimmune diseases is to nourish Yin, clear Heat, remove Blood stasis and ameliorate all symptoms.

10. Chinese medical treatment is based on symptoms and signs

Using Chinese medicine principles, one can treat multiple Western medical diagnoses using one type of intervention. For example, Alzheimer's disease, diabetes (type II), infertility, menopause, Parkinson's disease, osteoporosis and amyotrophic lateral sclerosis (ALS) can all be treated by nourishing Yin; scar tissue overgrowth, hepatocirrhosis and amyloidopathia can all be treated by removing Blood stasis. The treatment of Chinese medicine is based on basic pathological change. Diseases may be different according to Western medicine, but in Chinese medicine their treatments may all be the same.

References

1. Cheng X. Chinese acupuncture and moxibustion. Beijing: Foreign Languages Press, 1987.
2. Cohen JJ. Overview: mechanisms of apoptosis. *Immunology Today* 1993; 14:126–130.
3. Patel YI, McHugh NJ. Apoptosis – new clues to the pathogenesis of Sjögren's syndrome? *Rheumatology* 2000; 39:119–121.
4. Ichiki Y, Aoki CA, Bowlus CL. T cell immunity in autoimmune hepatitis. *Autoimmunity Review* 2005; 4(5):315–321.
5. Yamamoto T, Nishioka K. Possible role of apoptosis in the pathogenesis of bleomycin-induced scleroderma. *Journal of Investigative Dermatology* 2005; 123(4):803–805.
6. Flauke Z. Apoptosis in multiple sclerosis. *Cell and Tissue Research* 2000; 301(1):163–171.
7. Zhou X, Zhou Z. Intermediate and late rheumatoid arthritis treated by tonifying the Kidney, resolving Phlegm, and removing Blood stasis. *Journal of Traditional Chinese Medicine* 2000; 20(2):87–91.
8. Chen K, Li C. New edited herbology on anti-aging. Beijing: People's Health Publishers, 1998.
9. Barinaga M. NEWS: Is apoptosis key in Alzheimer's disease? *Science* 1998; 281(5381):1303–1304.
10. Anderson AJ, Su JH, Cotman CW. DNA damage and apoptosis in Alzheimer's disease. *Journal of Neuroscience* 1996; 16:1710–1719.
11. Tatton WG, Chalmers-Redman R, Brown D. Apoptosis in Parkinson's disease: signals for neuronal degradation. *Annals of Neurology* 2003; 53(suppl 3):S61–S70.
12. Cipriani P, Fulminis A, Pingiotti E et al. Resistance to apoptosis in circulating T lymphocytes from patients with systemic sclerosis. *Journal of Rheumatology* 2006; 33:2003–2014.
13. Mon S. Nanjing University of TCM – Chinese medical experts. Beijing: People's Health Publishers, 1999.

14. Shen P. Lupus research of Chinese medicine in clinic. Beijing: People's Health Publishers, 1997.
15. Shen P, Su X. Contemporary immunology in traditional Chinese medicine. Beijing: People's Health Publishers, 2002.
16. Liang Z. Research on blood rheology of Blood stasis and removing Blood stasis. In: Kuang T, Dai H (eds) Pathological basis of modernized TCM, p 233. Shanghai: Shanghai Science Universal Publisher, 1998.
17. Li J. In: Kuang T, Dai H (eds) Pathological basis of modernized TCM, p 225. Shanghai: Shanghai Science Universal Publisher, 1998.
18. Kuang T, Dai H (eds). In: Pathological basis of modernized TCM, p 444. Shanghai: Shanghai Science Universal Publisher, 1998.
19. Yang J, Cao Y. Acupuncture points. Shanghai: Shanghai Scientific and Technical Publishers, 1984.
20. Sun B. Clinical discussion on essentials of Chinese medical Spleen deficiency. Journal of Anhui University of TCM 1983; 3:3. In: Kuang T, Dai H (eds) Pathological basis of modernized TCM, p 163. Shanghai: Shanghai Science Universal Publisher, 1998.
21. Yin G. The quantity change and its action in chronic stomach illness patients with Spleen insufficiency group of cyclic nucleoside and 3H-TdR lymphocyte conversion. Journal of Integrative Medicine 1985; 5(11):671. In: Kuang T, Dai H (eds) Pathological basis of modernized TCM, p 164. Shanghai: Shanghai Science Universal Publisher, 1998.
22. Lu. In: Kuang T, Dai H (eds) Pathological basis of modernized TCM, p 180. Shanghai: Shanghai Science Universal Publisher, 1998.
23. Moore AV, Korobkin M, Olanow W et al. Age-related changes in the thymus gland: CT-pathologic correlation. AJR American Journal of Roentgenology 1983; 141(2):241-246.
24. Lenardo M, Chan FKM, Hornung F et al. Mature T lymphocyte apoptosis – immune regulation in a dynamic and unpredictable antigenic environment. Annual Review of Immunology 1999; 17:221-253.
25. Lin J. Clinical experience of master-physician Wang Weilan. Journal of the American College of Traditional Chinese Medicine 1983; (3):3-28.
26. Zhou X, Zhou Z. Intermediate and late rheumatoid arthritis treated by tonifying the Kidney, resolving Phlegm, and removing Blood stasis. Journal of Traditional Chinese Medicine 2000; 20(2):87-91.

Systemic lupus erythematosus

CHAPTER 3

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Systemic lupus erythematosus (SLE), commonly called lupus, is an autoimmune disease in which the immune system attacks the body, leading to inflammation and damage to the joints, skin, kidneys, heart, lungs, blood vessels, nervous system and other tissues.

I. Western medical aetiology and pathology

The cause of SLE, a complex disease, is unknown, but it is likely to be multifactorial, including genetic factors, disorders of the immune system, and environmental and hormonal factors working together. Once the disease has developed, it manifests as injury and dysfunction of specific organs, tissues and cells.

The signs and symptoms of SLE differ from person to person, and the disease can range from mild to life threatening. The initial symptoms of SLE may begin with a fever followed by one or more of these common symptoms: arthralgia or arthritis, constant fatigue, skin rashes, anaemia, swollen ankles due to kidney involvement, chest pain upon deep breathing due to pleurisy, a butterfly-shaped rash across the cheeks and nose, photosensitivity, hair loss, blood clotting, often painless mouth ulcers, Raynaud's phenomenon, seizures or other neurological disorders, such as mild cognitive dysfunction, organic brain syndrome, peripheral neuropathy, sensory neuropathy, psychological problems (including personality changes, paranoia, mania and schizophrenia), transverse myelitis, and paralysis and stroke. No two patients with SLE have identical symptoms and complaints.

(1) Genetic factors

Genetic factors may play a very important role in SLE. Several different genes may be involved in determining a person's likelihood of developing the disease, which tissues and organs will be affected, and its severity. However, it is unlikely that genes alone determine who will develop SLE. Other factors that may play a role include infectious agents such as viruses, certain medications, sunlight and immune system disorder.

(2) Immune system disorder

A. Autoantibodies

Antibodies circulating in response to a large number of autoantigens characterize SLE. These autoantibodies are blood proteins that act against the body's own parts. Antinuclear antibodies, usually measured by immunofluorescence, are present in almost all patients with SLE; tests for antinuclear antibodies, which are sensitive but not specific, constitute a screening test for this autoimmune illness. A more disease-specific test for SLE is the measure of antibodies against native DNA. There is good direct evidence that these antibodies play a major role in pathogenic mechanisms leading to systemic and organ-specific disease manifestations. However, they must first join together with complex, described below, to complete the process of tissue injury that triggers SLE.

B. Complex

The complement system has important protective functions in both the innate and the adaptive immune systems, but can also, when activated inappropriately, cause tissue damage. 'Complement deficiency predisposes to infection and also to development of autoimmune disease, especially SLE, and complement is at the same time involved in the pathogenesis of this disease.'¹ The traditional view of the pathogenesis of SLE is that immune complexes containing autoantigens (tissue and cells) and autoantibodies activate complement, and that this causes inflammatory injury to tissues.

Abundant evidence indicates the key role of immune complex deposition in the aetiology of SLE. Many patients have serological findings of raised anti-DNA levels and depressed levels of complement; biopsied tissue examined using immunofluorescence shows evidence of immunoglobulin and complement deposition. Immune complex deposits can provoke an SLE flare-up. Complex formation could occur in the circulation with antibodies binding to DNA or nucleosomes released into the circulation by dead or dying cells.

C. Apoptosis

Investigation into the development of autoantibodies has looked at the response to the mechanism of tissue and cell injury that culminates in the inflammatory cascade. Once activated, the complement system promotes inflammation. In the complexes that result, anti-DNA antibodies appear to be important instigators of cell injury. These antibodies are part of a spectrum of antibodies directed at the nucleosome. The nucleosome is the form of DNA found in the cell nucleus and has both protein and nucleic acid components. In this form, DNA is wrapped around a histone core into a complex that is the essential building block of chromatin. As antibodies can bind to intact nucleosomes as well as isolated components, individual patients can concomitantly express antibodies to DNA, histones and nucleosomes. 'A hereditary defect in the induction of apoptosis as a mechanism of elimination of autoreactive lymphocytes does not seem to be a prerequisite factor for the development of autoimmune disorders.'²

Insight into the pathogenesis of the disease, apoptosis, clearance of apoptotic cells, and how to reduce the occurrence of apoptosis in SLE has shed a new and intriguing light on the development, course and prognosis of the disease.

(3) Hormonal factors

SLE occurs most frequently in women of childbearing years. This may be an effect of oestrogen's influence on the immune system. Other explanations for a high female to male ratio include an oestrogen-sensitive threshold mechanism³ and sex differences of exposure to exogenous agents.

(4) Environmental factors

Although infectious and sunlight triggers of SLE have long been suspected, no single infective agent has been found. Universal exposure of children with SLE to Epstein-Barr virus has been noted, suggesting a possible link of this virus with

the disease. Autoantibodies can be identified in serum specimens up to a decade before the earliest symptoms of SLE. Autoantibodies first appear as one specific antibody, then generalize into other types just before clinical onset.

2. Diagnosis by Western medicine

Diagnosing SLE can be difficult because its symptoms come and go and mimic those of other diseases. There is no single laboratory test that can definitively prove that a person has this complex illness. However, if SLE is suspected, the following generally occur in order to reach a positive diagnosis:

- A thorough and accurate medical history
- Complete physical examination
- Laboratory tests:
 - Complete blood count (CBC)
 - Erythrocyte sedimentation rate (ESR)
 - Urinalysis
 - Blood chemistries
 - Complement levels
 - Antinuclear antibody test (ANA)
 - Other autoantibody tests (anti-DNA, anti-Sm, anti-RNP, anti-Ro [SSA], anti-La [SSB])
 - Anticardiolipin antibody test
- Skin biopsy
- Kidney biopsy.

When a person is positive for four or more of these criteria, the diagnosis of SLE is strongly suggested.

The 11 symptoms and signs used for diagnosing SLE are:

- 1 Malar (over the cheeks of the face) 'butterfly' rash
- 2 Discoid skin rash: patchy redness that can cause scarring
- 3 Photosensitivity: skin rash in reaction to sunlight exposure
- 4 Mucous membrane ulcers: ulcers of the lining of the mouth, nose or throat
- 5 Arthritis: two or more swollen, tender joints of the extremities
- 6 Pleuritis/pericarditis: inflammation of the tissue lining around the heart or lungs, usually associated with chest pain on breathing
- 7 Kidney abnormalities: abnormal amounts of proteinuria or clumps of cellular elements called casts
- 8 Brain irritation, manifested by seizures and/or psychosis
- 9 Blood count abnormalities: low counts of white or red blood cells or platelets
- 10 Immunological disorder: abnormal immune tests include anti-DNA or anti-Sm (Smith) antibodies, false-positive blood test for syphilis, anticardiolipin antibodies, lupus anticoagulant, or positive lupus erythematosus (LE) prep test.
- 11 Antinuclear antibody: positive ANA test.

Note: The LE prep test used in the diagnosis of SLE has relatively low specificity and is insensitive. The ANA test has essentially replaced the LE prep as the test of choice for diagnosis of systemic immune-mediated disease, as it is fairly specific and more sensitive.

There are several kinds of SLE:

- **Systemic lupus erythematosus** is the most common form of the disease that people are referring to when they say ‘lupus’. The disease can affect many parts of the body. The symptoms of SLE may be mild or serious. Although SLE usually first affects people between the ages of 15 and 45 years, it can occur in childhood or later in life as well. This is the kind of SLE discussed in this chapter.
- **Discoid lupus erythematosus** is a chronic skin disorder in which a red, raised rash appears on the face, scalp or elsewhere. The raised areas may become thick and scaly, and may cause scarring. The rash may last for days or years and may recur. A small proportion of people with discoid lupus have or develop SLE later.
- **Subacute cutaneous lupus erythematosus** refers to skin lesions that appear on parts of the body exposed to sunlight. The lesions do not cause scarring.
- **Drug-induced lupus** is a form of lupus caused by medications. Many different drugs can cause drug-induced lupus. Symptoms are similar to those of SLE (arthritis, rash, fever and chest pain) and they typically go away completely when the drug is stopped.
- **Neonatal lupus** is a rare disease that can occur in newborns of women with SLE, Sjögren’s syndrome or no disease at all. Scientists suspect that neonatal lupus is caused by autoantibodies in the mother’s blood, including anti-Ro (SSA) and anti-La (SSB). At birth, the babies have a skin rash, liver problems and low blood counts. In rare instances, babies with neonatal lupus may have a serious heart problem that slows down the natural rhythm of the heart. Neonatal lupus is rare, and most infants of mothers with SLE are entirely healthy. All women who are pregnant and known to have anti-Ro (SSA) or anti-La (SSB) antibodies should be monitored by echocardiography during weeks 16 and 30 of pregnancy.

3. Chinese medicine aetiology and pathology

Although SLE has multiple and complicated symptoms, Chinese medical theory suggests the primary pathogenic cause is almost always due to Yin deficiency.⁴ Chinese medicine posits that SLE is a deficiency disease due to *Zhen Yin*, 真阴, true Yin, insufficiency – this primary problem can occur in the early or late process of SLE. Specifically, the theory describes the problem as ‘a deficiency in the disease origin and an excess in the disease manifestation’. Internal Heat due to Yin deficiency is the principal cause. When patients with a long history of illness have developed a Qi and Yang deficiency, Yin and Blood deficiency, or both Yin and Yang deficiency, they eventually also develop Yin, Yang, Qi and Blood deficiency coupled with Blood stasis. In the initial stage, deficiency may reside in the Liver, Spleen and/or Kidney. In the later stage, deficiency may reside in all five Yin organs. The disease may

damage the Heart, Lung, Liver, Kidney and Spleen, and their corresponding tissues, including the brain, skin, hair, nails, muscles and joints, as well as the *Ying*, or nutritive Qi, and the *Xue*, or Blood, and the entire body.

(1) Deficiency of Yin is the internal cause of lupus

When Zhen Yin flourishes, pathogenic factors cannot invade the body easily and cause diseases such as SLE. Deficiency of Zhen Yin, especially Kidney Zhen Yin, is very important in the development and course of SLE. Kidney Essence is the foundation of life, which originates from the conjugation of the innate reproductive essence of both sexes. This means the individual Kidney Zhen Yin and Essence come from both parents. The strength of the Zhen Yin and Essence depends on the quality of parental genes. Congenital deficiency is the internal cause of SLE.

According to Chinese medicine, women are energetically different from men. Women's bodies belong to Yin and the Liver. The Liver tends to Yin deficiency, which may be the reason why SLE occurs more in women than in men.

According to clinical research at the Traditional Chinese Medical Hospital of Shanghai, in 90% of 142 patients with SLE there was Yin deficiency.⁴ Most researchers in Chinese medicine realize that Yin deficiency may be the primary pre-existing problem in patients prior to the occurrence of SLE symptoms.

(2) Invasion of pathogenic factors is the external cause of SLE

While Zhen Yin deficiency is an important factor in the occurrence and development of SLE, not everyone, including members of the same family who have been diagnosed with SLE, have the same symptoms and signs. Therefore, it seems apparent that there are other triggers of SLE, such as result from an attack by the six exogenous factors that all cause different symptoms and signs.

There is always conflict between vital Qi, which tries to maintain the body's health, and pathogenic factors. Such conflict is not only related closely to the initial occurrence of a disease but it also affects the development and final outcome of the condition. It has some direct influence on the sthenic or asthenic transformation of the disease, meaning that the strength of vital Qi will influence an individual's healthy condition and can determine the gravity and prognosis of a disease. Therefore, the way a disease progresses actually depends on the conflict between vital Qi and pathogenic factors.

During the conflict, vital Qi and the pathogenic factors can influence one another. When vital Qi is exuberant, it can suppress pathogenic factors and so prevent the occurrence of disease. However, if vital Qi is deficient or the pathogenic factors are in excess, this can lead to the failure of vital Qi in conquering the pathogenic factors and the person will become sick.

(3) Blood stasis, Phlegm and Fluid are pathogenic substances, as well as one cause of SLE, and an aggravating factor in existing SLE

Blood stasis is a pathological state. It results from: (1) the reverse or impeded flow of Blood in the body; (2) stagnation of Blood flow in local areas, or (3) the abnormal presence of Blood outside the blood vessels that fails to disperse or to

be reabsorbed. Once Blood stasis has formed, it can further compromise the circulation of Blood and lead to still other pathological changes and a variety of diseases and syndromes. Therefore, Blood stasis is both a pathogenic factor and also the result of pathological abnormalities.

Retention of Phlegm and Fluid is caused by accumulation of Fluid due to a disturbance of metabolism. Retention of Phlegm and Fluid mostly occurs following either an attack by the six exogenous factors, an improper diet or internal damage from the seven emotions causing Qi not to move smoothly. The result is accumulated Fluid in the body. Once this complex is formed it can follow the same pathways as Qi circulating everywhere in the body, causing a number of diseases and symptoms. For instance, Phlegm stagnation in the Lung can cause cough with sputum and dyspnoea. Phlegm stagnation in the Heart can cause palpitations, chest pain and oppression, and mental confusion, coma and dementia.

Other examples of excess conditions include Fire, Heat-Toxin, Fire-Toxin, stagnant Fire, Heat in the Blood, Blood stasis, Wind-Dampness, chronic oedema and Cold-Dampness.

The term lupus has no equivalent in Chinese medicine, but there are records that describe similar conditions, particularly referring to damage of specific tissue.

(1) Skin damage

In the early Han Dynasty, Zhang Zhongjing's *Jin Gui Yao Lue/Synopsis of the Golden Chamber* 金匱要略 describes Yin Yang Du 阴阳毒, Yin and Yang-toxin. The chapter on this topic says that Yin toxin and Yang toxin can occur simultaneously as Yin and Yang toxin. Their main clinical symptom is red spots on the face and pain in the whole body. Other books that address this same condition include Cao Yuangfang's *Zhu Bing Yuan Hou Lun/General Treatise on the Causes and Symptoms of Diseases* 诸病源候论, written during the Sui Dynasty, and Zhu Danxi's *Dan Xi Xin Fa/Danxi's Experiential Therapy* 丹溪心法, written during the Yuan Dynasty, which records Yin Yang Du as having symptoms of fever and also cold hands and feet.

(2) Joint and organ damage

Thousands of years ago there were already records of lupus-like symptoms in medical books and articles. For instance, *Huang Di Nei Jing/The Yellow Emperor's Inner Classic* 黄帝内经, *Jin Gui Yao Lue/Synopsis of the Golden Chamber* 金匱要略, *Zhu Bing Yuan Hou Lun/General Treatise on the Causes and Symptoms of Diseases* 诸病源候论, and *Jing Yue Quan Shu/Complete Works of Zhang Jingyue* 景岳全书 have all described lupus-like pathologies.

Chinese medicine identifies these diseases as *Feng Shi Bin*, *Feng Shi Tong*, *Bi Zheng*, *Wong Bi* and *Zhou Bi*. These are all different names for Bi syndrome, which is used to describe symptoms of pain in the joints and muscles, swelling of joints and fever. They may be related to autoimmune diseases, such as rheumatoid arthritis and SLE. *Jin Gui Yao Lue/Synopsis of the Golden Chamber* 金匱要略 refers to Xuan Yin pleural effusion or fluid retention in the hypochondrium. It also refers to Yin Ji Xin Xia, or hydropericardium, which is Fluid retention in the pericardium that can cause oedema and heart failure. *Jin Gui Yao*

Lue/Synopsis of the Golden Chamber 金匱要略 and *Zhu Bing Yuan Hou Lun/General Treatise on the Causes and Symptoms of Diseases* 诸病源候论 both mention *Shen Zhuo Zheng*, which refers to a heavy sensation in the body, caused by Dampness. Its clinical symptoms are lumbago, a cold feeling in the lumbar region, swelling on the face, eyelids and ankles, decreased urination, and a swollen stomach from ascites. These symptoms and signs sound similar to nephritis and hypo-proteinaemia, which is caused by protein being lost in the urine resulting in deficient protein in the serum, causing hypotonic oedema.

Clinical symptoms recorded in Chinese medical books over the past several thousand years appear similar to those of SLE and include *Fa Re* 发热, fever, *Wen Du Fa Ban* 瘟毒发斑, epidemic disease with eruptions, *Xu Lao* 虚劳, consumptive diseases, *Bi Zheng* 痹证, arthralgia, and *Shui Zhong* 水肿, oedema.

DIFFERENTIATION AND TREATMENT

1. DOMINATION OF HEAT-TOXIN

CLINICAL MANIFESTATIONS

Sudden onset, high fever, flushed face, red rash or purpura dotted over the skin, irritability, anxiety, thirst, insomnia, arthralgia, constipation, and even coma and delirium as well as seizure in severe cases. The tongue is deep red with a yellow coating. The pulse is rapid and taut or rapid and full.

TREATMENT PRINCIPLE

Clear pathogenic Heat and Toxin, cool Blood, remove Blood stasis and nourish Yin.

HERBAL TREATMENT

QING WEN BAI DU YIN and *XI JIAO DI HUANG TANG* variation

Clear Epidemics and Overcome Toxin Decoction, and Rhinoceros Horn and Rehmannia Decoction

Jin Yin Hua *Lonicerae Flos* 20 g

Lian Qiao *Forsythiae Fructus* 20 g

Ku Shen *Sophorae flavescens Radix* 10 g

Huang Lian *Coptidis Rhizoma* 5 g

Huang Qin *Scutellariae Radix* 12 g

Shui Niu Jiao *Bubali Cornu* 10 g

Sheng Di Huang *Rehmanniae Radix* 15 g

Zhi Mu *Anemarrhenae Rhizoma* 15 g

Mu Dan Pi *Moutan Cortex* 10 g

Sheng Shi Gao *Gypsum fibrosum* 30 g (decocted first for 30 min)

The above herbs are decocted in water for oral administration.

ACUPUNCTURE

Du-14 Dazhui, LI-11 Quchi, LU-11 Shaoshang and LI-4 Hegu.

SUPPLEMENTARY TREATMENT

If the patient has constipation, add **Da Huang** *Rhei Radix et Rhizoma* and **Zhi Shi** *Aurantii Fructus immaturus* and needle ST-25 Tianshu and TB-6 Zhigou; if the patient has a temperature, add **Chai Hu** *Bupleuri Radix* and **Huang Qin** *Scutellariae Radix* and needle LIV-2 Xingjian.

2. INTERNAL HEAT DUE TO YIN DEFICIENCY**CLINICAL MANIFESTATIONS**

Low-grade fever or tidal fever in the afternoon, a feverish sensation in the palms and soles, anxiety, perturbation, red skin eruptions, night sweats, fatigue, irritability, insomnia, thirst with no desire to drink, preference for cold water, aching pain in the joints and baldness. The tongue is red with a fissure and less coating, or it is shiny and mirror-like. The pulse is thready and rapid.

TREATMENT PRINCIPLE

Nourish the Yin and clear Heat, cool the Blood and expel Toxin.

HERBAL TREATMENT

QING HAO BIE JIA TANG and **DA BU YIN WAN** variation

Artemesia Annua and *Soft-shelled Turtle Shell Decoction* and *Great Tonify the Yin Pill*.

Qing Hao *Artemisiae annuae Herba* 12 g

Bie Jia *Trionycis Carapax* 20 g (decoct first for 30 min, then add other herbs)

Yin Chai Hu *Stellariae Radix* 10 g

Di Gu Pi *Lycii Cortex* 12 g

Hu Huang Lian *Picrorhizae Rhizoma* 10 g

Sheng Di Huang *Rehmanniae Radix* 30 g

Zhi Mu *Anemarrhenae Rhizoma* 12 g

Huang Bai *Phellodendri Cortex* 12 g

Tian Men Dong *Asparagi Radix* 12 g

Mu Dan Pi *Moutan Cortex* 10 g

Chi Shao *Paeoniae Radix rubra* 12 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

BL-18 Ganshu, BL-23 Shenshu, BL-17 Geshu, SP-10 Xuehai and LIV-2 Xingjian.

SUPPLEMENTARY TREATMENT

If the symptoms manifest as Liver and Kidney Yin deficiency, accompanied by vertigo, blurred vision, tinnitus, and dryness of mouth and throat, add **Nu Zhen Zi** *Ligustri lucidi Fructus* 12 g, **Ye Ju Hua** *Chrysanthemi indicis Flos* 12 g and **Han Lian Cao** *Ecliptae Herba* 12 g, and needle GB-37 Guangming.

3. BLOOD STASIS AND HEAT STAGNATION

CLINICAL MANIFESTATIONS

Swelling in the limbs and joints with pain and stiffness that increases in the morning, fingers and toes are cold and are pale or purple, the face is red with erythema. The tongue is red with a thin white coating. The pulse is thready and rapid.

TREATMENT PRINCIPLE

Nourish Yin and clear Heat, and remove Blood stasis.

HERBAL TREATMENT

XUE FU ZHU YU TANG *variation*

Drive Out Stasis in the Mansion of Blood Decoction

Tao Ren *Persicae Semen* 10 g

Hong Hua *Carthami Flos* 10 g

Dang Gui *Angelicae sinensis Radix* 10 g

Sheng Di Huang *Rehmanniae Radix* 12 g

Chuan Xiong *Chuanxiong Rhizoma* 10 g

Chi Shao *Paeoniae Radix rubra* 12 g

Niu Xi *Achyranthis bidentatae Radix* 10 g

Chai Hu *Bupleuri Radix* 6 g

Zhi Ke *Aurantii Fructus* 10 g

Huang Qin *Scutellariae Radix* 12 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

GB-21 Jianjing, BL-17 Geshu, BL-18 Ganshu and LI-11 Quchi.

SUPPLEMENTARY TREATMENT

If the patient has insomnia, add Wu Wei Zi *Schisandrae Fructus* and Suan Zao Ren *Ziziphi spinosae Semen*, and needle HE-7 Shenmen and Du-20 Baihui; if there is joint pain, add Sang Zhi *Mori Ramulus*, Qin Jiao *Gentianae macrophyllae Radix* and Gui Zhi *Cinnamomi Ramulus*. For pain in the finger joints, needle Bafeng (extra); for pain in the toe joints, needle Baxie (extra); and for knee pain, needle ST-35 Xiyan and Neixiyan (extra).

4. SPLEEN AND KIDNEY QI DEFICIENCY

CLINICAL MANIFESTATIONS

Pale complexion, puffy face, oedema of limbs, distension and fullness of the abdomen, shortness of breath, no desire to talk, fatigue, disturbance of urination and loose stool. The tongue is pale, with teeth marks, and has a whitish coating. The pulse is deep or weak.

TREATMENT PRINCIPLE

Replenish the Spleen and Kidney Qi.

HERBAL TREATMENT

SHEN LING BAI ZHU SAN and **HUO XUE TONG MAI TANG** variation

Ginseng, Poria and Atractylodes Macrocephala Powder, and Remove Blood Stasis and Open the Channels Decoction

Dang Shen *Codonopsis Radix* 10 g

Huang Qi *Astragali Radix* 12 g

Bai Zhu *Atractylodis macrocephalae Rhizoma* 12 g

Fu Ling *Poria* 12 g

Hong Hua *Carthami Flos* 12 g

Tao Ren *Persicae Semen* 10 g

Mu Dan Pi *Moutan Cortex* 10 g

Chi Shao *Paeoniae Radix rubra* 12 g

Mai Men Dong *Ophiopogonis Radix* 12 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

BL-17 Geshu, BL-18 Ganshu, BL-20 Pishu and ST-36 Zusanli.

SUPPLEMENTARY TREATMENT

For chronic illness, add Dang Gui *Angelicae sinensis Radix* and Chuan Xiong *Chuanxiong Rhizoma*, and needle SP-10 Xuehai and SP-6 Sanyinjiao; if the patient has oedema, add Che Qian Zi *Plantaginis Semen* and Ze Xie *Alismatis Rhizoma*, and needle Ren-9 Shuifen.

5. FLUID RETENTION DUE TO YANG DEFICIENCY**CLINICAL MANIFESTATIONS**

Chest stuffiness, shortness of breath, dizziness, fatigue, generalized weakness, intolerance of and aversion to cold, cold limbs, tinnitus, pain in the loins and lower back, oedema in ankles, ascites and insomnia. The tongue is thick and pale or purple with a white coating. The pulse is thready, slow, and uneven or intermittent.

TREATMENT PRINCIPLE

Warm the Yang and replenish Qi, eliminate retained Fluid, and remove Blood stasis.

HERBAL TREATMENT

JIN KUI SHEN QI WAN and **DAN SHEN YIN** variation

Kidney Qi Pill from the Golden Cabinet and Salvia Decoction

Zhi Fu Zi *Aconiti Radix lateralis preparata* 3 g

Rou Gui *Cinnamomi Cortex* 3 g

Sheng Di Huang *Rehmanniae Radix* 12 g

Shan Zhu Yu *Corni Fructus* 10 g

Fu Ling *Poria* 12 g

Ze Xie *Alismatis Rhizoma* 10 g

Mu Dan Pi *Moutan Cortex* 6 g

Dan Shen *Salviae miltiorrhizae Radix* 10 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

BL-20 Pishu, BL-23 Shenshu, Ren-9 Shuifen, Ren-4 Guanyuan, KI-7 Fuliu and ST-36 Zusanli.

SUPPLEMENTARY TREATMENT

If the patient has palpitations, add **Mai Men Dong** *Ophiopogonis Radix*, **Wu Wei Zi** *Schisandrae Fructus* and **Dang Shen** *Codonopsis Radix*, and needle HE-7 Shenmen and Ren-17 Tanzhong; if there is dizziness, add **Tian Ma** *Gastrodiae Rhizoma* and **Fu Ling** *Poria*, and needle Du-20 Baihui and GB-20 Fengchi; if there is dysuria, add **Che Qian Zi** *Plantaginis Semen*, **Zhu Ling** *Polyporus* and **Ze Xie** *Alismatis Rhizoma*, and needle SP-9 Yinlingquan and Ren-6 Qihai.

4. Appendix

SLE is a multiple system disease. In addition to the symptoms above, there are other symptoms that include chest pain, hair loss, anaemia, mouth ulcers, and pale or purple fingers and toes from cold and stress (Raynaud's phenomenon). Some people also experience headaches, dizziness, depression, confusion or seizures. Symptoms may continue to appear years after the initial diagnosis, and different symptoms can occur at different times, making diagnosis and treatment difficult. In some people with SLE, only one system is affected, such as the skin or joints. Other people experience symptoms in many parts of their bodies. Just how seriously a body system is affected varies from person to person. When SLE affects organs there are symptoms such as those below.

(1) Kidneys

Nephritis, or inflammation of the kidneys, can impair their ability to remove waste products and other toxins, such as creatinine (Cr) and blood urea nitrogen (BUN), from the body effectively. There is usually no pain associated with kidney involvement, because the inflammation does not affect sensory nerves. Therefore, patients with nephritis are usually not alerted that something is wrong via the experience of pain, although they may have swelling in their ankles or eyelids. This manifestation appears similar to the concept of *Shui Zhong* described above. The only indication of kidney disease is an abnormal urine or blood test result. Should there be red blood cells or protein in the urine, this manifestation can be described as the Kidney being unable to store essential substances. Children with this condition have difficulty growing at an appropriate rate; adults have difficulty gaining weight and they experience symptoms of weakness and fatigue.

(2) Lungs

Some people with SLE develop pleuritis, an inflammation of the lining of the chest cavity that causes chest pain, particularly with breathing. This symptom is similar to the Chinese medicine concept of *Xuan Yin* 悬饮. Patients with SLE also may develop pneumonia. (For more information, refer to Chapter 14 on Scleroderma).

(3) Central nervous system

In some patients, SLE affects the brain or central nervous system. Central nervous system disease is highly heterogeneous and encompasses manifestations from headache, dizziness, memory disturbances, vision problems, depression, dysphoria, anxiety and obsessive-compulsive disorder to seizure, stroke and accelerated atherosclerotic disease. The role of autoantibodies in neuropsychiatric SLE is not well defined and appears to vary depending upon the specific clinical manifestations. (For an elaboration, refer to Chapter 10 on Mental Illness and Autoimmune Disease.)

Antibodies to phospholipids are associated with thrombosis, which can cause stroke in patients with SLE; in this manifestation, the vasculature is the target organ as opposed to the brain itself. Recent studies suggest that some anti-DNA antibodies can cross-react with receptors restricted to the brain, and that cerebrospinal fluid from some patients with SLE causes neuronal cell apoptosis.

(4) Blood vessels

Blood vessels may become inflamed (vasculitis), affecting the way blood circulates through the body. The inflammation may be mild and may not require treatment, or it may be severe and require immediate attention. (For an elaboration, refer to Chapter 4 on Cardiopulmonary Disease and Lupus.)

In addition to organ-specific disturbances, the course of SLE can be marked by severe vasculopathy that includes accelerated atherosclerosis. Indeed, SLE is a major risk factor for cardiovascular and cerebrovascular disease, although the basis of increased risk is not clear. Sustained inflammation, lipid disturbances and side-effects of corticosteroids may all contribute to this complication.

Venous and arterial thromboses are other vascular manifestations that occur prominently in SLE and cause considerable morbidity as well as diagnostic uncertainty. When these clotting abnormalities occur in association with antibodies to phospholipids, the syndrome is called antiphospholipid antibody (APLA) syndrome. In addition to venous and arterial thrombosis, fetal loss and thrombocytopenia characterize this syndrome, which can be part of a connective tissue disorder like SLE or occur by itself (primary APLA syndrome).

(5) Blood

People with SLE may develop anaemia, leukopenia or thrombocytopenia. Some people with SLE may have an increased risk for blood clots, which is similar to the Chinese medical concept of Blood stasis.

(6) Heart

In some people with SLE, inflammation can occur in the heart itself (myocarditis and endocarditis) or in the membrane that surrounds the heart (pericarditis), causing chest pains or other symptoms. SLE can also increase the risk of atherosclerosis. (For an elaboration on this issue, refer to Chapter 4 on Cardiopulmonary Disease and Lupus.)

(7) Raynaud's phenomenon

Raynaud's phenomenon is a condition that usually overlaps with other autoimmune diseases, resulting in discoloration of the fingers and/or toes after exposure to changes in temperature or emotional events. The fingers and/or toes can turn white due to a lack of oxygen, or blue if oxygen is depleted in the tissues. (For an elaboration on this issue, refer to Chapter 13 on Raynaud's Phenomenon.)

CASE STUDIES

CASE ONE

MN was a 23-year-old woman who had complained of kidney problems since she was 6 years old. The problem had been getting worse in recent years. Five years prior to her first office visit she had her serum creatinine (Cr) level checked in order to determine her kidney function; it was 1.5 mg/dL (normal range 0.5–1.5). Since then she had not had her kidney function checked and had not taken any medication until the last year when her blood pressure increased. Following treatment with medication for the hypertension, her condition stabilized. In addition, she was told to control her calorie and protein intake. Her blood pressure was controlled at around 120/75 mmHg.

When MN first came in, her appetite was fine, but she had fatigue, thirst, a dry mouth and dry skin. There was no dizziness, headache or swelling. Her stool was normal, her urine looked normal, and she had a normal frequency of urination. In addition, her menstrual cycle was normal.

Physical examination: Blood pressure 125/70 mmHg, heart rate 78 beats/min, normal rhythm with no murmur, no oedema on either ankles or eyelids. The tongue had a red tip, but the rest was pale with teeth marks and there was a deep fissure in the middle, with the sublingual blood vessels distended. The pulse was taut and tight.

2 months prior to office visit: laboratory results

Urinalysis gross examination:

Protein: 2+ (negative)

Cholesterol, total: 220 mg/dL (normal range 100–199)

Triglycerides: 152 mg/dL (0–145)

High-density lipoprotein (HDL)-cholesterol: 53 mg/dL (40–59)

Low-density lipoprotein (LDL)-cholesterol: 110 mg/dL (0–99)

BUN: 41 mg/dL (5–26)

Serum creatinine (Cr): 2.9 mg/dL (0.5–1.5)

Impression:

1. Lupus glomerulonephritis (*Kidney Yin and Qi deficiency with Blood stasis*)
2. Nephrotic syndrome
3. Hypertension secondary to nephrotic syndrome
4. Hyperlipidaemia secondary to nephrotic syndrome

TREATMENT PRINCIPLE

Nourish Kidney Yin and remove Blood stasis.

HERBAL TREATMENT

LIU WEI DI HUANG TANG and TAO HONG SI WU TANG variation

Six-Ingredient Pill with Rehmannia and Four-Substance Decoction with Safflower and Peach Pit

Sheng Di Huang *Rehmanniae Radix* 12 g

Shan Zhu Yu *Corni Fructus* 10 g

Fu Ling *Poria* 10 g

Ze Xie *Alismatis Rhizoma* 10 g

Mu Dan Pi *Moutan Cortex* 6 g

Gou Qi Zi *Lycii Fructus* 12 g

Nu Zhen Zi *Ligustri lucidi Fructus* 12 g

Zhi He Shou Wu *Polygoni multiflori Radix preparata* 10 g

Jue Ming Zi *Cassiae Semen* 10 g

Tao Ren *Persicae Semen* 10 g

Hong Hua *Carthami Flos* 10 g

Chuan Xiong *Chuanxiong Rhizoma* 10 g

Chi Shao *Paeoniae Radix rubra* 12 g

Bai Shao *Paeoniae Radix alba* 10 g

Dan Shen *Salviae miltiorrhizae Radix* 10 g

The herbs above were decocted in water for oral administration and taken twice daily. The prescription was varied based on changes in the laboratory findings.

ACUPUNCTURE

The patient received acupuncture twice a week with an alternation of two groups of points:

Group one: Du-20 Baihui, Front head line 3 (extra), KI-16 Huangshu, Ren-6 Qihai, Ren-4 Guanyuan, SP-10 Xuehai, ST-36 Zusanli and LIV-2 Xingjian.

Group two: Du-20 Baihui, Front head line 3 (extra), BL-20 Pishu, BL-23 Shenshu, ST-40 Fenglong, SP-6 Sanyinjiao and KI-3 Taixi.

6 weeks after office visit: laboratory results

Creatinine, 24-h urine: 812.5 mg/24 h (normal range 800.0–1800.0)

Creatinine clearance: 24 mL/min (88–128)

Protein, total, urine: 98.8 mg/dL (0.0–15.0)

Protein, 24-h urine: 2119.9 mg/24 h (30.0–150.0)

BUN: 49 mg/dL (5–26)

Serum Cr: 2.4 mg/dL (0.5–1.5)

Urinalysis gross examination:

Protein: 3+ (negative)

4 months after office visit

Urinalysis gross examination:

Protein: 3+ (negative)

Occult blood: 3+ (negative)

BUN: 46 mg/dL (5–26)
Serum Cr: 2.2 mg/dL (0.5–1.5)

8 months after office visit

Cholesterol, total: 158 mg/dL (100–199)
Triglycerides: 80 mg/dL (0–149)
HDL-cholesterol: 60 mg/dL (40–59)
LDL-cholesterol: 88 mg/dL (0–99)

The patient received treatment for 4 months. Total cholesterol, triglycerides and LDL declined to the normal range, HDL increased, Cr decreased from 2.9 to 2.2 mg/dL, and blood pressure was in the normal range.

CASE TWO

BL was a 20-year-old man who was seen by Western physicians in an emergency room. He complained of swelling in his whole body for about 2 weeks and he had been unable to urinate for a few days. The patient stated that he had a cold, with a sore throat, and he also had epididymitis. He had been prescribed an unfamiliar antibiotic for 1 week about 3 months previously. About 2½ weeks prior to visiting the emergency room he had developed a rash on his stomach and diarrhoea, which was watery for 1 week. At the same time, a family member noticed that he had developed oedema on his legs. BL went to the emergency room, where they noticed that he had a high protein level in his urine. Computed tomography revealed that he had diffuse abdominal ascites and small bowel wall thickening. The patient had no fever, no chest pain and no joint pain, but he had shortness of breath as a result of the swelling of the abdominal wall.

When he asked for Chinese medicine, BL was having diarrhoea three times a day and a urine volume of less than 400 mL/24 h (normal >500); the urine had been dark yellow in colour for 1 week. The body swelling and oedema were increasing, and he had a cold feeling with excessive oedema in the extremities. The patient denied that any genetic problems ran in his family and denied any past medical history related to his current condition. His family reported that they had received life-threatening notices from the emergency room several times already, informing them that BL was in serious danger.

Physical examination:

Blood pressure: 130/78 mmHg
Temperature: 97.7°F

Cardiovascular examination revealed a heart rate of 69 beats/min, with a regular rate and rhythm

Lungs: clear bilaterally

Abdomen: positive for ascites

Extremities: 3+ oedema

The patient had no tolerance for heat. He had anxiety, insomnia, a burning sensation in his stomach, decreased urination, and diarrhoea three times a day. The side and tip of the tongue were red, with less coating. The back of the tongue had a thick greasy coating that was dark yellow or brown. Pulse was deep and weak.

1 month prior to emergency room (ER) visit: laboratory results

Kidney needle biopsy: immune complex-mediated glomerulonephritis with a diffuse proliferative pattern of injury.

10 days prior to ER visit

Anti-DNA: >180 (normal value <25)

Smith antibody: 1.21 (<1.0)

ANA: positive

1 day prior to ER visit

Haematology:

White blood count (WBC): 4.0×10^9 cells/L (normal range 4.5–13.0)

Red blood count (RBC): 3.36×10^9 cells/L (4.5–5.3)

Haemoglobin: 10.1 g/dL (low)

Haematocrit: 28.7 (low) (37.0–49.0)

Mean cell volume (MCV): 85 fL (1)

Neutrophils: 74.5 (high) (42–72)

Lymphocytes: 13.5 (17–45)

Monocytes: 10.5 (high) (3–10)

Lymphocytes, absolute: 0.53 (low) (0.77–5.85)

Chemistry:

Sodium: 133 (low) (137–145)

Potassium: 5.2 (high) (3.6–5.0)

Chloride: 114 (high) (98–107)

Carbon dioxide: 17 (low) (22–30)

BUN: 49 mg/dL (high) (9–20)

Creatinine: 1.4 mg/dL (high) (0.7–1.2)

Calcium: 7.4 (low) (8.4–10.2)

Protein, total: 3.2 mg/dL

Albumin: 1.1 (low)

Aspartate aminotransferase (AST): 24 IU/L

Alanine aminotransferase (ALT): 79 IU/L (high)

Impression:

1. Lupus glomerular nephritis (*Heat-Toxin stagnation in the Qi, Ying and Xue levels with Blood stasis*) & retention of urine
2. Hypoalbuminaemia secondary to nephrotic syndrome
3. Oedema secondary to hypoalbuminaemia
4. Acute renal failure
5. Epididymitis

Medications: lisinopril 5 mg, Kayexalate 30 mg, Lasix (furosemide) 40 mg, prednisone 60 mg, furosemide 80 mg, cyclophosphamide therapy (no dosage reported).

TREATMENT PRINCIPLE

Eliminate Fire and Heat-Toxin in the Qi, Ying and Xue levels, induce diuresis with bland herbs, and remove Blood stasis.

HERBAL TREATMENT

QING WEN BAI DU YIN and XUE FU ZHU YU TANG variation

Clear Epidemics and Overcome Toxin Decoction, and Drive Out Stasis in the Mansion of Blood Decoction

Sheng Di Huang *Rehmanniae Radix* 30 g

Chi Shao *Paeoniae Radix rubra* 12 g

Bai Shao *Paeoniae Radix alba* 12 g
 Mu Dan Pi *Moutan Cortex* 10 g
 Zhi Mu *Anemarrhenae Rhizoma* 10 g
 Tao Ren *Persicae Semen* 12 g
 Hong Hua *Carthami Flos* 12 g
 Huang Qin *Scutellariae Radix* 15 g
 Bai Hua She She Cao *Hedyotis diffusa* Herba 30 g
 Ze Xie *Alismatis Rhizoma* 20 g
 Che Qian Zi *Plantaginis Semen* 20 g (put in tea bag to decoct)
 Fu Ling *Poria* 10 g
 Zhi Zi *Gardeniae Fructus* 20 g
 Cang Zhu *Atractylodis Rhizoma* 10 g
 Bai Zhu *Atractylodis macrocephalae Rhizoma* 10 g
 Yi Yi Ren *Coicis Semen* 30 g
 Zhi Ke *Aurantii Fructus* 10 g

The herbs above were decocted in water for oral administration and administered twice daily.

ACUPUNCTURE

No acupuncture was performed in this case.

1 day after ER visit The family advised that after BL had drunk the herbal formula the previous evening he urinated a volume of 100 mL for the first time since he began taking herbal medicine. During the previous 9 hours, between 7.00 pm and 5.00 am, his urine volume was 800 mL.

Blood results:
 Cr: 1.6 mg/dL
 BUN: 55 mg/dL

2 days after ER visit After taking the herbs, the patient's urination increased to 800 mL/24 h. During the first 24 h, the patient reported that his body did not feel as heavy as it had. He could walk comfortably on the floor and his appetite was better. His tongue was red with no coating on the front, but a yellow and greasy coating on the back.

11 days after ER visit

Cr: 1.3 mg/dL (normal range 0.5–1.5)

16 days after ER visit Urination 1200 mL/24 h. The patient reported that his urination was over 1000 mL every day and that the oedema had gradually decreased, but he had insomnia the previous night, sleeping for only 4 h. The skin on his left leg became red and thick.

The patient continued to take the formula above, but **Bai Mao Gen** *Imperatae Rhizoma* 12 g, **Huang Lian** *Coptidis Rhizoma* 3 g and **Jin Yin Hua** *Lonicerae Flos* 12 g were added.

18 days after ER visit

Cr: 1.3 mg/dL (0.5–1.5)

1 month after ER visit The lab report showed a Cr level of 1.4 mg/dL. The pain and redness in the patient's left leg was reduced and his insomnia had improved. He had a red tongue, with less coating on the tip, and a slight greasy coating in the back that was no longer yellow. His pulse was rapid and the left guan position was taut. At this point, the formula was varied as shown below.

HERBAL TREATMENT

Sheng Di Huang *Rehmanniae Radix* 20 g
 Shui Niu Jiao *Bubali Cornu* 12 g
 Chi Shao *Paeoniae Radix rubra* 10 g
 Bai Shao *Paeoniae Radix alba* 12 g
 Mu Dan Pi *Moutan Cortex* 10 g
 Xuan Shen *Scrophulariae Radix* 12 g
 Shan Zhu Yu *Corni Fructus* 10 g
 Bai Mao Gen *Imperatae Rhizoma* 12 g
 Huang Lian *Coptidis Rhizoma* 3 g
 Huang Bai *Phellodendri Cortex* 10 g
 Zhi Zi *Gardeniae Fructus* 10 g
 Tu Fu Ling *Smilacis glabrae Rhizoma* 15 g
 Fu Ling *Poria* 10 g
 Che Qian Zi *Plantaginis Semen* 12 g (put in tea bag for decocting)
 Ze Xie *Alismatis Rhizoma* 10 g
 Zhi Mu *Anemarrhenae Rhizoma* 10 g

The herbs above were decocted in water for oral administration and administered twice daily.

2 months after ER visit

Haematology:
 WBC: 16.1×10^9 cells/L (high) (normal range 4.5–13.0)
 RBC: 3.92×10^9 cells/L (4.5–5.3)
 Haematocrit: 33.7 (37.0–49.0)
 MCV: 86 fL (78–102)
 Mean corpuscular haemoglobin (MCH): 28.7 (25.0–35.0)
 Red blood cell distribution width (RDW): 17.5 (high) (11.5–14)
 Platelets: 234 (150–450)
 Neutrophils: 86 (high) (42–72)
 Lymphocytes: 4 (low) (17–45)
 Monocytes: 8 (3–10)
 Polymorphonuclear leukocytes: 14.01 (high) (2.52–12.32)
 Lymphocytes, absolute: 0.64 (low) (0.77–5.85)
 Chemistry:
 Sodium: 135 (low) (137–145)
 Potassium: 4.5 (3.6–5.0)
 Chloride: 105 (98–107)
 Carbon dioxide: 29 (22–30)
 BUN: 39 mg/dL (high) (9–20)
 Cr: 1.1 mg/dL (0.7–1.2)
 Calcium: 7.7 (low) (8.4–10.2)

6 months after ER visit

Cr: 0.9 mg/dL

The young man received Chinese herbal medicine for a period of 2 months during a medically difficult time. During this time, he went from kidney failure to improved kidney function as measured in part by a decrease in his Cr level from 1.6 to 1.1 and finally to 0.9 mg/dL. He also went from anuria to normal urination. The oedema disappeared completely and the patient returned back to his normal life and was able to avoid dialysis.

5. Analysis of the cases

SLE can have different symptoms depending on how the disordered immunity impairs specific organs and tissues that are involved or damaged in the disease process. The impaired area may be solely local tissue or a single organ, or it may be very wide ranging and involve several organs. In aetiology and pathology, SLE is a disease of multiple symptoms that is more complicated than many other diseases.

Different organs and systems can be involved simultaneously or at different times. According to the symptoms of SLE, Chinese medicine may diagnose it as several different diseases or as the same disease with different symptoms. However, no matter what we call it in clinic, the basic pathology is almost always the same – deficiency, especially Yin deficiency, is the internal cause and major mechanism in the occurrence and process of development of SLE.

If a patient receives a Yin-deficient constitution from their parents, this means that they were born with a Yin and Yang imbalance, but may not develop any symptoms or illness until invaded by exogenous pathogenic factors, causing the occurrence of SLE. Furthermore, should a patient with a deficient constitution be invaded by pathogenic factors, it will increase the underlying imbalance of Yin and Yang in the development of SLE; this will further exacerbate the disease later on. This concept of constitutional Yin deficiency is similar to the Western medical concept of gene involvement in the development of SLE.

This alternative paradigm describes the development of SLE as resulting from cellular damage by autoimmune antibodies causing subsequent tissue and organ damage. Although each organ and tissue has a different shape and function, their cellular components all experience the same pathological change – apoptosis. Which tissues become apoptotic determines the patient's condition, symptoms and prognosis. Apoptotic cells can be opsonized, or eaten, by autoantibodies present in patients with autoimmune disease, which are directed to autoantigens present on apoptotic cells. This process causes inflammation.

In Chinese medical terms, we call this 'deficiency of Yin leads to internal Heat symptoms'. This pathological Heat sings in the Blood level and leads to Blood stasis, affecting the smooth flow of Blood in the vessels and blocking circulation. This in turn can cause other diseases and symptoms, or aggravate an existing illness. It also depends on what cells have been damaged, because apoptotic cells produce different pathogenic substances and symptoms: apoptotic lung cells cause difficult

breathing – affecting and reducing the lungs' capacity for alveolar ventilation. In Chinese medicine, one of the Lung's functions is to govern breath. A deficiency of Lung Yin leads to hypoactivity of the Lung; when the illness affects the bronchi, the pathological product is sputum, which is Phlegm in Chinese medicine. Or it may affect the pleura, leading to exudation and pleuritis (pleurisy), which in Chinese medicine is called *Xuan Yin*. Therefore, we should not only nourish the Yin, but, to induce recovery from the illness, we must also clean the pathological factor in order to create a better condition for the cells to live and be restored. To do this, one must:

- 1 Nourish Yin and prevent further damage to Yin
- 2 Clean the pathological factors such as Phlegm, Fluid, Blood stasis and Heat, and foster the rebuilding of Yin
- 3 Take precautions to prevent future invasions of pathogenic factors
- 4 Prevent the progression of SLE
- 5 Should there be an external invasion in the future, prevent it from triggering the illness again.

Therefore, regardless of whether the illness is acute or chronic, the treatment must protect Yin and avoid further damage to Yin by excess or deficient Heat.

(1) In the two cases above, there was Yin deficiency and kidney cell damage by autoantibodies. Case one is chronic SLE with a recent flare. The patient's kidneys had already been damaged, as shown by symptoms and signs of high levels of proteinuria, and high levels of BUN and serum creatinine. Case two is acute lupus glomerulonephritis with renal failure. However, in both cases, the treatment targets are the impaired kidneys and their functional units, the glomeruli. As visible tissue of a substantial nature, they belong to Yin in Chinese medicine. The function of the kidneys and glomeruli is to clean the blood and filter out metabolic waste such as creatinine. Therefore, the function of the kidney belongs to Qi and Yang, and it is to 'separate the clear from the turbid'.

(2) As Case one is chronic, there is not only Qi and Yin deficiency but also Blood stasis. Therefore, the treatment is to nourish Yin and protect the kidney from further damage. The prescription for nourishing Yin is **Sheng Di Huang** *Rehmanniae Radix*, **Shan Zhu Yu** *Corni Fructus*, **Gou Qi Zi** *Lycii Fructus*, **Nu Zhen Zi** *Ligustri lucidi Fructus* and **Bai Shao** *Paeoniae Radix alba*; the cholesterol is reduced with **Zhi He Shou Wu** *Polygoni multiflori Radix preparata* and **Jue Ming Zi** *Cassiae Semen*, and the acupuncture point ST-40 Fenglong; to clean Heat and eliminate inflammation, **Mu Dan Pi** *Moutan Cortex*, **Jue Ming Zi** *Cassiae Semen* and **Sheng Di Huang** *Rehmanniae Radix* are used. Protein is an essential nutrient for the human body. When the glomeruli are damaged, microprotein escapes from the kidneys via leakage. The herbs that stabilize and bind, such as **Shan Zhu Yu** *Corni Fructus*, can help stop protein from escaping; **Fu Ling** *Poria* and **Ze Xie** *Alismatis Rhizoma* can enhance the quality of the urination; **Dan Shen** *Salviae miltiorrhizae Radix*, **Tao Ren** *Persicae Semen*, **Hong Hua** *Carthami Flos*, **Chuan Xiong** *Chuanxiong Rhizoma* and **Chi Shao** *Paeoniae Radix rubra*, coupled with the point SP-10 Xuehai, remove Blood

stasis and can improve microcirculation and prevent glomerulosclerosis and generalized sclerosis. They may also be able to prevent the deposition of complex on the glomeruli.

Although these patients also have Qi and Yang deficiency symptoms and signs, we did not replenish the Qi and warm the Yang. This is a crucial point: in this instance, tonifying Qi and warming Yang may trigger excess Fire and cause exacerbation of the illness (see Figure 2.4). Chinese medical theory indicates that if there is Heat or Fire the practitioner cannot tonify the Qi and Yang even when there are Qi and Yang deficiency symptoms and signs, because the warming method may cause Fire to flare.

Although the direction of the treatment is based on an ancient philosophy, it exactly matches the Western medical theory of immunology in the disease process. When an antigen exists, tonifying Qi and Yang may cause an increase in the number of helper T cells, resulting in the creation of more B cells, which in turn results in the production of more antibodies, aggravating the illness.

Therefore, it is beneficial to integrate acupuncture and herbal medical therapy to divide the treatment. One can choose acupuncture points to tonify the Qi and Yang gently and try to mediate the disordered immunity. But one can also use herbal medicine to treat the inflammation directly and restore the impaired cellular function that caused the disordered immunity in the first place.

The acupuncture points are KI-16 Huangshu, Ren-6 Qihai, Ren-4 Guanyuan, ST-36 Zusanli, BL-20 Pishu, BL-23 Shenshu and even Ren-22 Tiantu. These points can stimulate the production of suppressor T cells when an antigen is hiding, thus avoiding the aggressive herbal medicine that might trigger a flare-up.

(3) Glomerulonephritis is the term used to describe inflammation of the membranes in the kidney that function as a filter, separating wastes and removing excess fluid from the blood. Case two is lupus glomerulonephritis with acute renal failure, a situation in which an external pathogen invades the patient because of an underlying constitutional Yin deficiency. The pathogen invaded the Lower Jiao directly, causing Heat-Toxin in the Qi, Ying and Xue levels, leading to Blood stasis, and damage to the Kidney. Therefore, we selected a large quantity of **Sheng Di Huang** *Rehmanniae Radix* and **Bai Shao** *Paeoniae Radix alba* to nourish Yin and clear the Heat, as well as **Mu Dan Pi** *Moutan Cortex*, **Zhi Mu** *Anemarrhenae Rhizoma*, **Huang Qin** *Scutellariae Radix*, **Bai Hua She** *She Cao* *Hedyotis diffusae Herba* and **Zhi Zi** *Gardeniae Fructus* to eliminate Heat-Toxin and inflammation, and to protect Yin from damage; **Chi Shao** *Paeoniae Radix rubra*, **Mu Dan Pi** *Moutan Cortex*, **Tao Ren** *Persicae Semen* and **Hong Hua** *Carthami Flos* remove Blood stasis, improve microcirculation, and may be able to remove complex that has been deposited on the glomeruli and remove fibrosis caused by impaired cells, opening space for restoring and rebuilding the cells; **Ze Xie** *Alismatis Rhizoma*, **Che Qian Zi** *Plantaginis Semen*, **Fu Ling** *Poria* and **Yi Yi Ren** *Coicis Semen* promote diuresis, reducing oedema. Some 12 h after the patient had drunk the herbal medicine, his urine volume exceeded 500 mL and the Cr level gradually reduced to the normal range, improving the patient's overall condition.

(4) Glomerulosclerosis is the term used to describe scarring or hardening of the tiny blood vessels within the kidney. Chinese medicine describes this process as Blood stasis. Therefore, the treatment principle of removing Blood stasis is very important in the treatment of SLE and other autoimmune diseases that damage the kidney glomeruli. In Chinese medicine, Blood stasis is a pathological state resulting from impeded flow of Blood in the body or stagnation of Blood flow in local areas, as well as abnormal bleeding where the Blood exits the vessels, but remains in the body and fails to disperse. Once Blood stasis has developed it can further affect circulation and lead to further pathological changes. In this latter case, the causes of Blood stasis are excess Heat in the Qi, Ying and Xue levels, which singed the Blood, leading to Blood stasis and pathological Fire flaring up due to Yin deficiency, which also singed the Blood, causing Blood stasis. Therefore, in virtually all cases of SLE, Blood stasis exists, regardless of which organ or tissue is involved. This conforms to the Chinese medicine adage that says 'it is difficult to treat diseases that are due to Blood stasis'.

(5) Lupus is a complex, chronic, degenerative illness. Injured tissue can trigger immune cells that arrive to clean the dead cells and fragments, thus causing an acute inflammatory response and causing the illness to flare. This process can even cause organ failure. Recent Western medical research on the pathogenesis of SLE focuses on the regulation of components of the immune response, genetic controls of immunity and potential aetiological agents. However, the long-term damage of chronic disease from tissue injury and apoptosis is less well researched. Actually, Chinese medicine is different from Western Medicine in that the former looks at tissues and organs from a different perspective. However, with regard to autoimmune diseases, cell apoptosis is the key issue for both. It plays a central role in the occurrence, development and prognosis of SLE. Therefore, it is important to know how to recover the function of damaged tissues and cells. To do this, we must essentially 'mask' or 'hide' the offending antigen, protect it from attack and damage by a disordered immune system, and prevent the antigen from continuing to injure the body. Although there are no recommendations on how to do this using Western medicine, the treatment method has existed in Chinese medicine for thousands of years, yet few practitioners realize it. When an autoimmune antibody has lost a specific antigen, its numbers may decline or even disappear, because apoptosis is the key that can mediate and regulate immunity in a chronic autoimmune disease. Apoptosis is occurring in the two cases above. In both cases, there is damage to kidney cells, causing the Cr level to rise. Through the application of Chinese medicine, the Cr level in Case one declined from 2.9 to 2.2 mg/dL, and the patient's blood pressure and hyperlipidaemia returned to normal. Case two involved acute kidney function failure due to SLE, resulting in a urine volume of less than 500 mL during a 24-h period. However, using a Chinese medicine intervention, the patient's urine volume increased after only one night. After continued treatment, the patient's urination finally returned to normal. Furthermore, the Cr level gradually returned to normal (0.9 mg/dL) and the oedema disappeared. Although damaged, the function of his glomeruli and kidneys recovered. These case

studies illustrate the benefit of integrative medicine; that is, the use of neither Western nor Chinese medicine alone would produce the ideal benefit for the patients in these cases. However, when used in combination, the patients truly benefited. Perhaps exposure to these types of cases will induce more Chinese medicine practitioners to familiarize themselves to a greater extent with Western medicine.

6. Lifestyle prescriptions and health issues

- 1 Avoid spicy and pungent food, as well as cold and iced food so as to prevent further damage to Yin, while simultaneously avoiding Yang and Qi damage.
- 2 Maintain stable emotions and reserve enough time for sleep and relaxation.
- 3 Practitioners must concern themselves with preventing patients from being exposed to viral and bacterial infections. Even influenza shots that contain non-self protein may mimic the patient's cellular parts and tissues, and trigger an autoimmune attack. This is just as Chinese medicine says, new external pathogens may trigger old diseases *Xin Gan Yin Dong Fu Xie* 新感引动伏邪.
- 4 Nourish Yin throughout the disease process if the condition allows the practitioner to do so.
- 5 When a patient has retention of Phlegm-Dampness, Wind-Cold or Wind-Heat, the practitioner must first resolve these excess symptoms, eliminating external pathogens, after which the primary disease can be treated.
- 6 SLE is a complicated disease, regardless of whether looked at from a Chinese or Western medical perspective. Western medicine thinks the primary problem is a disordered immune attack on formed tissue, whereas Chinese medicine thinks of it as formed substance – Yin damaged by pathological Heat or Yin deficiency causing deficiency Heat, resulting in the illness becoming more severe and chronic.
- 7 The basic pathological change in SLE is Yin deficiency. Therefore, nourishing Yin is the principal treatment. Usually, if a patient has Qi or Yang deficiency accompanying the Yin deficiency, Chinese medicine suggests that warming Yang can help Yin grow. However, one must be careful not to use this method with autoimmune diseases, because the patient usually has unresolved Heat-Toxin or Fire or constitutional Yin deficiency. Warming the Yang could trigger the Heat-Toxin to flare up to further excess and increase the chance of damaging Yin.
- 8 If warming the Yang is necessary, a practitioner can also use the appropriate methods to reduce the chance of exacerbating Heat-Toxin, such as removing Blood stasis, eliminating Heat and nourishing Yin.

References

1. Sturfelt G, Truedsson I. Complement and its breakdown products in SLE. *Rheumatology (Oxford)* 2005; 44(10):1227–1232.
2. Bijl M, van Lopik T, Limburg PC et al. Do elevated levels of serum-soluble Fas contribute to the persistence of activated lymphocytes in systemic lupus erythematosus? *Journal of Autoimmunity* 1998; 11(5):457–463.
3. Rose LM, Latchman DS, Isenberg DA. Elevated soluble Fas production in SLE correlates with HLA status, not with disease activity. *Lupus* 1997; 6:717–722.
4. Shen P. *Clinical research on Chinese medicine treats SLE*. Beijing: People's Health Publishers, 1997.

Cardiopulmonary disease and lupus

CHAPTER 4

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The heart and lungs are frequently affected in people with systemic lupus erythematosus (SLE). Complications in these organs can cause a variety of problems, ranging from mild to serious or even life threatening. These complications are known as cardiopulmonary disease.

1. Western medical aetiology and pathology

(1) Cardiac involvement

In Western medicine, the term cardiac includes the pericardium, myocardium, endocardium and coronary artery. One or more of these tissues can be damaged when there is cardiac involvement in systemic lupus erythematosus (SLE).

- 1 The pericardium is a sac surrounding the heart. The most common heart involvement in people with SLE is pericarditis – inflammation of the pericardium. This condition occurs when antigen–antibody complexes, also known as immune complexes, are made during active SLE and cause inflammation within the pericardium.
- 2 The myocardium is the muscle layer of the heart. When SLE causes inflammation of the tissue of the heart muscle, it is called myocarditis.
- 3 The endocardium is the lining of the inside of the heart. When SLE causes inflammation of the lining of the inside of the heart, it is called endocarditis.
- 4 The coronary artery delivers blood and oxygen to the heart muscle and is vital to the heart's pumping function. In people with SLE this artery can become prematurely narrowed, causing coronary artery disease. This blockage can be due to arteritis, or inflammation of the artery wall; atherosclerosis, or cholesterol deposits inside the wall; arterial spasm; or thrombus, which is a blood clot.

(2) Pulmonary involvement

The lungs are often involved in SLE. This is usually due to disordered immunity impairing a single or multiple tissues of the lungs, which includes the pleura, lung tissues and blood vessels in the lungs.

- 1 The pleura are membranes that surround the lungs. Although SLE can affect the lungs in many ways, pleurisy, also known as pleuritis, is the most common pulmonary manifestation.
- 2 Sometimes an excessive amount of fluid builds up in the pleural space between the lungs and the chest wall, causing pain or tenderness in the chest. This is called pleural effusion in Western medicine and it is characterized in Chinese medicine by the term *Xuan Yin* 悬饮.
- 3 Lupus pneumonitis is inflammation within the lung tissue. Infection is the most common cause of pneumonitis in people with SLE. Certain bacteria, viruses or fungi can cause infection in the lungs, especially if the patient takes steroids and/or immune-suppressant medicine. Sometimes pneumonitis may occur without infection and is then called non-infectious pneumonitis.
- 4 Although rare in people with SLE, chronic diffuse interstitial lung disease causes fibrosis, or scarring of the lungs. This scarred tissue acts as a barrier to the oxygen that normally transfers from the alveoli into the blood, causing hypoxia.
- 5 Some people with SLE may develop pulmonary hypertension, or high blood pressure in the blood vessels within the lungs. It becomes difficult for the right side of the heart to pump to the left side, because of high blood pressure in the lungs.
- 6 Pulmonary emboli are blood clots that block the pulmonary arteries.
- 7 Pulmonary haemorrhage, or bleeding into the lungs, is a rare but potentially fatal complication of SLE.

2. Diagnosis by Western medicine

(1) Cardiac involvement

A Diagnosing pericarditis

As pericarditis can occur in conditions other than SLE, the cause must be determined before treatment begins. To diagnose pericarditis, the following tests may be ordered:

- Blood tests
- Chest radiography
- Electrocardiography
- Echocardiography (ultrasonography of the heart) to determine whether there is fluid around the heart.

B Diagnosing myocarditis

Myocarditis is often seen with inflammation of other muscles in the body and this condition can lead to tissue damage that replaces heart tissue with scar tissue. This scar tissue reduces the heart's contractility, causing some people eventually to die from heart failure.

C Diagnosing endocarditis

This condition rarely affects the pumping efficiency of the heart, although it can damage the heart valves. The surface of the valves can thicken or develop wart-like growths called Libman–Sacks lesions, which may cause heart murmurs.

D Diagnosing coronary artery disease

To diagnose coronary artery disease, the following tests may be ordered:

- Chest radiography
- Electrocardiography
- Echocardiography
- Blood tests to evaluate SLE activity.

(2) Pulmonary involvement

Diagnostic tools can include:

- Chest radiography
- Ventilation–perfusion scan of the lungs
- Gallium scan
- High-resolution computed tomography
- Bronchoalveolar lavage
- Pulmonary function tests.

Although the usefulness of all these tests varies depending on the type of lung involvement, close follow-up and monitoring is crucial to minimize long-term complications.

3. Chinese medicine aetiology and pathology

Based on cardiopulmonary symptoms, Chinese medicine may diagnose *Xin Ji* 心悸, palpitations, *Xiong Bi* 胸痹, an obstructive feeling in the chest, or *Zhen Xin Tong* 真心痛, angina pectoris.

In Chinese medicine, the Heart and Lung reside in the Upper Jiao. The function of the Heart is to govern Blood circulation in the body. The Heart is linked with the blood vessels to form a closed system. Its contractions continuously pump the Blood smoothly within the vessels to nourish itself and other organs. When external pathogenic factors invade the body, or improper foods or emotions affect Heart function, the body's first reaction is that vital Qi will be in conflict with the pathological factor, leading to Heat symptoms and improper Heart function. In such a case, the Heart may become disordered and symptoms will occur. The Lung is the organ that governs respiration and metabolism of body fluid. The Heart governs Blood, and the Lung governs Qi. The Heart and Lung depend on each other for coexistence. We say that Qi moves the Blood and that Blood is the mother of Qi. Blood circulation relies on Qi to drive it; Qi needs Blood circulation to perform its function of transportation and distribution. Anything that disturbs the normal relationship between the Heart and Lung leads to Qi stagnation, and Qi will not drive the Blood to flow smoothly in the vessels. Slowly moving Blood can become stasis due to this Qi stagnation. Excess Heat builds up based on long-term stagnation of either Qi or Blood. Eventually, chronic illness will damage Yin of the Heart and Lung. Therefore, the pathologies in this process of disease are mainly Heat, Blood stasis and Yin deficiency.

DIFFERENTIATION AND TREATMENT

1 OBSTRUCTION OF YANG IN THE CHEST

CLINICAL MANIFESTATIONS

Oppressed feelings in the chest or paroxysmal chest pain and palpitation, or shortness of breath. The tongue has a white, greasy coating. The pulse is taut.

TREATMENT PRINCIPLE

Warm the Yang of the chest and remove obstruction in the blood vessels of the Heart.

HERBAL TREATMENT

GUA LOU XIE BAI BAN XIA TANG *variation*

Trichosanthes Fruit, Chinese Chive and Pinellia Decoction

Gua Lou *Trichosanthis Fructus* 20 g

Xie Bai *Allii macrostemi Bulbus* 12 g

Zhi Ban Xia *Pinelliae Rhizoma preparatum* 10 g

Gui Zhi *Cinnamomi Ramulus* 10 g

Dan Shen *Salviae miltiorrhizae Radix* 15 g

Pu Huang *Typhae Pollen* 10 g

Wu Ling Zhi *Trogopterori Faeces* 10 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

Du-20 Baihui, BL-15 Xinshu, PC-6 Neiguan, Ren-17 Tanzhong and LIV-3 Taichong.

2 BLOOD STASIS IN THE BLOOD VESSELS OF THE HEART**CLINICAL MANIFESTATIONS**

Sharp pain in the chest that may radiate to the shoulder area and back; stuffy sensation in the chest or upper stomach; and shortness of breath. The tongue is deep purple. The pulse is taut and uneven.

TREATMENT PRINCIPLE

Promote the flow of Qi, remove Blood stasis and activate the blood vessels of the Heart.

HERBAL TREATMENT

DAN SHEN YIN and TAO HONG SI WU TANG variation

Salvia Decoction and Four-Substance Decoction with Safflower and Peach Pit

Dan Shen *Salviae miltiorrhizae Radix* 30 g

Tan Xiang *Santali albi Lignum* 3 g

Sha Ren *Amoni Fructus* 6 g

Qing Pi *Citri reticulatae viride Pericarpium* 5 g

Dang Gui *Angelicae sinensis Radix* 12 g

Chuan Xiong *Chuanxiong Rhizoma* 10 g

Chi Shao *Paeoniae Radix rubra* 12 g

Hong Hua *Carthami Flos* 10 g

Tao Ren *Persicae Semen* 10 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

BL-15 Xinshu, BL-17 Geshu, BL-18 Ganshu and SP-6 Sanyinjiao.

SUPPLEMENTARY TREATMENT

If precordial pain is accompanied with emotional disorder or anxiety and a choking sensation in the chest, add **SI NI SAN** *Frigid Extremities Powder*, composed of **Chai Hu** *Bupleuri Radix*, **Zhi Ke** *Aurantii Fructus*, **Bai Shao** *Paeoniae Radix alba* and **Gan Cao** *Glycyrrhizae Radix*, and add **Xiang Fu** *Cyperi Rhizoma* and **Yu Jin** *Curcuma Radix* to remove Liver Qi and Blood stasis. If the patient has an oppressive sensation in the chest with a white and greasy tongue coating and a taut and slippery pulse, add **WEN DAN TANG** *Warm the Gallbladder Decoction*, composed of **Zhi Ban Xia** *Pinelliae Rhizoma preparatum*, **Chen Pi** *Citri reticulatae Pericarpium*, **Zhu Ru** *Bambusae Caulis in taeniam*, **Zhi Shi** *Aurantii Fructus immaturus* and **Fu Ling** *Poria*.

3 DEFICIENCY OF BOTH QI AND YIN**CLINICAL MANIFESTATIONS**

Indistinct pain in the precordial region, lassitude, palpitations, shortness of breath, fatigue and dry mouth. The tongue is red with less coating. The pulse is taut and thready.

TREATMENT PRINCIPLE

Replenish Qi and nourish Yin, and promote Blood flow.

HERBAL TREATMENT

SHENG MAI SAN *variation*

Generate the Pulse Powder

Dang Shen *Codonopsis Radix* 12 g

Huang Qi *Astragali Radix* 12 g

Mai Men Dong *Ophiopogonis Radix* 12 g

Wu Wei Zi *Schisandrae Fructus* 10 g

Dang Gui *Angelicae sinensis Radix* 12 g

Dan Shen *Salviae miltiorrhizae Radix* 20 g

Yu Zhu *Polygonati odorati Rhizoma* 12 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

BL-15 Xinshu, BL-20 Pishu, BL-23 Shenshu and BL-18 Ganshu.

SUPPLEMENTARY TREATMENT

If the patient has symptoms of profuse sweat, cold limbs, pale complexion or even syncope, we must tonify Yang and Qi and restore vital Qi from collapse. In this case, the prescription needed is **DU SHEN TANG** *Unaccompanied Ginseng Decoction* or **SHEN FU TANG** *Ginseng and Prepared Aconite Decoction*, composed of **Ren Shen** *Ginseng Radix* and **Fu Zi** *Aconiti Radix lateralis preparata*. One can also add **Rou Gui** *Cinnamomi Cortex* and **Huang Qi** *Astragali Radix*. This case requires coordination with an integrative or Western medical practitioner.

4 KIDNEY AND HEART YIN DEFICIENCY**CLINICAL MANIFESTATIONS**

Chest stuffiness, shortness of breath, vague pain in the precordial region, dizziness, blurred vision, palpitations, insomnia, tinnitus, amnesia, dry mouth and constipation. The tongue is red with less coating. The pulse is deep and thready.

TREATMENT PRINCIPLE

Nourish Heart and Kidney Yin, and remove Blood stasis.

HERBAL TREATMENT

TIAN WANG BU XIN DAN *variation*

Emperor of Heaven's Special Pill to Tonify the Heart

Sheng Di Huang *Rehmanniae Radix* 12 g

Wu Wei Zi *Schisandrae Fructus* 10 g

Dang Gui *Angelicae sinensis Radix* 12 g

Tian Men Dong *Asparagi Radix* 12 g

Mai Men Dong *Ophiopogonis Radix* 12 g

Bai Zi Ren *Platycladi Semen* 10 g

Suan Zao Ren *Ziziphi spinosae Semen* 10 g

Dan Shen *Salviae miltiorrhizae Radix* 10 g

Zhi Gan Cao *Glycyrrhizae Radix* 10 g

Shan Zhu Yu *Corni Fructus* 10 g

Mu Dan Pi *Moutan Cortex* 6 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

Ren-17 Tanzhong, HE-7 Shenmen, Ren-4 Guanyuan, Ren-6 Qihai and ST-36 Zusanli.

SUPPLEMENTARY TREATMENT

If the patient has Fire flaring due to Yin deficiency, add *Huang Lian Coptidis Rhizoma* and *Zhi Zi Gardeniae Fructus*.

CASE STUDIES**CASE ONE**

PR was a 37-year-old woman who on her first office visit complained of shortness of breath with chest tightness for over 1 year prior to her first office visit. She first had these symptoms when she was walking and crossing the street. At the time she noticed that she had shortness of breath and a tight and oppressive feeling in her chest. After that her symptoms were aggravated as a result of a family bereavement and other stressful personal circumstances. All of these events led to extreme fatigue. She went to the hospital and her lung arterial pressure was 110/70 mmHg (normal values 15–30, 8–15 and 10–17 mmHg for systolic, diastolic and mean, respectively).

PR was diagnosed with primary pulmonary hypertension. She complained of insomnia even after taking sleeping pills, and anxiety and depression. She reported that she drank two to three glasses of wine daily, had watery diarrhoea five to six times per day, and occasionally had constipation.

Physical examination: the patient had pink eyes, blood pressure 120/70 mmHg, a pale tongue with teeth marks and a thin, white coating. Her pulse was thready and the left guan position was taut. Her sublingual veins were varicose.

2½ months prior to office visit: cardiac catheterization

I. Haemodynamic data:

Right atrium: 4 mmHg

Right ventricle: 110/6 mmHg

Pulmonary artery: 110/40 mmHg (mean 70)

Pulmonary capillary wedge pressure (PCWP): 8 mmHg

Cardiac output: 4.7 L/min

II. Oximetry shunt run:

The oxygen saturation from the superior vena cava was 68%. The pulmonary arteries were all very similar at approximately 67%.

2½ weeks prior to office visit

IgA, serum: 162 mg/dL (normal range 81–463)

IgG, serum: 1100 mg/dL (694–1618)

IgM, serum: 449 mg/dL (48–271)

IgE, serum: 3 KU/L (0–114)

Medications: Norvasc (amlodipine: calcium channel blocker) 10 mg q.d., sildenafil (Revatio, Viagra).

Impression:

1. Pulmonary hypertension (primary) (Liver Qi stagnation and Blood stasis with Spleen Qi deficiency)
2. Irritable bowel syndrome (IBS)
3. Insomnia
4. Anxiety
5. Depression

TREATMENT PRINCIPLE

Smooth Liver Qi and remove Blood stasis, reinforce Spleen Qi.

HERBAL TREATMENT

CHAI HU SHU GAN SAN and GUA LOU XIE BAI BAI JIU TANG variation

Bupleurum Powder to Spread the Liver, and Trichosanthes Fruit, Chinese Chive and Wine Decoction

Chai Hu *Bupleuri Radix* 10 g

Chi Shao *Paeoniae Radix rubra* 12 g

Bai Shao *Paeoniae Radix alba* 12 g

Chen Pi *Citri reticulatae Pericarpium* 6 g

Zhi Ke *Aurantii Fructus* 10 g

Dang Gui *Angelicae sinensis Radix* 12 g

Chuan Xiong *Chuanxiong Rhizoma* 10 g

Fu Ling *Poria* 12 g

Huang Qin *Scutellariae Radix* 12 g

Xie Bai Tou *Allii macrostemi Bulbus* 6 g

Gua Lou *Trichosanthis Fructus* 6 g

Fang Feng *Saposhnikoviae Radix* 12 g

Dan Shen *Salviae miltiorrhizae Radix* 10 g

Hong Hua *Carthami Flos* 10 g

Tao Ren *Persicae Semen* 6 g

Gan Cao *Glycyrrhizae Radix* 3 g

The herbs above were decocted in water for oral administration.

ACUPUNCTURE

Du-20 Baihui, Front head 5 needles (extra), Yintang (extra), PC-6 Neiguan, SP-10 Xuehai, SP-6 Sanyinjiao, KI-3 Taixi and LIV-3 Taichong.

7 months after office visit

Cardiac catheterization:

Pulmonary artery: 55/25 mmHg

Oximetry shunt run:

The oxygen saturation from the superior vena cava was 68%. The pulmonary arteries were all very similar at approximately 67%.

10 months after office visit

Antinuclear AB titre: 1 : 80 (negative: less than 1 : 40).

Eight months after her first office visit the patient reported that after she walked for 6 min during a blood oxygen test; her blood oxygen saturation increased to 87%. Two months later the patient reported that after she walked for 6 min; her blood oxygen saturation increased to 92%.

After the patient had taken Chinese herbal medicine and received acupuncture treatments for 1 year, her pulmonary artery pressure was reduced. The symptoms of insomnia, anxiety and depression were relatively reduced. Her chest tightness and shortness of breath continued, and were better on some occasions than on others. The oxygen in her bloodstream after 6 min of activity increased from 67% to 92%, a notable improvement; the pulmonary artery pressure reduced from 110/70 to 55/25 mmHg and the diarrhoea almost disappeared.

CASE TWO

FM was a 10-year-old girl who complained of shortness of breath at her first office visit. The patient's mother said that her daughter had been diagnosed with an autoimmune disease when she was 7 years old. The girl had always had difficulty breathing and had needed oxygen for the previous 5 months. She was intolerant of heat, had fatigue, a cold feeling in her extremities, stiffness in her fingers, stomach reflux, and the skin over her entire body was thickening, with light red and black spots on her face, which was puffy.

Five months prior to her office visit, her doctor had reviewed her case: she had significant pulmonary hypertension, was relatively unresponsive to Norvasc (amlodipine), and had significant symptomatology with New York Heart Association (NYHA) class III+–IV symptoms. Unfortunately, owing to her underlying co-morbid diseases, she was not a good candidate for a lung transplant.

Physical examination: the patient was cyanotic and her heart rate was 105 beats/min with a galloping rhythm. Her skin was thick and light – when a patient's skin becomes thick, the epidermal layer looks very thin and has an abnormal colour. She had no oedema, but swelling in both ankles made them look thick, like an elephant's legs. She could not make a fist with either hand and she had limited motion in her fingers and wrists bilaterally owing to skin involvement. Her face was erythematous, and her fingers and toes were white. Her tongue was pale, big and puffy, with a white coating, and no sublingual varicosities. Her pulse was deep and rapid. Her mother denied that any autoimmune diseases ran in the family.

Medications: Orapred (prednisolone) 30 mg q.d.; Viagra (sildenafil) 37.5 t.i.d.; Zantac (ranitidine) 75 mg b.i.d.; Tylenol (paracetamol) p.m.; bosentan 125 mg b.i.d.; atenolol 12.5 mg b.i.d.; Keppra (levetiracetam) 250 mg b.i.d.; oxygen 2 L per nasal cannula.

3 months prior to office visit: laboratory results

Alkaline phosphatase: 161 U/L (normal range 39–117)
 Alanine aminotransferase (ALT): 45 U/L (6–30)
 Aspartate aminotransferase (AST): 38 U/L (0–30)
 Lactate dehydrogenase (LDH): 266 U/L (120–240)
 Brain natriuretic peptide (BNP): 1328.4 pg/mL (0.00–100.0)

Impression:

1. Pulmonary hypertension (Liver Qi and Blood stasis)
2. Pericardial effusion (attack of the Heart by retained Fluid)
3. Juvenile rheumatoid arthritis (Cold-Dampness)
4. Systemic scleroderma (Heat flaring due to Yin deficiency and Blood stasis)
5. Raynaud's phenomenon (Blood stasis blocking the channels)

TREATMENT PRINCIPLE

Remove Blood stasis, protect the Heart and other organs, clear excess Heat and nourish Yin.

HERBAL TREATMENT

TAO HONG SI WU TANG and DU HUO JI SHENG TANG variation

Four-Substance Decoction with Safflower and Peach Pit, and Angelica Pubescens and Sangjisheng Decoction

Sheng Di Huang *Rehmanniae Radix* 12 g

Dang Gui *Angelicae sinensis Radix* 10 g

Chuan Xiong *Chuanxiong Rhizoma* 10 g

Hong Hua *Carthami Flos* 10 g
 Dan Shen *Salviae miltiorrhizae Radix* 10 g
 Chi Shao *Paeoniae Radix rubra* 12 g
 Bai Shao *Paeoniae Radix alba* 12 g
 Qiang Huo *Notopterygii Rhizoma seu Radix* 6 g
 Qin Jiao *Gentianae macrophyllae Radix* 10 g
 Du Huo *Angelicae pubescentis Radix* 10 g
 Fu Ling *Poria* 10 g
 Bai Zhu *Atractylodis macrocephalae Rhizoma* 10 g
 Chen Pi *Citri reticulatae Pericarpium* 10 g
 Mu Dan Pi *Moutan Cortex* 6 g
 Mai Men Dong *Ophiopogonis Radix* 12 g
 Ji Xue Teng *Spatholobi Caulis* 15 g

The herbs above were decocted in water for oral administration.

The patient returned the following day. On physical examination the galloping heart rhythm had disappeared and she had a regular rate of 88 beats/min.

1 month after office visit

Imaging report: chest, AP/PA and LAT

Result: AP and lateral views demonstrated stable cardiomegaly that had been noted on prior examination.

Impression: peribronchial oedema with no focal pneumonia. Stable cardiomegaly in this patient with known history of cardiac disease.

1 month after office visit

Alkaline phosphatase: 110 U/L (normal range 156–386)

ALT: 22 U/L (10–35)

AST: 44 U/L (15–40)

Creatinine kinase: 30 U/L (24–175)

BNP: 1240 pg/mL (0–100)

2½ months after office visit

Her doctor mailed information stating that her skin appeared much smoother and her facial erythema was reduced. The Raynaud's also appeared much reduced. Perhaps most important was that her liver enzyme levels, alkaline phosphatase and ALT, had returned to the normal range. BNP had been reduced from 1328.4 to 1240 pg/mL within 3 months.

4. Analysis of the cases

The term cardiopulmonary disease does not exist in Chinese medical terminology. However, the Heart and Lung reside in the Upper Jiao and are related to Qi and

Blood. Therefore, to treat cardiopulmonary disease it is best to manipulate the relationship between Qi and Blood.

(1) Case one

This patient not only had pulmonary hypertension (primary), but also IBS, insomnia and emotional disorder. According to the symptoms, tongue and pulse, the differentiation should be *Xiong Bi* 胸痹, chest Bi syndrome. The diarrhoea and other digestive symptoms were the result of Liver Qi stagnation and Spleen Qi deficiency. Liver Qi normally moves upward and downward in the body, and the Liver controls the patency of Qi. If Liver Qi stagnation results in stagnation of Qi in the chest, it causes chest Bi syndrome. As the Liver is generally stronger than the Spleen, the result is that Wood (Liver) restricts Earth (Spleen), causing digestive symptoms. To smooth Liver Qi and replenish Spleen Qi, one would normally prescribe **TONG XIE YAO FANG** *Important Formula for Diarrhoea*. However, in this instance, we must also be concerned with Western medical pathogens and pathogenesis. The reasons are:

- 1 Smoothing Liver Qi will improve blood circulation and reduce the tight sensation in the chest. We say: 'When Qi flows smoothly in the body then Blood can also flow well'. According to the relationship between Qi and Blood, Qi pushes Blood in the vessels. In addition, smoothing Liver Qi can help emotional disorders, although in this case one cannot discern whether the cause of the insomnia and emotional disorder was due to the autoimmune disease or to work pressure. Additionally, smoothing Liver Qi decreases IBS symptoms.
- 2 Removing Blood stasis is one way to promote circulation and prevent and treat fibrosis formation. It may also help reduce the formation of complex and protect cells and tissues from continuing damage. This theory has been promulgated by Dr Pian Shen, cited in Chapter 3.
- 3 In this case one might think to replenish Spleen Qi, because of the symptoms and signs of IBS: watery diarrhoea five to six times a day and a pale tongue with teeth marks all suggest Spleen Qi deficiency. However, as there was Fire present, resulting from Liver Qi stagnation and Yin deficiency, tonifying Spleen Qi could have exacerbated the Fire, thereby extending and aggravating the disease. Chinese medicine says that if there is a little Fire then you can be sure there is some Heat. The treatment should avoid warming Yang and replenishing Qi and prevent the ash from returning to Fire.¹ When an antigen exists, replenishing Qi and warming Yang will stimulate the thymus gland to produce more T cells, but there will be more helper T cells than suppressor T cells (see Figure 2.3). This will tend to turn a normal immune reaction into an autoimmune response, making the illness flare.
- 4 The treatment protocol above reduced the patient's symptoms, especially lowering of the pressure in the pulmonary artery from 110/70 to 55/25 mmHg and increasing oxygen saturation in the bloodstream after 6 minutes of activity from 67% to 92%. This suggests that a reduction in pulmonary artery blood pressure may be the result of degeneration of fibrosis

resulting from the use of herbal medicine and acupuncture. Furthermore, the pulmonary alveolar condition improved, giving evidence of improved air exchange. As the patient did not alter her medications during the Chinese medicine treatment, it is clear that improvements resulted from acupuncture and herbal medicine, such as the softening of the artery, reducing pulmonary pressure, and also improving pulmonary ventilation. The treatment essentially worked on the disordered immunity and impaired tissues.

In summary, the patient had an autoimmune disease causing pulmonary hypertension, emotional disorder and IBS. According to Chinese medicine, this resulted from a disordered relationship between the Liver and Spleen. In such cases, one should smooth Liver Qi and remove Blood stasis. Because of the Liver's function of storing Blood, when Liver Qi cannot flow smoothly, Blood stasis occurs. Recovery of Liver function is critical to treatment.

(2) Case two

This was a very difficult case for both Chinese and Western medicine, and a severe condition for a child aged only 10 years. When she came to the office, the girl had a galloping heart rhythm, and brain, skin, lung, joints, heart and liver function were involved. On analysis of her condition, the following concerns emerged:

- 1 The patient felt hot and had a burning sensation within her body, plus a rapid, thready pulse, but her extremities were cold and she had a pale, large and watery tongue, with a thin white coating. Superficially, this seemed like a Yang deficiency based on the cold extremities and tongue signs. The patient's symptoms and signs did not seem to match. Perhaps it was a case of Yin and Yang separating. This is called *Jue Zheng Re Jue* 厥证热厥. The cause is due to empty Heat internally being unable to warm the extremities because the channels are blocked by Qi stagnation or Blood stasis. Zhu Danxi described this phenomenon in *Dan Xi Xin Fa* 丹溪心法. He described *Jue Zheng* as the hands and feet (the extremities) being objectively cold to the patient and to touch by another person. The reason is that Qi and Blood are reversing their natural direction of flow in the channels. This looks like Raynaud's phenomenon. *Re Jue* 热厥 means there is a hot feeling internally, but a cold feeling in the extremities and the pulse is rapid. This looks like an autoimmune disease flare-up, coupled with Raynaud's phenomenon. The treatment for such a case would be harmonizing Yin and Yang. However, one cannot simply warm the Yang and eliminate the excess Heat. This separation of Yin and Yang could simply be Raynaud's phenomenon.
- 2 The patient's face had red spots and thick skin. According to the *Shang Han Lun/Treatise on Febrile Diseases* 伤寒论, 'red spots on the skin just like grain' are caused by Heat-Toxin and Blood stasis. Clearing the Heat-Toxin and removing the Blood stasis are required in this case.
- 3 The patient had shortness of breath and used oxygen 24 hours a day for 7 days a week. She had a pale and watery tongue that we would generally consider to be signs of Kidney Qi and Yang deficiency, because the Kidney could not grasp Lung Qi, causing superficial breathing. However, the patient's condition was actually the result of an autoimmune disorder that

impaired her lung function. Instead, the symptoms and signs seemed to point to an impairment of the Lung's function of purifying and descending Qi. The cause for this was secondary pulmonary hypertension, heart failure and alveolar hypoventilation. If we chose to warm Kidney Yang based solely on Chinese medical theory and treated this patient like a case of chronic bronchitis or asthma, we may well have triggered a flare-up of the disease.

- 4 We generally differentiate palpitations and a galloping and rapid heart rhythm as Heart Yin deficiency and/or Heart Fire rising due to Yin deficiency. If we tonified Yang, undoubtedly the condition would have become worse. The young patient not only had reduced liver enzymes but also her BNP level was reduced. Had it risen, this would have indicated heart failure. As it had dropped, this showed that the treatment was effective.
- 5 Practitioners must also know what kind of medications the patient has been prescribed as these may mask naturally occurring symptoms and signs. If this occurs, when we perform *Bian Zheng Shi Zhi* 辨证施治, or differentiation of symptoms and signs, we may be analysing side-effects of the medication as opposed to symptoms and signs resulting from the disease. Thus, a practitioner must also understand a disease's natural process. For example, the patient in Case two used a high dosage of beta-blockers that reduced her blood pressure and expanded her arteries. Although the effects of the medication were beneficial to the patient, they masked the true symptoms and signs of the natural disease process. Thus, if we had treated this patient based on the apparent symptoms and signs, and had warmed Yang and tonified Kidney, this would certainly have made the situation worse.

The patient received treatment and by the second day, her heart condition was better and its galloping rhythm disappeared; 1 month later her skin had improved, liver enzymes had reduced to almost normal levels, and the laboratory results indicating heart failure had improved.

5. Lifestyle prescriptions and health issues

Heart and pulmonary diseases caused by autoimmune diseases can also overlap other autoimmune diseases, such as rheumatoid arthritis, autoimmune hepatitis and type I diabetes. The symptoms and signs will differ depending on anatomical and pathophysiological differences. In Chinese medicine, the Heart and Lung reside in the Upper Jiao and are related through Qi and Blood. Therefore, to treat this pathogenic condition, one must harmonize the Qi and Blood.

- 1 The key to treatment of cardiopulmonary disease caused by an autoimmune disease is to prevent tissues and organs from being damaged by the autoimmune response. Limiting the scope of impairment of tissues is important. To do this, it is important to improve microcirculation and inhibit inflammation and immune reaction, prevent degradation of tissues and formation of fibrosis, and help new tissues to grow.

- 2 Although cardiopulmonary disease is not a Chinese medical term, we can still treat the condition according to its clinical symptoms and pathogenesis, which inform what treatment we should select.
- 3 According to Chinese medicine, the condition of the whole body must be analysed in order to treat a specific disease. Before tonifying a patient, the practitioner must always first ensure there is no Fire, Heat or Dampness, as tonifying will exacerbate these conditions.
- 4 One must also be careful not to tonify Yang directly, using warm or hot medicines, even if there is extreme cold, until the reason for the cold has been understood. This is because replenishing Qi and warming Yang may trigger a flaring of an autoimmune disease when used inappropriately.
- 5 Patients should stay far away from *Fa Wu* 发物, substances that may exacerbate a disease (e.g. spicy and pungent food), as well as cold food, including iced water. Some foods may trigger an allergy and should be avoided (e.g. seafood, eggs, leeks, coriander and mushrooms). Alcohol and tobacco should also be avoided.
- 6 Patients should maintain a sensible lifestyle.
- 7 Patients should try to stay warm and avoid the invasion of Wind, Cold and Damp, and exposure to viral or bacterial infection.

Conclusion

The broad array of cardiopulmonary problems associated with SLE requires a close working relationship between patient and physician. Preventative measures to reduce the number of flare-ups and rapid evaluation of new or changing symptoms are crucial to minimize long-term problems. Treatment is always individualized to the type of heart and/or lung involvement. Ongoing medical supervision is essential to optimize therapy and prevent long-term side-effects.

-
1. The term 'ash returning to Fire' is based on *Wen Bing*, or warm disease theory. Metaphorically, if one has lit fire to grass and it has burned down to ash, the fire seems to disappear. However, if you place a dry leaf on the ash, just briefly, the fire will rise up and burn the leaf. For this reason, one must be careful not to replenish Qi and Yang after a fever, because it may lead to Fire burning again. This is the same in autoimmune diseases, because there is always an underlying Yin deficiency. If you replenish Qi and warm the Yang, it may trigger the disease to flare up. In Western medicine, this means that replenishing Qi and Yang will stimulate the thymus gland to produce more T cells, including helper and suppressor T cells, as long as the antigen exists in the body.

Rheumatoid arthritis

CHAPTER 5

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Rheumatoid arthritis (RA) is caused by inflammation of the synovium,¹ which is the lining of the joints, and it may be triggered by disordered immunity. It can lead to long-term joint damage, resulting in chronic pain, loss of function and even disability.

1. Western medical aetiology and pathology

The exact cause of RA is currently unknown. In fact, there probably is no single cause. Researchers are now debating whether RA is one disease or several different diseases with common features. Below are listed its several possible causes.

(1) Genetic aetiology

When the genetic marker HLA-DR4, a human leukocyte antigen that is a genetic anomaly, is found in white blood cells there is a risk for developing RA. The marker's function is to distinguish one's own cells from foreign invaders.² If HLA-DR4 cannot differentiate between the two, it may attack self cells.

(2) Immune system aetiology

One example of miscommunication in the body is something known as rheumatoid factor, which is an antibody that is directed to regulate other, normal, antibodies. This means that, although this lower-level antibody may not cause autoimmune disease directly, it may potentially trigger an existing autoimmune disease to flare up. A high level of rheumatoid factor, however, may point to a malfunctioning immune system. In general, the higher the level of rheumatoid factor present in the body, the more severe the disease activity. It is important to note that not all people with RA have an increased level of rheumatoid factor, and that not all people with an increased level of rheumatoid factor have RA. Additionally, the test for rheumatoid factor can give a false-negative result if it is performed too early in the course of the disease.

(3) Infection aetiology

It is possible that, in some people, RA may be triggered by an infection, although there is currently no proof of this. RA is not a contagious disease, although it is possible that a germ to which almost everyone is exposed may cause an abnormal reaction from the immune system in people who already have some susceptibility for RA.

2. Diagnosis by Western medicine

A diagnosis of RA is based on a complete medical and family health history, a physical examination, laboratory tests and radiography.

- 1 Medical history – the medical history is probably the best tool for diagnosing RA.
- 2 Physical examination – for such symptoms and signs as joint swelling, joint tenderness, loss of motion in damaged joints, joint malalignment, signs of RA in other organs including the skin, lungs and eyes.
- 3 Laboratory tests.

The most commonly used tests are:

- **Complete blood count.** People with RA often have a low red blood cell count, signalling anaemia. Anaemia can contribute to feelings of fatigue. People with a more aggressive form of the disease tend to have more severe anaemia. However, the white blood cell count (WBC) may be high, indicating that infection is present. A low WBC could suggest Felty's syndrome,³ a complication of RA, or it may be caused by certain medications. Generally, the platelet count is raised when inflammation is present. However, it can also be lowered by certain drugs.

- **Erythrocyte sedimentation rate (ESR).** ESR measures the speed at which red blood cells fall to the bottom of a test tube. The more rapidly the red blood cells drop, the more inflammation is present. A high ESR indicates inflammation; the higher the rate, the more severe the RA. The ESR is frequently checked to monitor the success of treatment. This test is not specific to RA, but measures general inflammation in the body.
- **C-reactive protein (CRP).** CRP is normally found in the body, but levels are increased in the presence of inflammation. The higher the level of CRP, the more active the disease. Although ESR and CRP reflect similar degrees of inflammation, sometimes one will be raised when the other is not. This test may be repeated regularly to monitor inflammation and response to the treatment.
- **Rheumatoid factor (RF).** The test measures the amount of RF in the body. The higher the RF, the more severe the RA.
- **Antinuclear antibodies (ANAs).** This test detects a group of autoantibodies that are seen in about 30–40% of people with RA. Although commonly used as a screening tool, ANA testing is not used as a diagnostic tool because many people without RA or with other diseases can have ANAs.
- **Imaging studies:**
 - Radiographs (X-rays) – X-rays may show swelling of the soft tissues and loss of bone density around the joints. When the disease progresses, X-rays can show small holes or erosions near the ends of bones and narrowing of the joint space due to loss of cartilage.
 - Magnetic resonance imaging (MRI) – MRI can detect early inflammation before it is visible on an X-ray. MRI is particularly good at pinpointing synovitis (inflammation of the lining of the joint).
 - Joint ultrasonography – this is a much less expensive way to look for joint inflammation before X-rays show damage.
 - Bone densitometry – dual-energy X-ray absorptiometry (DEXA) is an important imaging method for measuring bone density, used primarily to detect osteoporosis. Osteoporosis may be especially severe in people with RA due to joint immobilization and the inflammatory response itself that may hasten bone loss. Women are particularly affected by osteoporosis following menopause.

3. Chinese medicine aetiology and pathology

Although Chinese medicine does not refer to RA by name, it does address diseases called *Bi syndromes* 痹证, some of which have symptoms and signs that may be similar to those of RA. Bi means obstruction and it is caused by pathogens creating blockage in the channels. This blockage prevents Qi and Blood from travelling through the channels smoothly and performing their functions of warming and nourishing the joints and extremities, thus causing serious symptoms.

Chinese medicine says: 'The four external evils known as Wind, Cold, Heat and Dampness attack the human body and cause Bi syndromes'. Chinese medicine teaches that exterior pathogens can attack the body when Qi and Blood are deficient and so cannot protect the body very well. This attack, coupled with the Qi and

Blood deficiency, can result in Bi syndrome. Thus, the aetiology of Bi syndrome is complicated. It involves some combination of the external pathogens Wind, Dampness, Cold and Heat that invade the body as a result of an internal deficiency of Qi and Blood. These external pathogens stay in the channels and obstruct the flow of Blood and Qi, causing Bi syndrome.

(1) Invasion of external pathogens

Bi syndrome is due to the combined invasion of Wind, Cold, Dampness and/or Heat, although Cold and Heat cannot attack simultaneously. Wind is the most important pathogenic factor as it always leads other pathogens to attack the body. This attack can occur if the weather changes suddenly, if people live in a cold or rainy place or wear few clothes, when people jog in extremely cold and damp weather, or if people sweat profusely thereby causing the pores to open. Any of these factors can facilitate the invasion of external Wind, Cold, Dampness or Heat. When the external pathogens stagnate in the channels for a long time, this can also lead to Blood stasis and to symptoms of Heat in the Blood. Or if Cold-Dampness stagnates in the body for a long time, this can also turn into a Heat syndrome.

(2) Deficiency of Liver and Kidney create internal conditions that allow external pathogens to invade the body

The Liver stores Blood, and the Kidney stores Essence. Liver Blood is nourished by Kidney Essence; Kidney Essence is replenished by Liver Blood. Chinese medicine believes that Blood can transform into Essence, but the source of Blood and Essence is the same: food Essence. This is why Chinese medicine says: 'Essence and Blood have a common source' and 'The Liver and Kidney have a common source'. Therefore, a deficiency of Essence may lead to a deficiency of Blood. And a long history of deficient Liver Blood may also cause deficient Kidney Essence. Both ultimately lead to Kidney and Liver deficiency. Essence and Blood have a function to nourish muscles, tendons and bones. When deficient, this results in 'an emptiness of the joints', giving the external pathogens a chance to invade the body, leading to Bi syndrome.

4. General treatment principle

It is important to distinguish what the invading external pathogens are, based on the symptoms and signs, in order to determine the correct treatment. If the pain is migratory and involves many joints, it is due mainly to pathogenic Wind. If the pain is relatively severe and fixed in one or more areas, it is due to Blood stasis. If pain is accompanied by a feeling of cold or heat in the affected joints, it is mainly due to pathogenic Cold or Heat, respectively. If the involved joints feel heavy, coupled with numbness or swelling, it is mainly due to pathogenic Dampness.

In the acute phase, the treatment needs to dispel pathogenic Heat or Cold, remove obstruction in the channels, and dispel external pathogenic Wind and Dampness. In the chronic phase, the treatment needs to nourish the Liver and Kidney, remove Blood stasis and smooth the channels.

DIFFERENTIATION AND TREATMENT

1. WIND-HEAT-DAMPNESS SYNDROME

CLINICAL MANIFESTATIONS

Redness, swelling around the joints, and a heat sensation and pain in the damaged joints. The joint is too painful to be touched, but the pain can be relieved by cold. There may be fever and thirst. The tongue is red, with a dry, yellow coating. The pulse is slippery and rapid.

TREATMENT PRINCIPLE

Dispel pathogenic Wind, Heat and Dampness, remove obstruction in the channels and stop pain.

HERBAL TREATMENT

BAI HU JIA GUI ZHI TANG *variation*

White Tiger plus Cinnamon Twig Decoction

Shi Gao *Gypsum fibrosum* 30 g (decoct first for 30 min)

Zhi Mu *Anemarrhenae Rhizoma* 12 g

Gan Cao *Glycyrrhizae Radix* 6 g

Gui Zhi *Cinnamomi Ramulus* 10 g

Yi Yi Ren *Coicis Semen* 30 g

Ren Dong Teng *Lonicerae Caulis* 30 g

Sang Zhi *Mori Ramulus* 30 g

Chi Shao *Paeoniae Radix rubra* 12 g

Qin Jiao *Gentianae macrophyllae Radix* 12 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

BL-17 Geshu, SP-10 Xuehai, Du-14 Dazhui and LI-11 Quchi.

SUPPLEMENTARY TREATMENT

If the patient has skin lesions, specifically erythematic, annular and subcutaneous nodules, add **Dan Shen** *Salviae miltiorrhizae Radix* 15 g, **Hong Hua** *Carthami Flos* 10 g, **Tao Ren** *Persicae Semen* 10 g and **Zi Cao** *Amebiae/Lithospermi Radix* 10 g, and needle HE-7 Shenmen, Front head line 1 (extra), and local points around the skin lesions.

2. WIND-COLD-DAMPNESS SYNDROME

CLINICAL MANIFESTATIONS

Joint pain aggravated by cold and relieved by warmth, and a cold sensation in the extremities. The tongue is pale with a whitish, thin or greasy coating. The pulse is floating and slow.

TREATMENT PRINCIPLE

Dispel pathogenic Wind-Cold-Dampness, remove obstruction in the channels and stop pain.

HERBAL TREATMENT

JUAN BI TANG *variation*

Remove Painful Obstruction Decoction

Qiang Huo *Notopterygii Rhizoma seu Radix* 6 g

Du Huo *Angelicae pubescentis Radix* 10 g

Gui Zhi *Cinnamomi Ramulus* 10 g

Qin Jiao *Gentianae macrophyllae Radix* 12 g

Dang Gui *Angelicae sinensis Radix* 10 g

Chuan Xiong *Chuanxiong Rhizoma* 10 g

Hai Feng Teng *Piperis kadsurae Caulis* 30 g

Ji Xue Teng *Spatholobi Caulis* 30 g

Sang Zhi *Mori Ramulus* 30 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

Selection of the local and distal points plus BL-23 Shenshu, Ren-4 Guanyuan and ST-36 Zusanli, and warm the needles.

SUPPLEMENTARY TREATMENT

If the pain migrates due to pathogenic Wind, add **Wei Ling Xian** *Clematidis Radix* and **Fang Feng** *Saposhnikoviae Radix*, and needle BL-17 Geshu and SP-10 Xuehai; if a patient has Cold pain, add **Zhi Chuan Wu** *Aconiti preparata niti Radix* and **Zhi Cao Wu** *Aconiti kusnezoffii Radix preparata*, and needle BL-23 Shenshu and Ren-4 Guanyuan; if there is a heavy pain due to Dampness, add **Yi Yi Ren** *Coicis Semen* and **Cang Zhu** *Atractylodis Rhizoma*, and needle ST-36 Zusanli and SP-5 Shangqiu; when the condition is chronic and the symptoms recur repeatedly and aggravate the arthralgia, add **Ru Xiang** *Olibanum*, **Mo Yao** *Myrrha*, **Di Long** *Pheretima* and **Quan Xie** *Scorpio*, and needle BL-23 Shenshu and SP-10 Xuehai; when patients have deficiency of Liver and Kidney symptoms, add **Du Zhong** *Eucommiae Cortex* and **Sang Ji Sheng** *Taxilli Herba*, and needle SP-6 Sanyinjiao.

3. YIN DEFICIENCY WITH BLOOD STASIS

CLINICAL MANIFESTATIONS

Joint pain with slight swelling, inability to engage in activities due to pain in the damaged joints, and affected joints may be deformed and weak. The tongue is red with less coating or a thin, whitish coating. The pulse is thready, rapid and tense.

TREATMENT PRINCIPLE

Nourish Liver and Kidney Yin, remove Blood stasis and transform Dampness.

HERBAL TREATMENT

DU HUO JI SHENG TANG *variation*

Angelica Pubescens and *Sangjisheng* Decoction

Du Huo *Angelicae pubescentis Radix* 10 g

Sang Ji Sheng *Taxilli Herba* 12 g

Qin Jiao *Gentianae macrophyllae Radix* 10 g

Fang Feng *Saposhnikoviae Radix* 10 g

Xi Xin *Asari Herba* 3 g

Gui Zhi *Cinnamomi Ramulus* 10 g

Fu Ling *Poria* 10 g

Du Zhong *Eucommiae Cortex* 12 g

Niu Xi *Achyranthis bidentatae Radix* 12 g

Bie Jia *Trionycis Carapax* 20 g (decocted first for 30 min)

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

KI-3 Taixi, SP-6 Sanyinjiao, BL-23 Shenshu and BL-18 Ganshu.

SUPPLEMENTARY TREATMENT

If the symptoms are chronic and the pain is intermittent, add **Dang Gui** *Angelicae sinensis Radix* and **Wei Ling Xian** *Clematidis Radix*, and needle BL-11 Dazhu and GB-39 Xuanzhong. However, be careful to warm Yang only if the patient has Yang deficiency symptoms, because warming the Yang may trigger helper T cells to produce more antibodies.

Below is a list of acupuncture points for pain in different joints and locations:

- Pain in the shoulder joint: LI-15 Jianyu, TB-14 Jianliao, TB-19 Jianzhen and TB-10 Naoshu
- Pain in the scapula: SI-10 Tianzong, SI-12 Bingfeng, SI-14 Jianwaishu and BL-43 Gao Huang
- Pain in the elbow: LI-11 Quchi, LU-5 Chize, TB-10 Tianjing and LI-4 Hegu
- Pain in the wrist: TB-4 Yangchi, LI-5 Yangxi, SI-5 Yanggu and TB-5 Waiguan
- Stiffness of the fingers: SI-5 Yanggu, LI-4 Hegu and SI-3 Houxi
- Numbness and pain in the fingers: SI-3 Houxi, LI-3 Sanjian and Baxie (extra)
- Pain in the hip joint: GB-30 Huantiao, GB-29 Juliao and GB-39 Xuanzhong
- Pain in the knee joint: Heding (extra), ST-35 Dubi, Medial Xiyan (extra), GB-34 Yanglingquan and SP-9 Yinlingquan
- Pain in the ankle: ST-41 Jiexi, SP-5 Shangqiu, GB-40 Qiuxu, BL-60 Kunlun and KI-3 Taixi
- Numbness and pain in the toes: SP-4 Gongsun, BL-65 Shugu and Bafeng (extra).

CASE STUDIES

CASE ONE

L was a 39-year-old woman who came in for her first office visit complaining of bilateral pain in her knees with a dry mouth and sore throat and eyes for over 3 years. She had pain in the joints of both hands and they were stiffer in the morning. She also had pain in the joints of both shoulders and knees. Her knees always felt like there was something warm on them. She had intolerance to cold, dry eyes and lips, a cold feeling in both hands and feet, frequent headaches but without dizziness, a skin rash all over especially on the inside of both thighs, itchiness that led to insomnia, and had to use a steroid cream to stop the itchy feeling before going to bed. She had pain in the upper right quadrant of her abdomen, fatigue, and she easily caught the common cold. Her urination was normal and she had three bowel movements a day that were formed.

Physical examination: the patient's face was red. The skin rash was all over her body, especially on the inside of the thighs and wrists. Her right leg was about 2 inches shorter and slightly smaller than the left leg. Her tongue was red and cracked in the middle with a white greasy coating and teeth marks. Her pulse was thready and rapid.

The patient had a history of asthma until around the age of 12 years.

2 years prior to office visit

Abdominal ultrasonography: normal examination.

18 months prior to office visit

MRI: bone spurs at the articulation of the right fibular head with the adjacent lateral tibial metaphysis compatible with degenerative change that may have been related to a previous trauma or a benign exostosis. No other abnormality.

1 year prior to office visit

Complement C3, serum: 85 mg/dL (normal range 90–180)

Complement C4, serum: 18 mg/dL (9–36)

ANA, direct: 599 U/mL (0–99, >120 positive)

1 month prior to office visit

Rheumatoid factor:

RA Latex Turbid: 35.7 IU/mL (0.0–13.9)

ANA, direct: 714 U/mL (0–99, >120 positive)

Sedimentation rate, Westergren: 11 mm/h (0–20)

SLE profile C:

Ribonucleoprotein (RNP) antibodies: 21 U/mL (0–99)

Smith antibodies: 13 U/mL (0–99)

Sjögren's anti-SS-A: 599 U/mL (0–99)

Sjögren's anti-SS-B: 67 U/mL (0–99)

Anti-DNA Ab: 35 U/mL (0–99)

Impression:

1. RA (Bi syndrome caused by Wind, Cold and Dampness)

2. Sjögren's syndrome (Fire flaring due to Liver and Kidney Yin deficiency)

TREATMENT PRINCIPLE

Expel Wind, Cold and Dampness, open the channels and remove Blood stasis.

HERBAL TREATMENT

DU HUO JI SHENG TANG variation

Angelica Pubescens and *Sangjisheng* Decoction

Qiang Huo *Notopterygii Rhizoma seu Radix* 10 g

Du Huo *Angelicae pubescentis Radix* 10 g

Niu Xi *Achyranthis bidentatae Radix* 10 g

Qin Jiao *Gentianae macrophyllae Radix* 10 g

Fang Feng *Saposhnikoviae Radix* 10 g

Fang Ji *Aristolochiae fangchi Radix* 6 g

Gui Zhi *Cinnamomi Ramulus* 10 g

Chi Shao *Paeoniae Radix rubra* 12 g

Bai Shao *Paeoniae Radix alba* 12 g

Sheng Di Huang *Rehmanniae Radix* 12 g

Chuan Xiong *Chuanxiong Rhizoma* 10 g

Huang Qin *Scutellariae Radix* 12 g

Dan Shen *Salviae miltiorrhizae Radix* 12 g

Gan Cao *Glycyrrhizae Radix* 3 g

The herbs above were decocted in water for oral administration twice daily.

CHINESE HERBAL PATENT

SNIFF & RELIEVE⁴ for external use. This is a patent aromatherapy remedy designed to decrease the frequency with which a person catches the common cold or flu; it reduces viral load and inhibits the virus from growing in the nasal vestibule.

ACUPUNCTURE

Du-20 Baihui, Yintang (extra), LI-11 Quchi, Ren-22 Tiantu, SP-10 Xuehai, Xiyao (extra), ST-35 Dubi, SP-6 Sanyinjiao and LIV-2 Xingjian.

4 months after office visit

Four months later the patient reported that the pain in both knees was almost gone. She had only a slight skin rash and dry lips and eyes.

8 months after office visit: laboratory results

Sjögren's anti-SS-A: 931 U/mL (normal range 0–99)

Sjögren's anti-SS-B: 65 U/mL (0–99)

Anti-DNA (DS) Ab, Qn: 21 U/mL (0–99)

ANA, direct: 931 U/mL (0–99)

Rheumatoid factor:

RA Latex Turbid: 32.5 IU/mL (0.0–13.9)

Sedimentation rate, Westergren: 8 mm/h (0–20)

Complement C3, serum: 92 mg/dL (adult 90–180)

Complement C4, serum: 15 mg/dL (adult 9–36)

The patient received the above treatment for about 6 months. The pain in both knees and fingers was almost gone. She sometimes felt slight pain in the right knee, but it would last for only a few minutes. She stopped using her artificial tears by accident, because she forgot she needed them, but her eyes still felt moist, especially her right eye. She realized that even without artificial tears, her eyes still seemed okay.

CASE TWO

SP was a 17-year-old boy who came in complaining of pain and swelling in the knee joint for 6 months, on his first office visit. He had had a left knee injury coupled with pain about 2 years before his first visit. He had received physiotherapy and pain medication for 3 months and those symptoms had resolved. Soon before he came in, he had a frequent sore throat that did not respond to medication. Four months before his first office visit the patient developed a high fever of 104°F, stomach pain and diarrhoea. He went to the emergency room and received a prescription for antibiotics, resulting in improved symptoms. However, 5 days later his left knee began to swell and developed a burning sensation, decreased range of motion and stiffness in the morning. He received a steroid injection in the left knee. The pain was reduced, but the boy still had a burning sensation and swelling. His tongue was pale with a thin and white coating. His pulse was thready, taut and rapid.

5 weeks prior to office visit

CRP, quant: 57.6 mg/L (normal range 0.0–4.9)

HLA-B27: positive

2 weeks prior to office visit

Sedimentation rate, Westergren: 9 mm/h (0–15)

ANA: 1: 160 (negative < 1: 40)

Rheumatoid factor: positive

Impression:

I. RA (Wind, Dampness and Heat Bi syndrome)

TREATMENT PRINCIPLE

Dispel pathogenic Wind, Heat and Dampness, remove obstruction in the channels and stop the pain.

HERBAL TREATMENT

BAI HU JIA GUI ZHI TANG *variation*

White Tiger plus Cinnamon Twig Decoction

Shi Gao *Gypsum fibrosum* 30 g (decoct first for 30 min)

Zhi Mu *Anemarrhenae Rhizoma* 12 g

Gan Cao *Glycyrrhizae Radix* 6 g

Gui Zhi *Cinnamomi Ramulus* 10 g

Yi Yi Ren *Coicis Semen* 15 g

Bai Shao *Paeoniae Radix alba* 10 g

Chi Shao *Paeoniae Radix rubra* 10 g

Fang Feng *Saposhnikoviae Radix* 10 g

Ze Xie *Alismatis Rhizoma* 10 g

Fu Ling *Poria* 10 g

Jin Yin Hua *Lonicerae Flos* 12 g

Lian Qiao *Forsythiae Fructus* 12 g

Ren Dong Teng *Lonicerae Caulis* 30 g

The herbs above were decocted in water for oral administration twice daily.

CHINESE HERBAL PATENT

SNIFF & RELIEVE for external use. See description above.

ACUPUNCTURE

L. Xiyan (extra), L. ST-35 Dubi, L. Hedong (extra), SP-10 Xuehai and ST-36 Zusanli.

After taking the treatment for 3 months, the patient's symptoms had all gone. However, 6 years later he returned with the same complaint. He had gone to the beach 8 months previously. While there, he had an itchy feeling on the skin of his neck, which was controlled by Zyrtec (cetirizine). Since then, the pain, burning sensation and the swelling in his left knee had returned. Every month since then, his physician had drawn 40–45 mL of fluid from his left knee.

8 months prior to this office visit

Antinuclear AB, enzyme-linked immunosorbent assay (EIA): positive

Antinuclear AB titre: 1 : 80 (negative < 1 : 40)

IgE: 154 KU/L (0–114)
 CRP: 2 mg/L (<8)
 C3: 112.7 mg/dL (90.0–207.0)
 C4: 14.6 mg/dL (17.4–52.2)

The same treatment was given as 6 years previously, with the addition of *Lei Gong Teng Tripterygii wilfordii Radix* 10 g. Two months later, the patient's knee was better and no more fluid could be aspirated.

5. Analysis of the cases

Western medical research shows that RA progresses in three stages. The first stage involves the swelling of the synovial lining, causing pain, warmth, stiffness, redness and swelling around the joint. In the second stage, there is rapid division and growth of the pannus (inflamed synovial tissue), causing the synovium to thicken. In the third stage, the inflamed cells release enzymes that may digest and damage bone and cartilage, often causing the involved joint to lose its shape and alignment, more pain, and loss of movement. Because RA is a chronic, degenerative disease, it may continue indefinitely and progress. Frequent flares in disease activity can occur. RA is a systemic disease that can affect other organs in the body.

Chinese medicine posits that when the pathogenic evils Wind, Dampness, Heat and Cold invade the body, if vital Qi is strong enough it safeguards health and protects against Bi syndrome.

(1) Case one

This patient had a Western diagnosis of RA and Sjögren's syndrome, both of which are autoimmune diseases. RA impairs the tissues in the synovial lining, causing the lining to proliferate and produce serous fluid in the articular cavity, resulting in pain. The patient also felt chilly and intolerant to cold. This latter symptom pointed to a Cold syndrome, so the patient was diagnosed with Wind-Cold-Dampness Bi syndrome. At the same time, the patient also experienced dry mouth and dry eyes from Sjögren's syndrome. This is impairment of glands in the mouth and eyes, whereby they lose their ability to moisten surrounding tissues. These symptoms suggested a Yin deficiency.

If RA were to be treated first, the treatment would use drying Dampness herbs. However, the character of such drying herbs is that they damage Yin. If Sjögren's syndrome were to be treated first, the treatment would nourish Yin. However, the character of nourishing Yin herbs is that they will disturb the function of the herbs that dry Dampness, thereby causing Dampness to remain in the body longer, making it difficult to dry and possibly aggravating the RA. Thus the Chinese medicine treatment appears contradictory, although the Western medicine treatment does not, as both of the illnesses are autoimmune, regardless of which organ and tissue is involved. For better results, we treated the RA first, because the joint pain was a major health issue at that time. The principle in this case was that, while treating the RA, the Sjögren's syndrome should not be exacerbated. Once

the symptoms of RA had improved, there would be a better chance to treat both illnesses together.

We chose **DU HUO JI SHENG TANG**/*Angelica Pubescens* and *Sangjisheng Decoction* to expel Wind, Cold and Dampness, to open the channels and to remove the Blood stasis. Yet we removed **Ren Shen Ginseng Radix** and **Du Zhong Eucommiae Cortex** from the formula so that their replenishing effect would not trigger a stronger antibody attack. In this prescription, **Qiang Huo Notopterygii Rhizoma seu Radix** and **Du Huo Angelicae pubescentis Radix** both have the function of dispelling Wind-Dampness. **Qiang Huo Notopterygii Rhizoma seu Radix** works for the upper body and **Du Huo Angelicae pubescentis Radix** for the lower body. In combination, the herbs cover the joints of the whole body. When coupled with **Qin Jiao Gentianae macrophyllae Radix** and **Fang Feng Saposhnikovia Radix**, they all work to increase the above function. **Niu Xi Achyranthis bidentatae Radix** strengthens the back and knees, and removes Blood stasis when accompanied by **Chi Shao Paeoniae Radix rubra** and **Dan Shen Salviae miltiorrhizae Radix**. These three herbs prevent antibodies from sticking to antigens, thereby reducing the likelihood of causing degeneration and scar tissue, and they inhibit synovial lining proliferation and reduce exudation in the articular cavity. **Bai Shao Paeoniae Radix alba** and **Sheng Di Huang Rehmanniae Radix** nourish Yin, whereas the other herbs remove Blood stasis. Their purpose is to prevent the herbs that dry Dampness from damaging the Yin, and they protect against gland impairment. **Huang Qin Scutellariae Radix** clears Heat due to Yin deficiency and also has the function of suppressing antibodies. **Gui Zhi Cinnamomi Ramulus**, with its warm character, is not used to warm Yang but to promote the free movement of Qi in the channels. When coupled with **Bai Shao Paeoniae Radix alba**, the two have the ability to harmonize the Ying and Wei. These two are the main ingredients of **GUI ZHI TANG**/*Cinnamon Twig Decoction*, which helped resolve the patient's chilly sensation. The patient also complained of frequent colds and a sore throat. The pathogenic evils undoubtedly triggered the illness to flare.

A disordered immune system can be described as the chicken and a cold or flu as the egg. As always, the question is, 'Which comes first, the chicken or the egg?'. The disordered immune system leads to an overall imbalance in immunity, making a patient susceptible to catching a cold or flu. Conversely, a viral or bacterial infection may trigger an autoimmune disease flare-up! If the patient continues in the flare phase, the disease will be difficult to heal or send into remission. Instead, the condition will cause the patient to enter a bad downward spiral.

To block the process of the disease further, **SNIFF & RELIEVE** was also prescribed to inhibit viral growth in the patient's nasal vestibule, thereby reducing the viral load and protecting her from frequent colds. Chinese medicine has the principle that, if a patient suffers from an exogenous pathogen, this must be treated first. Undoubtedly, applying this principle caused a slight delay in the overall treatment of the autoimmune disease, but if the **SNIFF & RELIEVE** could prevent the patient from frequent colds, it would ensure the overall progress of the treatment.

The acupuncture points Du-20 Baihui and Yintang (extra) govern Yang of the entire body; LI-11 Quchi, SP-10 Xuehai, SP-6 Sanyinjiao and LIV-2 Xingjian clear

Heat and remove Blood stasis; Xiyan (extra) and ST-35 Dubi are local points for reducing the pain sensation; Ren-22 Tiantu was used here for governing Yin of the whole body, as the Ren channel governs Yin and may stimulate the thymus gland indirectly.

After regular treatment for 7 months, the patient's symptoms were almost gone, including joint pain, and dry mouth and eyes. The main treatment addressed RA and the concentration of the specific antibody, RA Latex Turbid, at 32.5 IU/mL was reduced, and complement C3 and C4 levels were increased. Although levels of the Sjögren's syndrome-specific antibody Sjögren's anti-SS-A 931 U/mL increased, the symptoms of dryness were reduced. These results may indicate that, although there were autoimmune antibodies, the antigen (glands) was protected.

(2) Case two

The patient in Case two received treatment until symptoms had resolved, but antibodies remained positive. This suggests that the initial treatment sent the patient into remission, but did not cure him. So, when an exogenous pathogen invaded the patient, this triggered the illness to flare up again. The patient was prescribed **BAI HU JIA GUI ZHI TANG/White Tiger and Cinnamon Twig Decoction**, which clears pathogenic Heat and opens the channels. **Shi Gao Gypsum fibrosum** and **Zhi Mu Anemarrhenae Rhizoma** clear pathogenic Heat in the Qifen. The addition of **Jin Yin Hua Lonicerae Flos** and **Lian Qiao Forsythiae Fructus** strengthened the ability to clear Heat, including the Heat in the Weifen. The pathogen entered from the body surface and we say, 'Allow evils that enter from the surface to exit from the surface or leave from the same door from which they entered'. **Yi Yi Ren Coicis Semen**, **Ze Xie Alismatis Rhizoma** and **Fu Ling Poria** transform Dampness. **Gui Zhi Cinnamomi Ramulus** and **Ren Dong Teng Lonicerae Caulis** open the channels. Of those chosen acupuncture points, SP-10 Xuehai removes Blood stasis and cools the Heat; ST-36 Zusanli replenishes Qi to resist external pathogens.

Another way to say this is we use herbal medicine and acupuncture to clear the Heat, remove Blood stasis and dispel exogenous pathogens. By also replenishing Qi, we are doing two separate things to accomplish a single goal. In applying Chinese medicine theory, when one treats any disease, one must safeguard the Spleen and Stomach. This is because these two organs are the source of acquired Qi and they play a central role in the transformation and transportation of pure Essence. The herbs we are using here are bitter in taste and cold in nature, and they can compromise the functions of transformation and transportation. Therefore, to protect these functions, we must replenish Spleen Qi. Modern research shows that replenishing Qi and warming Yang may stimulate the thymus to produce more T cells (see Figure 2.3). However, simply replenishing Qi and Yang when an antigen exists can exacerbate this kind of illness. On the other hand, if the offending antigen is 'masked' by a particular treatment, there may be greater production of suppressor T cells than helper T cells, thus reducing the antibodies in the bloodstream. The treatment is a natural process, but it undoubtedly takes time to 'get the goat'. The patient has had two flare-ups during the past 7 years, both treated by Chinese medicine.

6. Lifestyle prescriptions and health issues

RA is an autoimmune disorder in which immune cells mistakenly attack the patient's own tissue, specifically the lining of the synovium of the joints, causing inflammation and other symptoms.

Pain in the joints and muscles is a common health issue. The aetiology is usually internal Qi and Blood deficiency, making it difficult for the body to prevent invasion by the external pathogens Wind, Cold, Heat or Dampness. These pathogens obstruct the channels so that Qi and Blood cannot flow smoothly, causing pain and numbness in the joints and muscles.

- 1 The manner in which Bi syndromes manifest is based on a patient's individual constitution of Qi (Yang) or Blood (Yin) deficiency, and which pathogen – Wind, Cold, Heat or Dampness – invades the body.
- 2 To treat Bi syndrome, one usually dispels Wind, Cold, Heat or Dampness, while simultaneously taking care to protect the patient's underlying constitution, such as Qi, Blood or Yin deficiency. Therefore, on the one hand, one needs to dispel pathogens, but on the other hand, one needs to prevent the pathogens from impairing the function of vital Qi.
- 3 The Chinese medicine treatment must follow Western medical theory on treating the disease.
- 4 RA is a chronic disease, because vital Qi is insufficient, resulting in frequent colds, which further impair vital Qi. To prevent frequent invasion by exogenous pathogens, we suggest that patients use the patent **SNIFF & RELIEVE**.
- 5 Keep the joints warm.
- 6 Engage in proper activity, but avoid overactivity that may damage the joints.
- 7 Check for and avoid food allergens that may trigger an RA flare.

-
1. *Synovium* refers to a thin, weak layer of tissue, only a few cells thick, that lines the joint space. The synovium acts to control the environment within the joint. It does this in two ways: first, it acts as a membrane to determine what can pass into the joint space and what stays outside; second, the cells within the synovium produce substances such as hyaluronan, which are the components of joint fluid, a clear substance that lubricates and nourishes the cartilage and bones inside the joint capsule.
 2. Gregersen PK, Silver J, Winchester RJ. The shared epitope hypothesis. *Arthritis Rheum* 1987; 30:1205–1215.
 3. Felty's syndrome refers to pathological changes that occur in patients with chronic RA. They include splenomegaly and neutropenia. In some cases, there may also be anaemia and thrombocytopenia. Thomas CL, ed. *Taber's cyclopedic medical dictionary*, 18th edn. Philadelphia: FA Davis, 1997.
 4. **SNIFF & RELIEVE**. This aromatherapy remedy has been formulated by the author. It is not yet available for purchase, but soon will be.

Autoimmune hepatitis

CHAPTER 6

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Autoimmune hepatitis (AIH) occurs when the liver is attacked by rogue immune cells that mistake it for foreign tissue or pathogen, causing inflammation. Its alternative name is lupoid hepatitis.

1. Western medical aetiology and pathology

The function of the immune system is to protect the body from viruses, bacteria and other living organisms. Normally, the immune system does not damage the body's own cells. However, certain viral infections such as hepatitis B or toxins that change the antigenicity of the liver's cytomembrane may cause the immune

system mistakenly to attack liver cells. In addition, a genetic factor may predispose some people to have AIH.

T cells play a central role in the immunopathogenesis of AIH. CD4⁺ T cells are thought to be critical for this disease to develop. Increasing evidence has shown that CD8⁺ T and $\gamma\delta$ T cells also play a significant role. HLA genotypes to AIH, as well as the clonal expansion of a limited number of T-cell receptors, suggest that the presentation of a self-antigen or a molecular mimic may be responsible for the initiation of the immune response. Given the association of AIH with viral hepatitis, it is thought that the loss of tolerance begins with an infection of hepatocytes and subsequent cytolysis by CD8⁺ T cells. The presentation of self-antigens or molecular mimics leads to activation and clonal expansion of T cells; this process may be increased by impaired regulatory T cells and a defect in apoptosis. Ultimately T cells initiate B-cell production of autoantibodies, proinflammatory cytokines, and finally hepatocyte cytotoxicity.

2. Diagnosis by Western medicine

Laboratory blood tests and liver biopsy may give a clear diagnosis.

(1) Blood tests

A routine blood test for liver enzymes can help reveal a pattern typical of hepatitis, such as alanine aminotransferase (ALT), aspartate aminotransferase (AST) and the albumin/globulin (A/G) ratio. However, further tests, especially for autoantibodies, are needed to diagnose AIH. In AIH, the immune system makes antinuclear antibodies (ANA), antibodies against smooth muscle cells (SMA), or liver and kidney microsomes (anti-LKM).

AIH is subdivided into three groups. Type 1 AIH is associated with antibodies to nuclear and/or smooth muscle autoantigens. Type 2 AIH is characterized by antibodies to liver and kidney microsomal antigen. In Type 3, a substantial number of patients with AIH produce antibodies to a cytosolic soluble liver antigen alone or in combination with ANA and/or SMA.

(2) Liver biopsy

If blood tests are inconclusive, a liver tissue biopsy is necessary.

3. Chinese medical aetiology and pathology

Chinese medicine does not specifically name AIH. However, the symptoms of AIH belong to the categories of *Fa Re* 发热, fever; *Huang Dan* 黄疸, jaundice; *Xie Tong* 胁痛, hypochondrial pain; *Zheng Jie* 症积, abdominal mass; *Shui Zhong* 水肿, oedema; and *Bi Zheng* 痹证, joint pain.

According to Chinese medicine, the material structure of the Liver belongs to Yin and its function belongs to Yang. When a patient has a Yin deficiency due to a genetic inheritance from their parents, or from an improper diet, or following an illness treated by a medication that damaged Liver Yin, or if the patient is in low spirits, Liver depression will bring Fire that further impairs Liver Yin, and

causes prolonged Liver disease. Febrile diseases may also lead to the impairment of Liver Yin. Sometimes, the Liver may not be moistened by Kidney water because of a deficiency of Kidney Yin. Deficiency of Liver Yin makes it impossible not only for the Liver to be nourished but also for Yin to control Yang, so Fire flares up. At the same time, Fire can singe the Blood to cause Blood stasis, which blocks the Liver channel and impedes water flow and bile and blood transportation. The water, bile and blood exude from their regular pathways, causing oedema, ascites, jaundice and bleeding.

4. General treatment principle

The principle of treatment is to eliminate pathogenic Heat from the Blood, remove Blood stasis, and nourish Liver and Kidney Yin.

DIFFERENTIATION AND TREATMENT

1. LIVER YIN DEFICIENCY

CLINICAL MANIFESTATIONS

The patient may have no major clinical complaints, but be diagnosed by general physical examination and laboratory tests. The tongue may be red with a white and thin coating. The pulse will be thready and taut.

TREATMENT PRINCIPLE

Nourish Liver Yin and regulate Blood flow.

HERBAL TREATMENT

YI GUAN JIAN *variation*

Linking Decoction

Sheng Di Huang *Rehmanniae Radix* 12 g

Mai Men Dong *Ophiopogonis Radix* 10 g

Gou Qi Zi *Lycii Fructus* 12 g

Nu Zhen Zi *Ligustri lucidi Fructus* 12 g

Bai Shao *Paeoniae Radix alba* 12 g

Chuan Lian Zi *Toosendan Fructus* 10 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

BL-18 Ganshu, BL-17 Geshu, SP-6 Sanyinjiao, KI-3 Taixi and LIV-2 Xingjian.

SUPPLEMENTARY TREATMENT

If the patient is not using any medication, but liver enzymes are rising, add Wu Wei Zi *Schisandrae Fructus* and Chui Pen Cao *Sedii Herba*, and needle hepatitis point (extra located 0.7 cun distal to the carpal bones between the 4th and 5th metacarpal bone) and Du-20 Baihui; if the patient is thirsty and has a red tongue, add Ku Shen *Sophorae flavescens Radix* and Tu Fu Ling *Smilacis glabrae Rhizoma*, and needle LI-11 Quchi and HE-7 Shenmen; if there is cirrhosis, add Yu Jin *Curcumae Radix*, Zhi Ke *Aurantii Fructus*, Dan Shen *Salviae miltiorrhizae Radix*, Tao Ren *Persicae Semen* and Hong Hua *Carthami Flos*, and needle SP-10 Xuehai, LIV-14 Qimen and LIV-13 Zhangmen.

2. EXTREME HEAT DUE TO LIVER AND KIDNEY YIN DEFICIENCY

CLINICAL MANIFESTATIONS

Low-grade fever or tidal fever in the afternoon, a feverish sensation in the palms and soles, thirst, fatigue, night sweats, irritability, insomnia or aching pain in the joints. The tongue is red, small and fissured, or mirror-like. The pulse is taut and thready or rapid.

TREATMENT PRINCIPLE

Clear pathogenic Heat and remove Toxins, cool the Blood, and nourish Liver and Kidney Yin.

HERBAL TREATMENT

LONG DAN XIE GAN TANG *variation*

Gentiana Longdancao Decoction to Drain the Liver

Long Dan Cao *Gentianae Radix* 4 g

Zhi Zi *Gardeniae Fructus* 10 g

Huang Qin *Scutellariae Radix* 12 g

Chai Hu *Bupleuri Radix* 6 g

Ze Xie *Alismatis Rhizoma* 10 g

Dang Gui *Angelicae sinensis Radix* 10 g

Che Qian Zi *Plantaginis Semen* 12 g

Gan Cao *Glycyrrhizae Radix* 3 g

Sheng Di Huang *Rehmanniae Radix* 12 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

BL-18 Ganshu, BL-19 Danshu, LI-11 Quchi, SP-10 Xuehai, LIV-2 Xingjian, KI-3 Taixi and SP-6 Sanyinjiao.

SUPPLEMENTARY TREATMENT

To treat symptoms and signs of Spleen Qi deficiency, such as fatigue, bilateral oedema in the ankles, with symptoms and signs being worse in the afternoon than in the morning, add **Bai Zhu** *Atractylodis macrocephalae Rhizoma* and **Fu Ling** *Poria*, and needle ST-36 Zusanli and KI-16 Huangshu to treat symptoms and signs of Blood stasis, such as a dark tongue, add **Tao Ren** *Persicae Semen*, **Hong Hua** *Carthami Flos* and **Dan Shen** *Salviae miltiorrhizae Radix*, and needle BL-17 Geshu, GB-21 Jianjing and BL-40 Weizhong; to treat symptoms and signs of sleeplessness due to Liver Fire, add **Long Dan Cao** *Gentianae Radix*, **Huang Lian** *Coptidis Rhizoma* and **Ze Xie** *Alismatis Rhizoma*, and needle Du-20 Baihui, Yintang (extra), HE-7 Shenmen and LIV-2 Xingjian.

3. DEFICIENCY OF BOTH LIVER YIN AND SPLEEN QI

CLINICAL MANIFESTATIONS

Thirst, night sweats, pain or ache in the hypochondrial region, dizziness, blurred vision, lassitude, fatigue, dysphoria with feverish sensation in the chest, palms and soles, anorexia and indigestion. The tongue is red and/or fissured with teeth marks and little coating. The pulse is thready and weak, or thready and rapid.

TREATMENT PRINCIPLE

Nourish Liver Yin and supplement Spleen Qi.

HERBAL TREATMENT

SHENG MAI SAN *variation*

Generate the Pulse Powder

Dang Shen *Codonopsis Radix* 12 g

Mai Men Dong *Ophiopogonis Radix* 12 g

Wu Wei Zi *Schisandrae Fructus* 10 g

Shan Zhu Yu *Corni Fructus* 10 g

Sheng Di Huang *Rehmanniae Radix* 12 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

BL-18 Ganshu, BL-20 Pishu, BL-23 Shenshu, ST-36 Zusanli, SP-6 Sanyinjiao, KI-3 Taixi and LIV-2 Xingjian.

SUPPLEMENTARY TREATMENT

To treat symptoms and signs of Kidney Yin deficiency, add **Nu Zhen Zi** *Ligustri lucidi Fructus* and **Xuan Shen** *Scrophulariae Radix*; to treat extreme Heat, add **Huang Qin** *Scutellariae Radix*, **Ku Shen** *Sophorae flavescens Radix* and **Zhi Zi** *Gardeniae Fructus*, and needle LIV-2 Xingjian, SP-10 Xuehai and LI-11 Quchi.

4. YIN DEFICIENCY AND BLOOD STASIS**CLINICAL MANIFESTATIONS**

Hepatomegaly and splenomegaly, discomfort or distress in the hypochondrium, distension of the abdomen, anorexia, thirst, sallow yellow and jaundiced complexion or spider angiomas on the skin and 'liver palms'.¹ The tongue is deep red, or crimson and purple. The pulse is taut and thready.

TREATMENT PRINCIPLE

Nourish Yin, promote Blood circulation, remove Blood stasis and soften hepatosplenomegaly.

HERBAL TREATMENT

DA BU YIN WAN and **HUA YU TANG** *variation*

Great Tonify the Yin Pill and Removing Blood Stasis Decoction

Dang Gui *Angelicae sinensis Radix* 12 g

Dan Shen *Salviae miltiorrhizae Radix* 10 g

Tao Ren *Persicae Semen* 10 g

Hong Hua *Carthami Flos* 10 g

Bie Jia *Trionycis Carapax* 15 g (decoct first for 30 min)

Sheng Di Huang *Rehmanniae Radix* 10 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

KI-3 Taixi, BL-23 Shenshu, BL-18 Ganshu, BL-17 Geshu, SP-10 Xuehai and KI-16 Huangshu.

SUPPLEMENTARY TREATMENT

To treat additional symptoms and signs of Heat in the blood, add *Shui Niu Jiao Bubali Cornu* and *Mu Dan Pi Moutan Cortex*, and needle LI-11 Quchi and LIV-2 Xingjian; for Qi deficiency, add *Bai Zhu Atractylodis macrocephalae Rhizoma* and *Fu Ling Poria*, and needle ST-36 Zusanli and BL-20 Pishu.

5. Appendix and complications

Primary biliary cirrhosis

Primary biliary cirrhosis is a disease that slowly destroys the liver's bile ducts. Experts consider it to be an autoimmune disease in which the body turns against its own cells, although it is likely that genetic and environmental factors also play a part. The liver's bile ducts are slowly destroyed, causing harmful substances to build up, and sometimes leading to irreversible scarring of liver tissue (cirrhosis).

Primary biliary cirrhosis is diagnosed by laboratory liver function tests, anti-mitochondrial antibodies (AMAs), ultrasonography and, in some cases, liver biopsy to help to determine the extent of disease progression. A liver biopsy uses a thin needle to remove a small sample of liver tissue. The sample is then examined under a microscope by a pathologist.

DIFFERENTIATION AND TREATMENT

1. YANG-TYPE JAUNDICE

CLINICAL MANIFESTATIONS

Yellow coloration of the skin and sclera, thirst, anorexia, fatigue, hypochondrial distension and pain, a feeling of fullness and distension in the epigastrium, nausea, dark urine, and pale or gray-coloured stools. The tongue coating is yellow and greasy, and the body is red or crimson. The pulse is taut and rapid.

TREATMENT PRINCIPLE

Remove pathogenic Heat and jaundice.

HERBAL TREATMENT

YIN CHEN HAO TANG *variation*

Artemesia Yinchenhao Decoction

Yin Chen Hao *Artemisiae scopariae Herba* 30 g

Zhi Zi *Gardeniae Fructus* 10 g

Da Huang *Rhei Radix et Rhizoma* 4 g (decoct in the last 10 min of cooking)

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

Du-9 Zhiyang, BL-18 Ganshu, BL-19 Danshu, GB-34 Yanglingquan, LI-11 Quchi, SP-10 Xuehai and SP-9 Yinlingquan.

SUPPLEMENTARY TREATMENT

To treat more severe symptoms and signs of the lustrous yellow skin of Yang jaundice, add *Bai Hua She She Cao Hedyotis diffusae Herba* and *Huang Qin Scutellariae Radix*, and needle LIV-2 Xingjian; if the skin is the sallow yellow of Yin jaundice, add *Fu Ling Poria* and *Cang Zhu Atractylodis Rhizoma*, and perform direct moxa on BL-20 Pishu.

2. LIVER AND KIDNEY YIN DEFICIENCY WITH COLD-DAMPNESS

CLINICAL MANIFESTATIONS

Epigastric distress, anorexia, thirst, ascites and scanty urine. The tongue is red. The pulse is taut and thready.

TREATMENT PRINCIPLE

Nourish Yin and induce diuresis.

HERBAL TREATMENT

ZHI JU ZI TANG and **YI GUAN JIAN** variation

Hovenia Fruit Decoction and Linking Decoction

Zhi Ju Zi *Hoveniae Fructus* 10 g

Fu Ling *Poria* 15 g

Zhu Ling *Polyporus* 12 g

Ze Xie *Alismatis Rhizoma* 12 g

Sha Shen *Glehniae/Adenophorae Radix* 10 g

Mai Men Dong *Ophiopogonis Radix* 10 g

Sheng Di Huang *Rehmanniae Radix* 10 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

LIV-3 Taichong, KI-3 Taixi, GB-41 Zulinqi, BL-20 Pishu, BL-23 Shenshu, Ren-9 Shuifen, Ren-4 Guanyuan and Du-26 Shuigou.

SUPPLEMENTARY TREATMENT

To treat more severe symptoms and signs of jaundice, add **Yin Chen Hao** *Artemisiae scopariae Herba* and **Da Huang** *Rhei Radix et Rhizoma*, and needle Du-9 Zhiyang and GB-34 Yanglingquan; if there is extreme Heat, add **Zhi Zi** *Gardeniae Fructus* and **Huang Qin** *Scutellariae Radix*, and needle LI-11 Quchi and LIV-2 Xingjian.

CASE STUDIES

CASE ONE

EJ was a 74-year-old woman who first visited with the chief complaint that she had been diagnosed with autoimmune hepatitis 12 years previously. Since then, she had taken 60 mg prednisone per day to reduce her liver enzymes. When the enzyme level was stable, the dosage of prednisone had been reduced to 15 mg and she was also prescribed 100 mg azathioprine (Imuran) daily. However, her liver enzyme levels remained increased. EJ was thirsty but did not want to drink. She had occasional insomnia, lower back pain, finger joint and shoulder pain, a normal appetite, and normal stool and urination.

Past history: EJ used to visit a Chinese medical doctor and had used Chinese herbal medicine and received acupuncture therapy. But her liver enzymes did not decline to normal levels while under that professional's care and, in fact, she developed jaundice. She had begun smoking at age 15 years, and was continuing to do so.

Physical examination: sallow complexion and liver palms. The tongue was crimson red with fissures and less coating, and purple and bluish on the side. Her pulse was deep and thready.

Blood pressure: 130/80 mmHg
 Heart: 80 beats/min and regular; increase in precordial second heart sound
 No oedema, hepatomegaly, splenomegaly or ascites
 Tenderness pain at L2, L4 and L5
 Scoliokyphosis

6 months prior to office visit: laboratory results

AST: 153 U/L (normal range 12–50)
 ALT: 116 U/L (9–52)

2 weeks prior to office visit

AST: 125 U/L (12–50)
 ALT: 110 U/L (9–52)
 Protein, total: 8.4 g/dL (6.3–8.2)
 Albumin: 4.4 g/dL (3.9–5.0)

Impression:

1. Autoimmune hepatitis (Liver and Kidney Yin deficiency with Heat in the Blood and Blood stasis)
2. Arthritis
3. Osteoporosis
4. Lower back pain

TREATMENT PRINCIPLE

Eliminate Liver Heat, remove Blood stasis, and nourish Liver and Kidney Yin.

HERBAL TREATMENT

XI JIAO DI HUANG TANG *variation*

Rhinoceros Horn and Rehmannia Decoction

Shui Niu Jiao *Bubali Cornu* 10 g

Sheng Di Huang *Rehmanniae Radix* 15 g

Mai Men Dong *Ophiopogonis Radix* 10 g

Wu Wei Zi *Schisandrae Fructus* 10 g

Mu Dan Pi *Moutan Cortex* 6 g

Nu Zhen Zi *Ligustri lucidi Fructus* 10 g

Gou Qi Zi *Lycii Fructus* 12 g

Huang Qin *Scutellariae Radix* 12 g

Dan Shen *Salviae miltiorrhizae Radix* 10 g

Tao Ren *Persicae Semen* 10 g

Hong Hua *Carthami Flos* 10 g

The herbs above are decocted in water for oral administration twice daily.

ACUPUNCTURE

KI-3 Taixi, SP-6 Sanyinjiao, BL-23 Shenshu, BL-25 Dachangshu, BL-40 Weizhong, Huatuojiagi (extra at L2–3, 3–4, 4–5) and hepatitis points (extra, located 0.7 cun distal to the carpal bones between the 4th and 5th metacarpals). The patient's treatment plan was to receive five bags of herbal medicine per week and acupuncture once a week.

Checking liver enzymes once a month After 3½ months liver enzymes were reduced to normal; her physician started to reduce the prednisone to 7.5 mg per day.

6 months after first office visit

AST: 45 U/L (normal range 14–50)

ALT: 31 U/L (9–52)

These values indicate that the liver enzymes began to normalize after the patient received treatment regularly.

11 months after office visit The physician reduced the dosage of prednisone to 6 mg per day.

13 months after office visit The physician reduced prednisone to 5 mg per day.

32 months after office visit The physician reduced prednisone to 1 mg daily, but liver enzymes remained normal.

33 months after office visit The physician reduced the prednisone dose to zero.

3 years after office visit Several months later the patient's liver enzymes remained normal. Additionally, her facial colour returned to pink and the depth of the fissure in her tongue decreased, as well as the purple colour. At this point, the goal was to have the physician reduce the dosage of azathioprine.

5 years after office visit The patient reported the great news that her bone density test had normal results, demonstrating that the osteoporosis had not only improved but also had essentially disappeared.

CASE TWO

GT was a 40-year-old woman who had been diagnosed with AIH 10 years previously and had been treated with 20 mg prednisone for 2 months, resulting in liver enzyme levels being reduced to normal. Soon before she came in, she began to feel fatigue. She went to her doctor and found that her liver enzymes were up to 200 U/L. Despite having taken 20–40 mg prednisone daily for 2 months previously, the ALT level was still abnormally high (100–160 U/L), 80 U/L at its lowest point. GT had a 5-month-old daughter who was breastfeeding, so she worried about the side-effects of the medication on her daughter. She had no symptoms except fatigue, loss of appetite and insomnia. Her tongue was red with a thin, white coating. Her pulse was thready and taut.

Impression: AIH (flaring up of Liver Fire, Wood overacting on Earth)

TREATMENT PRINCIPLE

Clear away excess Fire and prevent Spleen damage.

HERBAL TREATMENT

LONG DAN XIE GAN TANG *variation*

Gentiana Longdancao Decoction to Drain the Liver

Long Dan Cao *Gentianae Radix* 6 g
 Zhi Zi *Gardeniae Fructus* 12 g
 Huang Qin *Scutellariae Radix* 12 g
 Chai Hu *Bupleuri Radix* 10 g
 Ze Xie *Alismatis Rhizoma* 12 g
 Dang Gui *Angelicae sinensis Radix* 12 g
 Che Qian Zi *Plantaginis Semen* 12 g
 Gan Cao *Glycyrrhizae Radix* 6 g
 Wu Wei Zi *Schisandrae Fructus* 10 g
 Fu Ling *Poria* 10 g
 Bai Shao *Paeoniae Radix alba* 12 g
 Mu Dan Pi *Moutan Cortex* 8 g
 Sheng Di Huang *Rehmanniae Radix* 12 g

The herbs above were decocted in water for oral administration twice daily.

After the first week of taking herbal medicine, GT liver enzyme level of ALT was reduced to 68 U/L. After 4 weeks of taking the formula, the level of ALT returned to normal (less than 32 U/L). Her doctor stopped the prednisone and her liver enzymes remained normal.

CASE THREE

JM was a 35-year-old man who, on his first office visit, came in complaining of having been diagnosed with cirrhosis of the liver. He reported that he had had asthma and had used Chinese herbal medicine as treatment until he was 16 years old. The asthma had resolved, but then he felt fatigue and the skin on his palms and soles started to become very rough, looking callused, but without a diagnosis. In recent years, his doctor had discovered that his liver was cirrhotic and the condition was being aggravated. JM was told that there was no treatment for his illness. Therefore, the doctor put him on the liver transplant list and he had nothing to do but wait and hope for a new liver. His skin was itchy, he had fatigue, both his palms and soles were callused, he was overweight, and he had dry skin. His tongue had a red tip with a thin, white coating with teeth marks, and varicosities of the veins underneath. His pulse was thready on the right, and thready and taut on the left.

2 months prior to office visit: laboratory results

WBC: $3.5 \times 10^3/\mu\text{L}$ (normal range 4.0–10.5)
 Platelets: $67 \times 10^3/\mu\text{L}$ (140–415)
 A/G ratio: 1.3
 Bilirubin, total: 1.7 mg/dL (0.1–1.2)
 International normalized ratio (INR): 1.5 (2.0–3.5)
 Prothrombin time: 15.5 s (9.0–13)
 Cholesterol: 137 mg/dL (100–199)
 Triglycerides: 203 mg/dL (0–149)

Impression:

1. Primary biliary cirrhosis (excessive Heat stagnates in the Liver and Gallbladder, with Blood stasis)
2. Hyperlipidaemia
3. Allergic rhinitis

TREATMENT PRINCIPLE

Eliminate Liver Heat, remove Blood stasis and nourish Liver Yin.

HERBAL TREATMENT

YIN CHEN HAO TANG *variation*

Artemisa Yinchenhao Decoction

Yin Chen Hao *Artemisiae scopariae Herba* 15 g

Zhi Zi *Gardeniae Fructus* 10 g

Chi Shao *Paeoniae Radix rubra* 10 g

Bai Shao *Paeoniae Radix alba* 10 g

Da Huang *Rhei Radix et Rhizoma* 6 g

Chuan Xiong *Chuanxiong Rhizoma* 10 g

Mu Dan Pi *Moutan Cortex* 10 g

Dan Shen *Salviae miltiorrhizae Radix* 12 g

Zhi Ke *Aurantii Fructus* 10 g

Yu Jin *Curcumae Radix* 10 g

Shan Zha *Crataegi Fructus* 15 g

Jue Ming Zi *Cassiae Semen* 10 g

He Shou Wu *Polygoni multiflori Radix preparata* 10 g

Sheng Di Huang *Rehmanniae Radix* 12 g

The herbs above were decocted in water for oral administration twice daily.

4 months after office visit

WBC: $4.8 \times 10^3/\mu\text{L}$ (normal range 3.8–10.8)

Cholesterol: 145 mg/dL (100–199)

Triglycerides: 154 mg/dL (0–149)

1 year after office visit

WBC: $4.9 \times 10^3/\mu\text{L}$ (3.8–10.8)

Platelets: $76 \times 10^3/\mu\text{L}$ (140–400)

Bilirubin, total: 1.6 mg/dL (0.2–1.5)

Bilirubin, direct: 0.4 mg/dL (0.0–0.3)

After receiving Chinese herbal medicine for 1 year, the patient's general condition got better and almost all of the laboratory indices returned to more normal levels. His treatment was irregular because of his work schedule. His last office visit was 3 years after his initial consultation, but there were no current lab reports. His itchy skin had recurred, but the calluses on both hands were much reduced and his skin was smooth.

6. Analysis of the cases

A. Cases one and two

EJ had been clearly diagnosed with AIH for 12 years and had used high dosages of steroids, with all the accompanying side-effects. The Chinese medicine treatment was designed to protect her liver cells, which were being attacked by the autoimmune disease. By suppressing her overactive immune system, it was possible to reduce the harm to the liver. The treatment also aided in the rebuilding of the patient's microcirculation, eliminating inflammation, and decreasing the generation of fibrin. In this way, the treatment prevented and treated the cirrhosis, and protected normal cells as well.

In Chinese medical terminology, excess Heat stagnating in the Liver impairs Liver Yin. As Liver and Kidney Yin come from the same source, the impaired Liver Yin resulted in harm to Kidney Yin, leading to simultaneous Liver and Kidney Yin deficiency. This Yin deficiency led to Yang rising, so that the illness became chronic and caused deficiency Fire, which singed the Blood, causing Blood stasis. The Chinese medicine treatment addressed the deficiency Fire, the Yin deficiency and the Blood stasis; the explanation is given below.

(1) Immune suppression

The patients in Cases one and two were already using immunosuppressant medications prescribed by their doctors. Although we have no legal authority to prescribe medications for our patients, it is crucial that we are familiar with them, their mechanism of action, and their interactions and side-effects. With this knowledge, we can apply an integrative medicine approach to treat patients for maximum success. For instance, both of these patients used immunosuppressant therapy, but none of their liver enzymes returned to normal levels because of the presence of fragments of hepatocytes, which continued to trigger the disordered immune response that led to attack on the liver cells in the first place. The key to treatment by Chinese medicine is totally different from that of Western medicine as it protects the antigen – liver cells in this case.

(2) Protecting and regenerating hepatocytes and preventing apoptosis

The liver cells changed their antigenicity for some unknown reason, leading them to become target antigens of a disordered immune system. Protecting liver cells and the membranes of the liver is the way to reduce liver damage and prevent an increase in the levels of liver enzymes. The benefit of this treatment process was described by Wong and Jia.²

According to Chinese medicine, 'substance belongs to Yin, but function belongs to Yang'. In this theory, the Liver is a Yin organ, because it is visible. Specifically, liver cells and tissues are visible substances that belong to Yin. When liver cells are destroyed by disordered immunity, Chinese medicine describes this as Liver Yin deficiency. The relationship of the Liver and Kidney is described as son and mother according to Five Element theory. When the son, the Liver in this case, is impaired, this affects the mother, in this case the Kidney. We refer to this as

a ‘disordered child organ affecting the mother organ’. Therefore, because the ‘Liver and Kidney arise from the same source’, we say that chronic Liver disease always affects the Kidney and prolongs an illness.

When liver cells dissolutely release energy and inflammation causing Heat and Fire symptoms, this is called extreme Heat due to Yin deficiency. Based on hepatolysis (destruction of liver cells), the liver function and metabolism (bile, body fluid, nutrients, etc.) become disordered; that is, Liver Qi cannot circulate smoothly, leading to symptoms of jaundice, ascites and indigestion.

In treatment, Chinese medicine posits that ‘if hypofunction is found in the son organ, the mother organ should be tonified; if hyperfunction is found in the mother organ, the son organ should be reduced’. We treated the patient in Case one by nourishing Liver and Kidney Yin, yet the patient in Case two was treated by clearing Fire to protect liver cells and to reduce liver enzyme levels. This is because the former patient had chronic disease, whereas the latter patient had an acute condition. In our clinical experience, nourishing Liver and Kidney Yin benefits the liver cells and prevents them from further destruction, and it may help liver cells to regenerate. In Case one, the whole of the tongue was deeply fissured before the treatment. Following treatment her liver enzymes reduced to normal levels and the tongue got better; the fissure reduced and a thin white coating developed. Nourishing Liver and Kidney Yin is the key of the treatment principle for treating patients with chronic AIH who have raised levels of liver enzymes. For example, the Chinese herbs **Wu Wei Zi** *Schisandrae Fructus* and **Nu Zhen Zi** *Ligustri lucidi Fructus* have the ingredient Schizandrine A, which may help to reduce liver enzymes when there are Yin deficiency symptoms. This effect was reported by Hou, Zhou and Yan.³ Acupuncture points such as BL-18 Ganshu and Ganyan Xue (extra hepatitis point) may prevent hepatolysis.

(3) Improving microcirculation

Immune cells attack liver cells, causing inflammation, liver cell shredding (which blocks liver microcirculation and makes it difficult for impaired liver cells to regenerate and recover), liver cell apoptosis, and sometimes fibrosis of the liver that will be hyperplastic and replace liver cells, causing hepatocirrhosis. When liver cells dissolve and lead to Heat symptoms and inflammation, this seems similar to the Chinese medical concept of hyperactivity of Fire due to Yin deficiency, where deficiency Fire sings the Blood and causes Blood stasis.

So, besides nourishing the Yin as described above, removing Blood stasis is an important method for treating autoimmune diseases. Removal of Blood stasis may have the functions of:

- 1 Preventing the development of fibrosis of the liver – when liver cells are destroyed, fibrosis replaces the space where healthy liver cells were, because the regeneration of liver cells is a slower process than fibrosis. The liver will gradually become cirrhotic. Removing Blood stasis may slow down the speed of the formation of fibrosis, giving liver cells more chance to recover and regenerate, as was reported by Hou, Hou and Xu.⁴

- 2 Improving liver microcirculation – when the liver is inflamed, this may cause it to enlarge. The enlarged liver belongs to the Chinese medicine concept of *Zheng Jie*, or mass in the abdomen. The method of removing Blood stasis may help the circulation and reduce inflammation, so that the enlarged liver can reduce in size.
- 3 Most importantly, this method of treatment may reduce the likelihood of the antibodies sinking and binding with the antigens; this is one of the methods that protects antigens, should an antigen exist that always triggers the immune system to attack it. The patients described above both used Western medicine immunosuppressant therapy, but the liver enzyme levels did not decline. However, Chinese medicine reduced them to normal levels in 4 weeks (Case two), suggesting that Chinese medicine has a different mechanism of action.

(4) Clearing Liver Fire and Heat to protect the Yin from damage and suppress inflammation

The Liver is a Yin organ that stores Blood. When fever Fire sings the internal body, one of the first organs that is damaged is the Liver and its Yin. Clearing Liver Fire and Heat can protect against Yin damage. This process is very similar to the Western medicine process of immune suppression and anti-inflammation. Chinese medicine says: 'Clear internal Heat and Fire by using herbs that are bitter in taste and cold in nature for forming the Yin'. In Cases one and two, herbs were used that were bitter in taste cold in nature; in addition, points were used in Case one.

(5) Improving the condition of the adrenal cortex

For the purpose of reducing and stopping the use of steroids, we also need to prepare the recovering patient's adrenal cortex, which produces adrenocorticotrophic hormone (ACTH). Its condition must be improved before reducing steroids, particularly if the patient has been using steroids for a long time. When a patient uses steroids for a long time, the adrenal cortex may atrophy. This is probably due to the use of an external source of ACTH that causes there to be abnormally high amounts of steroid in the bloodstream, resulting in less stimulation of the adrenal cortex. This is called negative feedback in Western medicine. It is therefore difficult to reduce steroids as quickly as a patient would wish. The practitioner must tonify the Kidney Yin to improve adrenal glands, as was done in Case one.

B. Case three

This patient was diagnosed with primary biliary cirrhosis, which most experts believe is an autoimmune disease. The patient had asthma that had been treated by Chinese herbal medicine, and 1 year later his palms and soles developed calluses, which were getting worse. At the same time, his doctor determined that his liver was cirrhotic, but had no treatment to improve the situation. This condition also affected the patient's fat metabolism, leading to hyperlipidaemia. (Refer to Figure 2.4 to help understand this case.) To treat asthma in the remission phase, the

practitioner always replenishes Spleen Qi and warms Kidney Yang to strengthen the Spleen and Kidney. Using Western medical terminology to describe this effect, we say the treatment boosts T cells in the thymus gland in an attempt to increase suppressor T cells and reduce the B cells that produce antibodies, including immunoglobulin (Ig) E. Finally, levels of IgE were reduced and the asthma resolved, but another autoimmune disease was triggered – primary biliary cirrhosis. If an internal antigen exists, T cells will continue to stimulate helper T cells to grow, resulting in B cells producing more antibodies comprised of IgG and IgM, which may impair the biliary tract cells and soft keratin cells of the palms and soles (see Figure 2.5). Possibly both the biliary tract and soft keratin cells have some antigenicity in this case: when we treated the primary biliary cirrhosis, the calluses of both hands became smoother. Primary biliary cirrhosis develops slowly. Chinese medicine can further slow progression of the disease, especially if treatment begins early. Advanced primary biliary cirrhosis can lead to life-threatening complications and liver failure.

7. Lifestyle prescriptions and health issues

- 1 Nourishing Yin, clearing Heat and removing Blood stasis are the key Chinese medical treatments for AIH.
- 2 Care must be taken when tonifying Qi to ensure that the herbs selected are compatible with prescribed medication.
- 3 Do not warm the Yang while treating AIH.
- 4 Do not drink alcohol and avoid pungent foods.

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1. 'Liver palms' are a sign in a patient with a history of liver illness and sclerosis that oestrogen is not being broken down properly, causing the blood vessels of the palm to become extended and red, indicating a serious liver problem.
 2. Wong M, Jia K. A study of the protective effect of biphenyl dimethyl dicarboxylate (BDD) on human fetal hepatocytes. First Sino-Japanese Symposium on Hepato-Biliary Disease, 20–22 April 1991, p 5.
 3. Hou W, Zhou L, Yan M. Evaluation of three kinds of traditional Chinese medicinal therapies for the treatment of hepatitis. First Sino-Japanese Symposium on Hepato-Biliary Disease, 20–22 April 1991, p 27.
 4. Hou W, Hou W, Xu G. Clinical study of Chinese herbs in the treatment of hepatitis B. *Complementary and Alternative Medicine in Chronic Liver Disease*, National Institutes of Health, 22–24 August 1999, p 94.

Crohn's disease

CHAPTER 7

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Crohn's disease is one form of inflammatory bowel disease (IBD). It is an inflammation of the ileum, which is the third and terminal portion of the small intestine.

1. Western medical aetiology and pathology

In Crohn's disease, autoimmune cells attack the gastrointestinal system. The initial trigger may be the immune system trying to suppress a viral or bacterial infection. However, based on a person's genetic predisposition, the disordered immunity attacks the end of the small intestine that joins to the large intestine instead. It causes swelling of the deeper layers of the lining of the intestine,

but the condition may affect any area of the digestive tract and cause bowel tissue injury. As a result of the immune attack, the intestinal wall becomes thick and deep ulcers may form.

So far, no one knows whether the abnormally functioning immune system in people with Crohn's disease is a cause or a result. Crohn's disease may result from several factors:

- Genes the patient has inherited
- The immune system itself
- The environment.

Antigens normally exist in the environment. They may stimulate the body's defences to produce an inflammatory response that continues without control, either directly by causing the inflammation or indirectly by causing a reaction to which the body responds with inflammation.

Crohn's disease also can affect other parts of the body, causing different complications. These complications include various forms of arthritis, renal or biliary calculi, skin problems, inflammation of the eyes or mouth, or other diseases of the liver and biliary system.

2. Diagnosis by Western medicine

- 1 Upper gastrointestinal series
- 2 Colonoscopy or sigmoidoscopy
- 3 Biopsy of the ileum
- 4 Blood labs: there may be anaemia and/or a high white blood cell count
- 5 Stool sample: there may be red blood cells in the stool.

Crohn's disease and ulcerative colitis are similar – so similar that they are often mistaken for one another. Both are autoimmune inflammatory bowel diseases that inflame the lining of the digestive tract, and both can cause severe bouts of watery or bloody diarrhoea and abdominal pain. Crohn's disease can occur anywhere in the digestive tract, often spreading deep into the layers of affected tissues. Ulcerative colitis, on the other hand, usually affects only the innermost lining of the large intestine and rectum. Symptoms of Crohn's disease are persistent diarrhoea, which may be bloody in 75–85% of patients, abdominal pain and general fatigue. Symptoms of ulcerative colitis are bloody diarrhoea, pain, urgent bowel movements, joint pains and skin lesions. In both diseases there is a risk of significant weight loss and malnutrition.

3. Chinese medicine aetiology and pathology

Crohn's disease is not mentioned directly in Chinese medicine, but according to the pathology and symptoms described by Western medicine, it can be characterized as *Fu Tong* 腹痛, abdominal pain, *Bian Xue* 便血, haemafecia, and *Xie Xie* 泄泻, diarrhoea.

When a patient has a Yin-deficient constitution, if Cold-Dampness, Damp-Heat, and/or Heat-Toxin invade the body, vital Qi cannot resist the invaders. These exogenous factors can stagnate in the Small Intestine, causing Blood stasis, and destroy blood vessels, thereby causing Crohn's disease.

According to Chinese medicine theory, haemafaecia, abdominal pain, diarrhoea and similar symptoms are due to a disorder of the Small or Large Intestine. Related organs are the Spleen, Liver, and Lung. The Small and Large Intestine have different functions. The function of the Small Intestine is to transform and absorb food content and Essence. It separates the Essence from the turbidity, or the pure from the impure, to support and nourish the body. It transforms the turbidity and sends it down to the Large Intestine. The Large Intestine receives the turbidity, continues to absorb the remaining water and sends it to the Urinary Bladder, which further separates the pure from the impure, steaming the pure and sending it upward and excreting the impure by urination. The remaining turbidity is excreted from the body via the anus.

While the Small Intestine is digesting, the Spleen absorbs the pure Essence and then distributes it to the Lung and the entire body. Liver Qi assists the general Qi activities of ascending, descending, exiting and entering in the whole body including the Small Intestine. The Lung has an internal channel that connects to the Large Intestine. Qi moving downward from the Lung assists the Large Intestine in descending smoothly and transporting normally. Therefore, any factor such as external or internal pathogens, emotional disorder, poor diet and/or congenital variables may negatively affect the intestinal function of transportation, leading to Qi stagnation, Damp-Heat stasis and/or Blood stasis causing the illness. Qi stagnation, Blood stasis and Heat are the most critical pathogens in the process of the illness.

There are two different symptoms called *Jin Xue* 近血 and *Yuan Xue* 远血 in the process of the illness. *Jin Xue* refers to nearby bleeding where blood is bright red and fresh, indicating the pathological location of the problem is near the rectum and anus. *Yuan Xue* refers to distant bleeding where the blood is dark, indicating the pathological location is far away from the anus, generally suggesting that bleeding is occurring higher up in the digestive tract.

4. General treatment principle

Eliminate pathogenic Heat, transform Dampness, stop bleeding, remove Blood stasis and nourish Yin.

DIFFERENTIATION AND TREATMENT

The most common symptoms of Crohn's disease are abdominal pain, often in the lower right quadrant, and diarrhoea. Rectal bleeding, weight loss and fever may also occur. Bleeding may be serious and persistent, leading to anaemia. Children with Crohn's disease may suffer delayed development and stunted growth.

To provide correct treatment of Crohn's disease, one must first understand the pathogenic factors: are they deficient or excess? One must distinguish between excess or deficient Heat and deficiency of Yin or Qi (this latter deficiency is rare). One must realize that first one treats Blood; secondly one treats Fire; thirdly one treats Qi.

- 1 Treating Blood: primarily one must stop bleeding by astringing, cooling Blood and removing Blood stasis to arrest bleeding.
- 2 Treating Fire: the treatment includes eliminating excess Fire, clearing deficient Fire and nourishing Yin.
- 3 Treating Qi: if there are excess symptoms, one should clear Heat in the Qifen and descend the rebelliously ascending Qi; if there is deficient Qi, one should nourish Qi and replenish Spleen Qi.

1. DOWNWARD FLOW OF DAMP-HEAT

CLINICAL MANIFESTATIONS

Acute attack of the illness, fever, abdominal pain, diarrhoea, with red, dark, bloody and purulent or mucous stool, burning sensation in the anus, thirst and dark, yellow urination. The tongue has a yellow, thick and greasy coating. The pulse is slippery and rapid.

TREATMENT PRINCIPLE

Clear pathogenic Heat and remove Dampness by promoting diuresis.

HERBAL TREATMENT

GE GEN HUANG LIAN HUANG QIN TANG *variation*

Kudzu, Coptis and Scutellaria Decoction

Ge Gen *Puerariae Radix* 15 g

Huang Qin *Scutellariae Radix* 12 g

Huang Lian *Coptidis Rhizoma* 6 g

Bai Tou Weng *Pulsatillae Radix* 12 g

Mu Xiang *Aucklandiae Radix* 6 g

Che Qian Zi *Plantaginis Semen* 12 g (*wrapped in a tea bag prior to decoction*)

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

ST-25 Tianshu, Ren-12 Zhongwan, ST-36 Zusanli, SP-9 Yinlingquan and LI-11 Quchi.

SUPPLEMENTARY TREATMENT

If a patient has stomach pain, add Zhi Ke *Aurantii Fructus* and Fo Shou *Citri sarcodactylis Fructus*, and needle ST-25 Tianshu; if the patient has a high temperature, add Chai Hu *Bupleuri Radix*, Huang Qin *Scutellariae Radix*, Shi Gao *Gypsum fibrosum* (decocted first for 30 min) and Zhi Mu *Anemarrhenae Rhizoma*, and needle LI-11 Quchi and LIV-2 Xingjian. If there is fresh, thick bleeding, add Ce Bai Ye *Tan Platycladi Cacumen*, Ou Jie Tan *Nelumbinis Nodus rhizomatis* and Xian He Cao *Agrimoniae Herba*, and needle BL-17 Geshu and SP-10 Xuehai.

2. HYPERACTIVE LIVER FIRE WITH QI STAGNATION

CLINICAL MANIFESTATIONS

Chronic diarrhoea with light, intermittent bleeding usually occurring after emotional stress, abdominal distension and pain, especially before diarrhoea with the pain being reduced after diarrhoea, and thirst with no desire to drink. The tongue is red with a thin and whitish coating. The pulse is taut.

TREATMENT PRINCIPLE

Clear Liver Fire, remove stagnant Qi and arrest bleeding.

HERBAL TREATMENT

XI JIAO DI HUANG TANG and **TONG XIE YAO FANG** variation

Rhinoceros Horn and Rehmannia Decoction, and Important Formula for Painful Diarrhoea

Shui Niu Jiao *Bubali Cornu* 10 g

Sheng Di Huang *Rehmanniae Radix* 12 g

Mu Dan Pi *Moutan Cortex* 10 g

Bai Shao *Paeoniae Radix alba* 12 g

Chen Pi *Citri reticulatae Pericarpium* 10 g

Fang Feng *Saposhnikoviae Radix* 10 g

Bai Zhu *Atractylodis macrocephalae Rhizoma* 10 g

Chai Hu *Bupleuri Radix* 6 g

Qian Cao Gen *Rubiae Radix* 12 g

Bai Ji *Bletillae Rhizoma* 10 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

ST-25 Tianshu, BL-18 Ganshu, BL-25 Dachangshu and LIV-2 Xingjian.

SUPPLEMENTARY TREATMENT

If the patient has symptoms of intolerance to cold or a cold sensation, poor appetite and watery diarrhoea, add **Fu Ling** *Poria* and **Qian Shi** *Euryales Semen*, and needle ST-36 Zusanli.

3. FIRE FLARING DUE TO YIN DEFICIENCY**CLINICAL MANIFESTATIONS**

This is a chronic condition with diarrhoea with a small amount of stool, bleeding with fresh red blood intermittently covering the stool, thirst and tidal fever in the late afternoon. The tongue is red with a small fissure on its surface. The pulse is thready and rapid.

TREATMENT PRINCIPLE

Eliminate Fire, nourish Yin and arrest bleeding.

HERBAL TREATMENT

QIAN CAO GEN SAN variation

Rubiae Radix Powder

Sheng Di Huang *Rehmanniae Radix* 12 g

Mai Men Dong *Ophiopogonis Radix* 10 g

Qian Cao Gen Tan *Rubiae Radix* 12 g

Xue Yu Tan *Crinis carbonisatus* 6 g

E Jiao Asini *Acorii Colla* 10 g (melt in the hot, decocted tea)

Han Lian Cao *Ecliptae Herba* 12 g

Bai Shao *Paeoniae Radix alba* 12 g

Mu Dan Pi *Moutan Cortex* 10 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

ST-25 Tianshu, BL-25 Dachangshu, LI-11 Quchi, SP-6 Sanyinjiao and KI-3 Taixi.

SUPPLEMENTARY TREATMENT

If the patient has a high temperature, add **Huang Qin** *Scutellariae Radix*, **Chai Hu** *Bupleuri Radix* and **Shui Niu Jiao** *Bubali Cornu*, and needle Du-14 Dazhui and SP-10 Xuehai.

4. DEFICIENT SPLEEN QI**CLINICAL MANIFESTATIONS**

Watery diarrhoea with slight, intermittent, pink bleeding, intolerance to cold, a chilly sensation, abdominal pain reduced when it is warmed, and fatigue. The tongue is pale with a thin or greasy coating. The pulse is deep and weak.

TREATMENT PRINCIPLE

Replenish Spleen Qi and regulate Blood flow.

HERBAL TREATMENT

GUI PI TANG *variation*

Restore the Spleen Decoction

Dang Shen *Codonopsis Radix* 12 g

Huang Qi *Astragali Radix* 15 g

Bai Zhu *Atractylodis macrocephalae Rhizoma* 10 g

Dang Gui *Angelicae sinensis Radix* 10 g

Shu Di Huang *Rehmanniae Radix preparata* 12 g

Shan Zhu Yu *Corni Fructus* 10 g

Shan Yao *Dioscoreae Rhizoma* 12 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

ST-25 Tianshu, ST-36 Zusanli, SP-4 Gongsun, BL-20 Pishu and Ren-4 Guanyuan.

SUPPLEMENTARY TREATMENT

If the patient has light or pink-coloured stool, add **Di Yu** *Sanguisorbae Radix*, **Gan Jiang Tan** *Zingiberis Rhizoma* and **Chi Shi Zhi** *Halloysitum rubrum* (even if blood pressure is dropping). However, if blood pressure is dropping, also add **Ren Shen** *Ginseng Radix* and **Zhi Fu Zi** *Aconiti Radix lateralis preparata*, and needle Du-26 Renzhong and KI-1 Yongquan.

5. Appendix and complications**(1) Blockage of the intestine**

Blockage occurs because the disease tends to thicken the intestinal wall with swelling and scar tissue, narrowing the passage. Crohn's disease may also cause sores or ulcers that tunnel through the affected area into surrounding tissues such as the bladder, vagina or skin. The areas around the anus and rectum are often involved. The tunnels, called fistulas, are a common complication and often become infected.

HERBAL TREATMENTXIAO CHENG QI TANG *variation**Minor Order the Qi Decoction*

Sheng Da Huang Rhei Radix et Rhizoma 4 g (decoct during the last 15 min)

Zhi Shi Aurantii Fructus immaturus 10 g

Mang Xiao Natrii Sulfas 6 g (infuse into the cooked decoction)

*The herbs above are decocted in water for oral administration.***ACUPUNCTURE**

TB-6 Zhigou, ST-25 Tianshu, ST-36 Zusanli, LIV-3 Taichong and BL-25 Dachangshu.

SUPPLEMENTARY TREATMENT

If a patient has acute constipation, add **Fan Xie Ye** *Sennae Folium* and needle TB-6 Zhigou and ST-25 Tianshu. Be careful not to be too aggressive in treatment, because the intestines of such a patient may either have scar tissue or be very thin, and the practitioner must prevent intestinal perforation; if a patient has a fever, add **Huang Lian** *Coptidis Rhizoma*, **Huang Qin** *Scutellariae Radix*, **Jin Yin Hua** *Lonicerae Flos*, **Lian Qiao** *Forsythiae Fructus* and **Pu Gong Ying** *Taraxaci Herba*, and needle LI-11 Quchi, SP-10 Xuehai and LIV-2 Xingjian. If the patient has fistulas near the body surface, one should generally use external therapy to replace surgical therapy. First keep the local area clean. Then use fistula-removing therapy.¹ This is a method of removing canals using corrosion therapy. That is, one uses corrosive herbal medicine on the wall of the canal in order to make it necrotic; then the dead tissue will fall off and new tissue will grow in its place. The canal will gradually close from the point where the internal canal commences to the external skin.

(2) Nutritional deficiency

Deficiencies may be caused by inadequate dietary intake, intestinal loss of protein or malabsorption. Deficiencies of proteins, calories and vitamins occur frequently. These deficiencies often manifest as fatigue, emaciation, a pale tongue with deep teeth marks and a weak pulse.

HERBAL TREATMENTSI JUN ZI TANG *variation**Four Gentleman Decoction*

Dang Shen Codonopsis Radix 12 g

Fu Ling Poria 12 g

Bai Zhu Atractylodis macrocephalae Rhizoma 10 g

Gan Cao Glycyrrhizae Radix 3 g

Shan Yao Dioscoreae Rhizoma 12 g

*The herbs above are decocted in water for oral administration.***ACUPUNCTURE**

Front head line 2 (extra, make a line directly from the pupil to 0.5 cun within the hairline to treat digestive system illnesses), Ren-12 Zhongwan, KI-16 Huanshu, Ren-4 Guanyuan, Ren-6 Qihai, ST-36 Zusanli and KI-3 Taixi.

(3) Arthritis

Refer to Chapter 5 on Rheumatoid Arthritis.

(4) Skin problems

Refer to Chapters 12 and 14 on Psoriasis and Scleroderma, respectively.

CASE STUDIES

CASE ONE

IR was a 34-year-old man who, on his first office visit, came in complaining of stomach pain and diarrhoea for the previous 5–6 years. He experienced diarrhoea more than ten times per day, which had a brown or red colour mixed with watery stool, and abdominal cramps that were reduced after a bowel movement. In addition, he was overweight and had depression and fatigue. He had a pale tongue with deep teeth marks on the edges and deep fissures on the surface. His pulse was deep and thready.

Impression: Crohn's disease (deficiency of both Liver and Spleen with Qi stagnation and Blood stasis).

TREATMENT PRINCIPLE

Nourish Qi and Yin and remove Blood stasis.

HERBAL TREATMENT

SHEN LING BAI ZHU SAN and TONG XIE YAO FANG variation

Ginseng, Poria and Atractylodis Macrocephalae Powder, and Important Formula for Painful Diarrhoea

Dang Shen *Codonopsis Radix* 12 g

Fu Ling *Poria* 12 g

Bai Zhu *Atractylodis macrocephalae Rhizoma* 10 g

Huang Qi *Astragali Radix* 12 g

Chen Pi *Citri reticulatae Pericarpium* 10 g

Cang Zhu *Atractylodis Rhizoma* 10 g

Yi Yi Ren *Coicis Semen* 15 g

Sha Ren *Amoni Fructus* 3 g (added the last 10 min of decocting)

Shan Yao *Dioscoreae Rhizoma* 15 g

Bai Bian Dou *Lablab Semen album* 10 g

Bai Shao *Paeoniae Radix alba* 12 g

Fang Feng *Saposhnikoviae Radix* 10 g

Mu Dan Pi *Moutan Cortex* 6 g

Bai Ji *Bletillae Rhizoma* 10 g

Huang Lian *Coptidis Rhizoma* 3 g

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

Du-20 Baihui, Front head line 2 (extra, make a line directly from the pupil to 0.5 cun within the hairline to treat digestive system illnesses), ST-25 Tianshu, SP-10 Xuehai, ST-36 Zusanli, SP-6 Sanyinjiao, SP-4 Gongsun and LIV-3 Taichong.

1 week later The patient reported that, following the above treatment, the abdominal pain was immediately reduced and his stool gradually became formed with less bleeding.

CASE TWO

CS was a 29-year-old woman who had been diagnosed with Crohn's disease 2 years previously. Her doctor suggested that she use prednisone to control the condition. She was taking 20 mg prednisone per day, but still felt a dull pain in her abdomen, especially in the right hypogastrium. She had unformed diarrhoea three times a day and her stool had a small amount of fresh red blood. The symptoms became aggravated when she was stressed. Her tongue was red with less coating, and deep teeth marks and multiple fissures on the surface. Her pulse was deep, thready and rapid.

Impression: Crohn's disease (Liver Fire rising with Yin and Qi deficiency).

TREATMENT PRINCIPLE

Eliminate Liver Fire and nourish Yin and Qi.

HERBAL TREATMENT

QING DAI WAN² and **ZUO GUI WAN** variation

Indigo Naturalis Pill and Restore the Left Kidney Pill

Qing Dai *Indigo Naturalis* 3 g

Tu Fu Ling *Smilacis glabrae Rhizoma* 15 g

Dan Shen *Salviae miltiorrhizae Radix* 10 g

Ku Shen *Sophorae flavescens Radix* 10 g

Chi Shao *Paeoniae Radix rubra* 12 g

Lian Qiao *Forsythiae Fructus* 10 g

Jin Yin Hua *Lonicerae Flos* 10 g

Ling Xiao Hua *Campsis Flos* 6 g

Ban Lan Gen *Isatidis/Baphicacanthis Radix* 12 g

Sheng Di Huang *Rehmanniae Radix* 12 g

Shan Zhu Yu *Corni Fructus* 10 g

Mu Dan Pi *Moutan Cortex* 10 g

Xian He Cao *Agrimoniae Herba* 12 g

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

LIV- 2 Xingjian, SP-6 Sanyinjiao, ST-36 Zusanli, SP-10 Xuehai and ST-25 Tianshu.

3 months later The patient reported that her prednisone prescription had been reduced to 5 mg per day; her stool was normal and without blood.

CASE THREE

DF was a 38-year-old man who came in complaining of constantly having blood in his stool for over 2 months. Two years previously he had started having blood in his stool. He had gone to his physician and was told he had haemorrhoids. Sometimes ZH had constipation and sometimes he had diarrhoea with either pink blood or fresh red blood

covering the stool, and more gas. He awoke late in the night and often had a dry mouth with thirst and a desire to drink hot water. He also experienced anxiety, intolerance to cold and daytime sweats. His tongue was red with teeth marks and a thin white coating. His pulses in both guan positions were taut and tight.

Impression: Crohn's disease (Liver Fire and Yin deficiency with Spleen Qi deficiency).

TREATMENT PRINCIPLE

Clear Liver Fire, cool Blood and stop bleeding, and activate the Spleen.

HERBAL TREATMENT

HUANG LIAN JIE DU TANG *variation*

Coptis Decoction to Relieve Toxicity

Huang Lian *Coptidis Rhizoma* 3 g

Huang Qin *Scutellariae Radix* 12 g

Huang Bai *Phellodendri Cortex* 12 g

Zhi Zi *Gardeniae Fructus* 12 g

Bai Jiang Cao *Patriniae Herba* 15 g

Qian Cao *Rubiae Radix* 10 g

Fu Ling *Poria* 12 g

Mu Xiang *Aucklandiae Radix* 4 g

Gan Jiang Tan *Zingiberis Rhizoma* 4 g

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

Not applicable.

3 months later The patient occasionally had a little blood covering his stool.

6. Analysis of the cases

Most scientists think that Crohn's disease is an autoimmune disease; that is, the body's immune system reacts to a virus or bacterium, causing long-term inflammation in the intestine. The most common symptoms of Crohn's disease are abdominal pain, often in the lower right area, and diarrhoea with rectal bleeding, weight loss and fever. Bleeding may be serious and persistent, and may cause anaemia. Children who have Crohn's disease may suffer delayed development and stunted growth.

Chinese medicine treats Crohn's disease with medicinal herbs and acupuncture. Both medical methods can mediate disordered immunity, relieve abdominal pain and reduce inflammation. Chinese herbal medicine can be given orally and by enema. Chinese herbs such as **Qing Dai** *Indigo Naturalis*, **Huang Qin** *Scutellariae Radix*, **Huang Lian** *Coptidis Rhizoma* and **Zhi Zi** *Gardeniae Fructus*

are anti-inflammatory, antiviral and antibacterial, and have the ability to check an overactive immune function. Their use can help prevent the immune system from attacking the bowel, thereby reducing bowel inflammation. **Ai Ye** *Artemisiae argyi Folium*, **Di Yu** *Sanguisorbae Radix* and **Zong Lu Tan** *Trachycarpi Petiolus* can stop bleeding. **Chen Pi** *Citri reticulatae Pericarpium*, **Zhi Ke** *Aurantii Fructus* and **Xiang Fu** *Cyperii Rhizoma* can relieve abdominal pain. **Fu Ling** *Poria*, **Cang Zhu** *Atractylodis Rhizoma* and **Bai Zhu** *Atractylodis macrocephalae Rhizoma* can stop diarrhoea and mediate the immune system. Acupuncture points such as ST-36 Zusanli, ST-25 Tianshu, Front head line 2 (extra) and LI-11 Quchi can adjust intestinal movement and reduce abdominal pain and diarrhoea; SP-6 Sanyinjiao and SP-10 Xuehai can help stop bleeding; and SP-9 Yinlingquan, ST-34 Liangqiu and ST-25 Tianshu can adjust intestinal movement and stop diarrhoea.

The treatment of Chinese medicine is based on a combination of Western and Chinese medical diagnoses and the prescription of natural therapies, including Chinese herbal medicine and acupuncture. These methods produce either no or fewer side-effects than Western medications, such as occur with steroid use, and they produce excellent clinical results.

Chinese medical treatment for Crohn's disease depends on the location and severity of the disease, complications and response to previous treatments. The goals of treatment are to control inflammation, correct nutritional deficiencies and relieve symptoms such as abdominal pain, diarrhoea and rectal bleeding, and also to mediate the immune function to reduce the immune attack.

Some people have long periods of remission that may last for years, during which they are free of symptoms. In this phase, on the one hand, one must treat the disordered immunity; on the other hand, one must also control infection, which may trigger the illness to become active again. The important thing during remission is to continue recovering damaged tissue that may also potentially trigger an immune response. Therefore, during remission our treatment works primarily to extend remission for as long as possible.

(1) Case one

This patient had been diagnosed with Crohn's disease for 5–6 years, and experienced diarrhoea more than ten times a day coupled with bleeding. His parents told us that he had lost his job because he needed to use the restroom so frequently. He had Spleen Qi deficiency symptoms and signs: deficient Earth (Spleen) reversely affected Wood (Liver) leading to Liver Qi stagnation. Therefore, the treatment prescription was **SHEN LING BAI ZHU SAN**/*Ginseng, Poria and Atractylodes Macrocephala Powder* to replenish Spleen function and **TONG XIE YAO FANG**/*Important Formula for Painful Diarrhoea* to smooth the Liver Qi. Acupuncture followed the same treatment principle as the herbal medicine. The result of the treatment was good, but we also need to explain that:

- 1 Chronic illness always combines with Blood stasis. In this case, with concern about Blood stasis, removing Blood stasis may have caused more bleeding and aggravated the illness. Therefore, as part of the treatment we chose **Mu Dan**

Pi Moutan Cortex, which has the function of both clearing Heat and removing Blood stasis, to address the potential problem that stopping bleeding might cause further Blood stasis.

- 2 Replenishing Qi may increase the chance for disordered immunity to attack antigens in the intestine. Using **Bai Shao Paeoniae Radix alba** to nourish Yin and Blood may have reduced the chance for damage of the intestinal membrane and also reduced abdominal pain, working in conjunction with **TONG XIE YAO FANG/Important Formula for Painful Diarrhoea**. **Mu Dan Pi Moutan Cortex** and **Huang Lian Coptidis Rhizomae** cleared excess Heat, including infection and inflammation. **Bai Ji Bletillae Rhizoma** stopped bleeding.

(2) Case two

This patient was diagnosed with Crohn's disease, but she was using 20 mg of a steroid each day. The function of the steroid was to suppress the disordered immunity, but provided nothing for healing the damaged intestine. Combining Chinese medicine with the Western drug, the treatment was designed to stop her bleeding, clear excess Heat and nourish deficient Yin. We chose **QING DAI WAN/Indigo Naturalis Pill** to clear the Heat and **ZUO GUI WAN/Restore the Left Kidney Pill** to nourish the Yin. The results were that the bleeding and diarrhoea were stopped, abdominal pain disappeared, and the patient felt full of vigour. Once Chinese medicine had been added to the Western treatment, the patient no longer needed to maintain the high dosage of steroid.

(3) Case three

This patient was misdiagnosed with haemorrhoids until 2 months before his arrival in our clinic. The patient rejected the use of steroids. Therefore, Chinese herbal medicine was his chosen primary treatment. His symptoms belonged to excess Fire and deficient Qi. If we had only cleared Fire using cold and bitter herbs, this would have caused further damage to the Spleen. If we had only replenished Spleen Qi, that would have resulted in exacerbating the Fire, which would singe the Blood and aggravate the bleeding condition. Therefore, we cleared the Fire, stopped the bleeding, cooled the Blood and activated the Spleen, instead of replenishing Spleen Qi.

The treatment we offered was based on the theories of both Chinese and Western medicine. We understand that when we use only one method to stop bleeding, scar (fibrosis) tissue will develop. Generally, the formation of scar tissue is physiological as it stops the loss of blood. However, new scar tissue may cause new bleeding because it can cover damaged tissue, making it too weak to prevent stool from passing through the intestine and causing further damage due to its decreased flexibility. Therefore, when we stop bleeding, we also need to remove Blood stasis to prevent scar formation, but not make it so strong so as to cause further bleeding.

7. Lifestyle prescriptions and health issues

- 1 Patients with Crohn's disease may not fully absorb the protein that they consume. The intestines may not absorb protein, calories or vitamins. There is no special diet proven to prevent or treat Crohn's disease. However, milk, alcohol, hot spicy food and fibre may make symptoms worse.
- 2 The patient should not smoke or drink alcohol.
- 3 Food allergies may cause relapse of Crohn's disease. Patients should keep well away from foods they are allergic to. These foods are called *Fa Wu* 发物, allergy-inducing foods.
- 4 Exercise properly.

1This method is used in China solely by Chinese medicine surgeons. It is not used in the West, as the method is performed more appropriately by physicians and is not within the general scope of practice of Western-trained acupuncturists and herbalists. Additionally, the herbs used are very toxic.

2The decocted formula **QING DAI WAN/ Indigo Naturalis Pill** is used regularly in China as an enema to treat Crohn's disease. One course of the treatment consists of using the formula once daily for 15 days.

Graves' disease

CHAPTER 8

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Graves' disease occurs when the thyroid produces and secretes more than the normal volume of thyroid hormone into the bloodstream. The cause is an overactive immune response and the result is hyperthyroidism.

1. Western medical aetiology and pathology

Graves' disease is an autoimmune disease in which T lymphocytes become sensitized to antigens within the thyroid gland and stimulate B lymphocytes to synthesize antibodies, specifically thyrotropin receptor antibody (TRAb). These bind to the surface of thyroid cells. They do not destroy the thyroid cells, but stimulate them to produce excessive amounts of thyroid hormone, while feedback leads to a decline in thyroid-stimulating hormone (TSH), causing hyperthyroidism. The patient's catabolic processes exceed the anabolic processes. The resulting inflammation of the thyroid gland is responsible for its growth and protrusion of the eyes, two classical signs of Graves' disease. The causes of Graves' disease may be a combination of factors, including heredity, gender, age and stress.

2. Diagnosis by Western medicine

The diagnosis of hyperthyroidism is made on the basis of findings during physical examination and confirmed by laboratory tests and the radioactive iodine test:

- Physical examination: enlarged thyroid gland, weight loss, tachycardia and tremors.
- Blood sample: decreased levels of TSH, and raised thyroxine, or T4, and tri-iodothyronine, or T3. In Graves' disease, an abnormal antibody called TRAb mimics TSH, causing increased thyroxine even while TSH levels remain low. In addition, thyroid-stimulating antibodies (TSAb) will be positive. These results together help diagnose Graves' disease.
- Radioactive iodine uptake: humans need iodine to make thyroxine. By giving a small amount of radioactive iodine and later measuring the amount of radioiodine in the thyroid gland, the rate at which the thyroid gland takes up iodine can be determined. A high uptake of radioactive iodine indicates the thyroid gland is producing too much thyroxine, as is the case in Graves' disease.

3. Chinese medical aetiology and pathology

Chinese medical theory does not specifically name hyperthyroidism. However, the symptoms of enlarged thyroid, fatigue, weight loss, tachycardia, muscle weakness, heat intolerance, tremors, palpitations, sweating, blurred or double vision, restless sleep, decrease in menstrual flow and increased frequency of bowel movements seem to be described by such diagnoses as *Ying Liu* 癭瘤, goitre, *Xin Ji* 心悸, palpitations, *Shi Mian* 失眠, insomnia, and *Jiao Lu* 焦虑, anxiety.

The symptoms of Graves' disease mirror those seen in Liver Fire rising. In Five Elements theory, the Liver belongs to Wood. If Wood (mother) affects Fire (son), and therefore the Heart, we call this 'diseased mother transferring illness to the son'. This causes palpitations, insomnia and nightmares; Fire sings the Blood and forms Blood stasis. The Wood Fire descends to singe water, leading to Kidney Yin deficiency. In Chinese medical theory, the Liver and Kidney come from the same source. Therefore, when Liver Fire affects the Kidney, it damages not only Kidney Yin but also Liver Yin. When this occurs, it causes thirst, dark and yellow urination that is of low volume, anxiety and reduced volume and period of menstruation. Liver Fire can also travel through the Liver channel and ascend to the Upper Jiao, burning Lung Yin. Should this occur, it can cause hypochondriac pain, irritability, cough with dyspnoea and haemoptysis. This is called 'Wood Fire impairs Metal'. When Liver Fire affects the Spleen, it causes an increase in the speed of transportation, distribution and transformation, resulting in polyorexia (bulimia) and emaciation. Therefore, as described in 'The 77th Problem', a chapter in *Nan Jing/The Classic on Medical Problems*, 'When Liver disease occurs it will spread to the Spleen, so the Qi of the Spleen should be reinforced before it is affected'. However, Liver Fire can affect different organs and cause different symptoms and signs.

Generally speaking, Chinese medicine thinks the disease has three causes:

- 1 Exterior pathogenic Heat invades the body and develops into the disease.
- 2 Emotional depression and anger lead to the disordered flow of Liver Qi, causing stagnation of Liver Qi. This becomes unfavourable for its normal, physiological activity and causes accumulation of Phlegm and Blood stasis.
- 3 A genetic predisposition to Yin deficiency, which causes internal Heat and is inherited from the parents.

4. General treatment principle

The primary treatment is to eliminate pathogenic heat from the Liver, clean Heat-Toxin, promote the flow of Qi and remove Blood stasis.

DIFFERENTIATION AND TREATMENT

1. LIVER FIRE FLAMING UP

CLINICAL MANIFESTATIONS

Red face, anxiety, insomnia, thirst for cold water, dry mouth, emaciation, palpitations, constipation and dark yellow urination. The tongue is red. The pulse is rapid and taut.

TREATMENT PRINCIPLE

Eliminate Liver Fire and calm hyperactive Yang.

HERBAL TREATMENT

LONG DAN XIE GAN TANG *variation*

Gentiana Longdancao Decoction to Drain the Liver

Long Dan Cao *Gentianae Radix* 6 g

Zhi Zi *Gardeniae Fructus* 12 g

Huang Qin *Scutellariae Radix* 12 g

Chai Hu *Bupleuri Radix* 6 g

Dang Gui *Angelicae sinensis Radix* 12 g

Sheng Di Huang *Rehmanniae Radix* 12 g

Zhi Mu *Anemarrhenae Rhizoma* 12 g

Mu Li *Ostreae Concha* 15 g

Hong Hua *Carthami Flos* 10 g

Tao Ren *Persicae Semen* 10 g

Da Huang *Rhei Radix et Rhizoma* 5 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

Du-20 Baihui, ST-9 Renying, Ren-22 Tiantu, BL-18 Ganshu and LIV-2 Xingjian.

SUPPLEMENTARY TREATMENT

If a patient has protruding eyes, add **Xia Ku Cao** *Prunellae Spica* and **Bei Mu** *Fritillariae Bulbus*, and needle SP-10 Xuehai and BL-1 Jingming; for constipation, add **Fan Xie Ye** *Sennae Folium*, and needle ST-25 Tianshu and TB-6 Zhigou.

2. LIVER FIRE RISING DUE TO LIVER YIN DEFICIENCY**CLINICAL MANIFESTATIONS**

Blurry eyes, thirst, a dry mouth with no desire to drink, tinnitus, palpitations, insomnia, emaciation, tremors and hypomenorrhoea. The tongue is red with less coating. The pulse is thready and rapid.

TREATMENT PRINCIPLE

Eliminate excess Liver Fire and nourish Yin.

HERBAL TREATMENT

QI JU DI HUANG WAN and **HUANG LIAN SHAN QIN WAN** *variation*

Lycium Fruit, Chrysanthemum and Rehmannia Pill, and Coptis Pill to Clear Heat in the Upper Jiao

Sheng Di Huang *Rehmanniae Radix* 12 g

Gou Ji Zi *Lycii Fructus* 12 g

Ju Hua *Chrysanthemi Flos* 12 g

Shan Zhu Yu *Corni Fructus* 10 g

Fu Ling *Poria* 10 g

Ze Xie *Alismatis Rhizoma* 10 g

Huang Lian *Coptidis Rhizoma* 3 g

Huang Qin *Scutellariae Radix* 12 g

Zhi Zi *Gardeniae Fructus* 12 g

Nu Zhen Zi *Ligustri lucidi Fructus* 12 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

Du-20 Baihui, Ren-22 Tiantu, BL-18 Ganshu, BL-23 Shenshu and KI-3 Taixi.

SUPPLEMENTARY TREATMENT

If a patient has palpitations and insomnia, add **Huang Lian** *Coptidis Rhizoma*, **Wu Wei Zi** *Schisandrae Fructus* and **Mai Men Dong** *Ophiopogonis Radix*, and needle HE-7 Shenmen and Ren-17 Tanzhong; for night sweats, add **Ma Huang Gen** *Ephedrae Radix*, **Fu Xiao Mai** *Tritici Frutus levis* and **Nuo Dao Gen** *Oryzae glutinosae Radix*, and needle HE-7 Shenmen and KI-7 Fuliu.

3. LIVER FIRE RISING WITH BLOOD STASIS**CLINICAL MANIFESTATIONS**

Red eyes, dry mouth, enlarged thyroid gland, insomnia and anxiety. The tongue is red and purple, and the sublingual veins are distended. The pulse is thready and rapid.

TREATMENT PRINCIPLE

Calm excess Liver Yang and Fire, and remove Blood stasis.

HERBAL TREATMENT

QING YING TANG *variation*

Clear the Nutritive Level Decoction

Sheng Di Huang *Rehmanniae Radix* 12 g

Xuan Shen *Scrophulariae Radix* 12 g

Mai Men Dong *Ophiopogonis Radix* 12 g

Huang Lian *Coptidis Rhizoma* 3 g

Huang Qin *Scutellariae Radix* 12 g

Mu Dan Pi *Moutan Cortex* 10 g

Dan Shen *Salviae miltiorrhizae Radix* 10 g

Yu Jin *Curcumae Radix* 10 g

Chi Shao *Paeoniae Radix rubra* 12 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

LIV-2 Xingjian, SP-6 Sanyinjiao, SP-10 Xuehai, BL-23 Shenshu, BL-18 Ganshu, BL-17 Geshu and Ren-22 Tiantu.

SUPPLEMENTARY TREATMENT

If Wood Fire sings Metal, called *Mu Huo Xing Jin*, there will be a dry cough or even asthma, and difficulty breathing, particularly lying flat on a bed. Add **XIE BAI SAN**/*Drain the White Powder* with **Sang Bai Pi** *Mori Cortex* and **Di Gu Pi** *Lycii Cortex*, and needle Dingchuan (extra) and BL-13 Feishu; if a patient has symptoms of Wood subjugating Earth leading to stomach pain, diarrhoea and a red tongue with teeth marks, add **Fu Ling** *Poria*, **Bai Zhu** *Atractylodis macrocephalae Rhizoma* and **Chen Pi** *Citri reticulatae Pericarpium*, and needle SP-9 Yinlinquan, ST-25 Tianshu and ST-34 Liangqiu.

CASE STUDIES**CASE ONE**

HS was a 37-year-old woman who, on her first office visit, came in complaining of flushed face, heat intolerance, easy sweating, anxiety, palpitations, a dry cough and itchy throat, eating more than other people, constant hunger and scanty menstruation. She had recently been diagnosed with Graves' disease and had already been prescribed a beta-blocker.

Physical examination: the thyroid gland was enlarged by two degrees and looked like an apple. Both eyes protruded. Her heart rate was 100 beats/min. She had a pale tongue and thready and rapid pulses.

2 weeks prior to office visit: laboratory results

TSH: 0.04 μ IU/mL (normal range 0.5–6.4)

T4: 24.9 ng/dL (4.8–11.5)

T3: 0.58 ng/dL (0.75–1.40)

Free T4: 6.06 ng/dL (0.66–2.0)

Impression:

1. Graves' disease (Liver Fire rising with Blood stasis)
2. Goitre (Ying Liu)
3. Allergy
4. Cough (Yin and Qi deficiency)

TREATMENT PRINCIPLE

Eliminate Liver Fire, nourish Yin and remove Blood stasis.

HERBAL TREATMENT

LONG DAN XIE GAN TANG *variation*

Gentiana Longdancao Decoction to Drain the Liver

Long Dan Cao *Gentianae Radix* 3 g

Xia Ku Cao *Prunellae Spica* 12 g

Ze Xie *Alismatis Rhizoma* 10 g

Zhi Zi *Gardeniae Fructus* 10 g

Huang Qin *Scutellariae Radix* 10 g

Chi Shao *Paeoniae Radix rubra* 12 g

Chai Hu *Bupleuri Radix* 6 g

Bai Shao *Paeoniae Radix alba* 12 g

Sheng Di Huang *Rehmanniae Radix* 10 g

Mai Men Dong *Ophiopogonis Radix* 10 g

Yu Zhu *Polygonati odorati Rhizoma* 10 g

Gan Cao *Glycyrrhizae Radix* 3 g

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

Du-20 Baihui, Yintang (extra), Ren-22 Tiantu, ST-9 Renying, LI-11 Quchi, SP-10 Xuehai, ST-36 Zusanli, SP-6 Sanyinjiao and LIV-2 Xingjian.

The patient received five bags of herbs per week and acupuncture once a week. She was told to have her thyroid function checked once every 3 months.

3 months after office visit

TSH: 3.64 μ U/mL (normal range 0.35–5.50)

T4: 0.54 ng/dL (0.61–1.76)

7 months after office visit The patient stopped the treatment. During the treatment, her condition had gradually returned to normal; her doctor discontinued the beta-blocker medication. Her heart rate was 64 beats/min; the enlarged thyroid (goitre) was almost within the normal size range; her period increased to 5 days of flow; and cough symptoms abated.

1 year after office visit: laboratory report

Free T4: 1.10 ng/dL (0.61–1.76)

TSH: 1.28 μ U/mL (0.35–5.50)

18 months after office visit The next year the patient reported that her thyroid function was still within normal range without any medication.

CASE TWO

LK was a 50-year-old woman who, on her first office visit, came in complaining of difficult breathing for years, which had recently become aggravated. She could not lie down at night. She had a cough without phlegm, itchy throat, heat intolerance, sweating during both the day and night, and loss of appetite, resulting in her having soup every day for nourishment. She had had a diagnosis of Graves' disease for over 10 years. In the past, she had even been diagnosed with thyroid storm, a life-threatening crisis. She had constipation and her urine looked like dark soybean soup.

Physical examination: continuing status asthmaticus, goitre, protruding eyes, wheezing breath and heart rate 105 beats/min. Her tongue was red and purple with less coating in front and a fissure in back, with deep teeth marks. Her pulse was deep rapid and thready, and the left guan and right cun were taut.

Laboratory results: Not available.

Impression:

1. Graves' disease (Wood Fire burns Metal)
2. Status asthmaticus

TREATMENT PRINCIPLE

Eliminate Liver Fire and calm asthma.

HERBAL TREATMENT

DING CHUAN TANG and SANG BAI SAN variation

Arrest Wheezing Decoction and Morus Powder

Sang Bai Pi *Mori Cortex* 15 g

Di Gu Pi *Lycii Cortex* 10 g

Kuan Dong Hua *Farfarae Flos* 10 g

Zi Wan Asteris *Radix* 10 g

Zhi Ban Xia *Pinelliae Rhizoma preparatum* 10 g

Chen Pi *Citri reticulatae Pericarpium* 6 g

Wu Wei Zi *Schisandrae Fructus* 10 g

Sheng Di Huang *Rehmanniae Radix* 12 g

Huang Qin *Scutellariae Radix* 12 g

Long Dan Cao *Gentianae Radix* 3 g

Zhi Mu *Anemarrhenae Rhizoma* 12 g

Zhe Bei Mu *Fritillariae thunbergii Bulbus* 10 g

Gan Cao *Glycyrrhizae Radix* 5 g

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

Acupuncture points were divided into two groups: front of the body and back of the body.

- Front of body: Du-20 Baihui, Front head line 1 (extra), Ren-22 Tiantu, LI-11 Quchi, LU-7 Lieque, SP-10 Xuehai, SP-6 Sanyinjiao and LIV-2 Xingjian.
- Back of body: Du-20 Baihui, Dingchuan (extra), BL-13 Feishu, BL-17 Geshu, BL-18 Ganshu and SP-6 Sanyinjiao.

3 days after office visit The patient reported that when the acupuncture needles were inserted she could immediately feel the air come into her lungs, allowing for easier breathing and better energy. However, that condition was maintained for only a few hours and the asthma would recur. Her hot sensation was better. To her formula were added **Ma Huang Ephedrae Herba** 3 g and **She Gan Belamcandae Rhizoma** 5 g.

1 month after office visit The patient reported that she could lie flat on her bed at night and that the asthma had reduced. She was not too hot at night and her sweating declined. The herbal formula was modified by deleting **Ma Huang Ephedrae Herba** and **She Gan Belamcandae Rhizoma**, and adding **Fu Ling Poria** 12 g, **Zhi Ke Aurantii Fructus** 10 g and **Jie Geng Platycodi Radix** 12 g.

CASE THREE

NA was a 50-year-old woman who, on her first office visit, came in complaining of insomnia, stress, depression, anxiety, constipation, a dry mouth and fatigue. In addition, she reported that she had been diagnosed with Graves' disease 15 years ago. Since then, NA had taken the beta-blocker Tapazole (methimazole). She had exophthalmos, acid reflux and type II diabetes. Three years earlier, she had had breast cancer surgery, as well as an ovariectomy and hysterectomy due to carcinoma of the ovary. She had had to repeatedly go into hospital for intestinal obstruction (ileus) due to serious constipation. She had high cholesterol level, a family history of cancer, allergies (including pollen, trees, wheat and other food allergies) and asthma.

Physical examination: blood pressure 136/80 mmHg, heart rate 80 beats/min, goitre, protruding eyes and several surgical scars on the stomach. Her tongue was fissured, pale and dry with teeth marks and less coating. Her pulse was thready and taut, and taut in the left guan position.

Laboratory results: 4 months prior to office visit

Antithyroglobulin Ab: 12 328 IU/mL (normal range 0–40)

4 months prior to office visit

T4: 5.99 ng/dL (0.61–1.76)

T3: 545 ng/dL (60–181)

Glucose: 131 mg/dL (65–99)

Haemoglobin A_{1c}: 7% (4.5–5.7)

6 weeks prior to office visit

TSH: 0.07 µIU/mL (0.4–5.5)

Impression:

1. Graves' disease (Ying Liu, Fire arising due to Yin deficiency with Liver Qi stagnation and Blood stasis)
2. Exophthalmos
3. Goitre
4. Constipation
5. Insomnia
6. Acid reflux
7. Asthma
8. Depression
9. Anxiety
10. Postsurgery of breast cancer and carcinoma of ovary
11. Diabetes type II

TREATMENT PRINCIPLE

Nourish Liver and Kidney Yin, remove Blood stasis and eliminate Liver Fire.

HERBAL TREATMENT

ZHI BAI DI HUANG WAN and LONG DAN XIE GAN TANG variation

Anamarrhena, Phellodendron and Rehmannia Pill, and Gentiana Longdancao Decoction to Drain the Liver

Ju Hua *Chrysanthemi Flos* 10 g

Xia Ku Cao *Prunellae Spica* 12 g

Ze Xie *Alismatis Rhizoma* 10 g

Huang Qin *Scutellariae Radix* 10 g

Chi Shao *Paeoniae Radix rubra* 12 g

Bai Shao *Paeoniae Radix alba* 12 g

Sheng Di Huang *Rehmanniae Radix* 10 g

Gou Qi Zi *Lycii Fructus* 12 g

Tao Ren *Persicae Semen* 10 g

Hong Hua *Carthami Flos* 10 g

Shan Zhu Yu *Corni Fructus* 10 g

Mai Men Dong *Ophiopogonis Radix* 10 g

Zhi Mu *Anemarrhenae Rhizoma* 10 g

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

Du-20 Baihui, Front head line 3 (from outer canthus of the eye making a line directly into hair line 0.5 cun), Ren-22 Tiantu, ST-9 Renying, TB-6 Zhigou, ST-25 Tianshu, SP-10 Xuehai, ST-36 Zusanli, SP-6 Sanyinjiao, KI-3 Taixi and LIV-3 Taichong.

The patient received five bags of herbal medicine per week and acupuncture once a week. Additionally she had her thyroid function checked once every 3–6 months.

7 months after office visit

T3: 89 ng/dL (normal range 60–181)

T4: 0.98 ng/dL (0.8–1.8)

TSH: 1.7 μ U/mL (0.4–5.5)

9 months after office visit

Antithyroglobulin Ab: 3086 IU/mL (0–40)

Haemoglobin A_{1c}: 4.9% (4.5–5.7)

T4: 9.7 ng/dL (4.5–12.0)

T3: 3.4 ng/dL (1.2–4.9)

TSH: 0.025 μ U/mL (0.35–5.500)

The patient had no more insomnia, depression, anxiety or constipation problems. Her lab results returned to normal, including A_{1c}, T4 and T3, and her antibody levels declined. The patient reported that she had not had asthma or allergies during the 2 years following her treatment.

CASE FOUR

RI was a 42-year-old woman who, on her first office visit, came in complaining of a flushed face with swelling and a desire to ice it, insomnia, a burning sensation in both palms and cervical dryness. She had been diagnosed with Graves' disease 1 year previously. RI had been married for many years and had never been pregnant, although she had tried different methods of treatment without success. Menarche occurred when she was 11 years old. She had 3–4 days of flow and her overall cycle length was 21–28 days. Her last period before coming in had started 4 days previously.

Physical examination: the patient's face was red. She had no goitre. Her tongue was red with a small fissure on the surface. Her pulse was thready and rapid. On the day the patient came in, she was having menstrual flow. Her basal body temperature (BBT) was 98.2°F (postmenses).

3 years prior to office visit

Follicle-stimulating hormone (FSH): 21 mIU/mL (follicular phase 2.5–10.2, luteal phase 1.5–9.1, postmenopausal 23.0–116.3)

Luteinizing hormone (LH): 3.4 mIU/mL (follicular phase 1.9–12.5, luteal phase 0.5–16.9, postmenopausal 5.0–52.3)

TSH: 2 µIU/mL (0.4–5.5)

Prolactin: 20.3 ng/mL (non-pregnant 3–30, pregnant 10–209, postmenopausal 2–20)

5 months prior to office visit

T3: 190 ng/dL (normal value <150)

T4: 1.6 ng/dL (0.9–1.0)

TSH: <0.01 µIU/mL (0.4–5.5)

Thyroid peroxidase Ab: >1000 IU/mL (0–34)

Impression:

1. Graves' disease (Liver Fire rising with Blood stasis)
2. Infertility (Liver and Kidney Yin deficiency and Liver Yang rising)

TREATMENT PRINCIPLE

Eliminate Liver Fire, tonify Liver and Kidney Yin, and remove Blood stasis.

HERBAL TREATMENT

The treatment was divided into two phases: before and after menstruation.

- After menses: eliminate Liver Fire and nourish Yin

LONG DAN XIE GAN TANG *variation*

Gentiana Longdancao Decoction to Drain the Liver

Long Dan Cao *Gentianae Radix* 3 g

Chai Hu *Bupleuri Radix* 10 g

Huang Qin *Scutellariae Radix* 12 g

Zhe Xie *Alismatis Rhizoma* 10 g

Sheng Di Huang *Rehmanniae Radix* 12 g

Mu Dan Pi *Moutan Cortex* 6 g

Zhi Mu *Anemarrhenae Rhizoma* 12 g

Nu Zhen Zi *Ligustri lucidi Fructus* 12 g

Fu Ling *Poria* 10 g

Hong Hua *Carthami Flos* 10 g

Tao Ren *Persicae Semen* 10 g

Zhi Ke *Aurantii Fructus* 10 g

Chi Shao *Paeoniae Radix rubra* 12 g

Bai Shao *Paeoniae Radix alba* 12 g

Zhi Zi *Gardeniae Fructus* 10 g

- Before menses: replenish Spleen Qi and Liver and Kidney Yin, clear Liver Fire and remove Blood stasis

SI JUN ZI TANG, LIU WEI DI HUANG WAN and TAO HONG SI WU TANG variation

Four Gentlemen Decoction, Six-Ingredient Pill with Rehmannia, and Four-Substance Decoction with Safflower and Peach Pit

Dang Shen *Codonopsis Radix* 10 g

Huang Qi *Astragali Radix* 12 g

Dang Gui *Angelicae sinensis Radix* 12 g

Chuan Xiong *Chuanxiong Rhizoma* 10 g

Sheng Di Huang *Rehmanniae Radix* 12 g

Chi Shao *Paeoniae Radix rubra* 12 g

Bai Shao *Paeoniae Radix alba* 12 g

Bai Zhu *Atractylodis macrocephalae Rhizoma* 10 g

Tong Ji Li *Astragali complanati Semen* 10 g

Zhi Zi *Gardeniae Fructus* 10 g

Hong Hua *Carthami Flos* 10 g

Tao Ren *Persicae Semen* 10 g

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

Du-20 Baihui, Front head line 3 (from outer canthus of the eye making a line directly into hair line 0.5 cun), Ren-22 Tiantu, ST-9 Renying, LI-11 Quchi, KI-16 Huangshu, Ren-4 Guanyuan, Zigong (extra), SP-10 Xuehai, ST-36 Zusanli, SP-6 Sanyinjiao, KI-3 Taixi and LIV-2 Xingjian.

The patient was also told to check her BBT every morning in order to monitor changes in her menstrual cycle and thyroid function.

6 weeks after office visit

T4: 1.25 ng/dL (normal range 0.61–1.76)

T3: 2.7 ng/dL (2.3–4.2)

TSH: 0.014 μ U/mL (0.35–5.50)

3½ months after office visit

TSH: 0.753 uU/mL (0.35–5.50)

T4: 1.18 ng/dL (0.61–1.76)

T3: 89 ng/dL (85–205)
Thyroid peroxidase Ab: 468 IU/mL (0–34)

7 months after office visit

Thyroid peroxidase Ab: 293 IU/mL (<35)
Thyroglobulin Ab: 64 IU/mL (<20)

The patient's thyroid function returned to normal and her antibody levels declined. One measure of infertility, FSH concentration, improved dramatically, from 21 to 2 mIU/mL (normal value). After 1 year of treatment, she had almost no symptoms.

5. Analysis of the cases

Although all four patients had been diagnosed with Graves' disease, they all had a unique constellation of symptoms and signs, and combination of different diseases. In the clinic, treatment does not always follow a 'textbook-like case' and treatment must be based on the specific symptoms and signs of each patient. A patient's symptoms are varied, and may combine with many diseases, some related to disordered immunity and some not. There are rarely two patients with exactly the same symptoms. Therefore, we need solid knowledge of both Western and Chinese medicine.

(1) Case one

It is important to follow the treatment principle to treat excess diseases using the reducing method. For the patient in Case one, **Huang Yao Zi *Dioscoreae bulbiferae Rhizoma*** was used to destroy hyperplastic thyroid tissues. During the process of destruction, liver cells would also be damaged. So, when using **Huang Yao Zi *Dioscoreae bulbiferae Rhizoma***, it is important (1) to monitor liver enzymes in a timely way in order to reduce the chance of damaging the liver, and (2) to note that **Huang Yao Zi *Dioscoreae bulbiferae Rhizoma*** does not have unlimited uses: its side-effects must be understood and its overuse avoided. After the patient had used **Huang Yao Zi *Dioscoreae bulbiferae Rhizoma*** for 1 month, she was sent back to her physician to have her liver enzymes checked. The laboratory results showed that her liver enzyme levels were slightly raised, so when the patient's blood results came back to us 1 month later we stopped using the treatment. The liver enzymes then returned to normal levels. During the several months for which we followed the patient, the goitre gradually reduced. In addition, thyroid function gradually returned to the normal range.

According to Western medical research, the pathogenic thyroid tissue of Graves' disease is increased by autoantibodies. These antibodies mimic the TSH function of stimulating thyroid tissue, causing it to become hyperplastic. Therefore, destroying these hyperplastic cells conforms to Western medical theory. In this case, treatment was fairly successful. During treatment, T3 and T4 levels gradually returned to normal, as did the TSH concentration. Through this case we can see that the order of change in hormone levels following treatment is that T3 and T4 return to normal first, followed by TSH. This order tells us that the treatment

target is the thyroid, not the hypothalamus or the pituitary. A TSH level rising to normal means the feedback function between the thyroid and pituitary glands has returned to normal as a result of the thyroid being free from autoimmune antibodies. Presumably this result could not have been achieved by using only beta-blocking medication.

This patient was a young woman with no illness except Graves' disease. She received treatment for 6 months and her thyroid function recovered completely. One year later, the patient reported that she had no symptoms and signs, and was living without any acute flares. In spite of the treatment success, this case was inadequate as a true clinical study, because the antibody levels were never checked.

(2) Case two

According to Chinese medical theory, 'When the disease is acute, the symptoms are serious. Treatment should address secondary symptoms, but not the primary cause'. The patient in Case two had status asthmaticus, asthma and difficulty breathing 24 hours a day. Although she had been diagnosed with Graves' disease for over 20 years, it was important to treat both the asthma and the Graves' disease. If the asthma had not been treated, the patient would still have been at risk of a decreased life expectancy. We had recommended that the patient visit her Western medical doctor, but she delayed seeing him, so we had to use our knowledge to save the patient's life at that time.

Asthma is not an autoimmune disease, but it does result from a problem with immune function. First of all, we need to dilate the bronchi so that the patient can breathe. Fresh air going into the body helps to resolve any other existing problems, such as Graves' disease. We immediately choose Dingchuan (extra) points and/or Ren-22 Tiantu. Both of these acupuncture points improve pulmonary ventilation and reduce bronchospasm.

Acupuncture treatment for asthma offers only temporary relief of symptoms. Following symptom relief we need to use herbal medicine to support pulmonary ventilation as well. As asthma is an immune function disorder, but not an autoimmune condition, its treatment is totally different from that of Graves' disease. Primarily, treatment must protect mast cells and reduce the release of serotonin (5-hydroxytryptamine, 5-HT) and engage in anti-infection and anti-allergy to control status asthmaticus. This is an emergency condition, and the use of acupuncture can stop the symptom of shortness of breath, providing a 4–5-hour remission. The asthma will gradually return and worsen around midnight. To continue to control asthma symptoms at night, one must also prescribe **Ma Huang Ephedrae Herba** and **She Gan Belamcandae Rhizoma** to strengthen the results of the acupuncture treatment. These herbs can be removed once the patient's condition has stabilized. It is important to combine the treatments of herbal medicine and acupuncture for Graves' disease and asthma. The herbal medicine prescribed for this patient was bitter in taste and cold in nature to help her clean Heat-Toxins and calm the Liver Fire to treat Graves' disease, and descend Lung Heat to treat asthma, thereby treating both diseases with the same prescription. The patient returned home to decoct the herbal medicine that would continue the treatment initially begun with the acupuncture, reducing her asthma symptoms in the night.

In Chinese medical theory, the Lung and Large Intestine have a relationship of exterior and interior. Therefore, Lung Heat can singe the Yin in the Large Intestine, resulting in constipation. This is called 'Lung transforms its Heat to the Large Intestine'. Free movement of the bowels could benefit the patient and reduce suffering from constipation and asthma, as purgatives that descend the Heat-Toxins could protect the Lung and Yin from continuing damage. Once the patient had received the above treatment, her status asthmaticus ceased and she no longer experienced the Heat sensation.

The second step, once the symptoms of asthma and Graves' disease are stable, is to mediate disordered immunity. Chinese medical theory says that once the symptoms of acute diseases have decreased, one should treat their causes. For instance, when asthma is attacking, we should treat the symptoms of asthma; once the acute asthma attack has resolved and gone into remission, we should treat the primary cause – disordered immunity. Chinese medicine posits that the Lung is in charge of breath and the Kidney governs reception of air. When the Kidney is deficient, it may lead to dyspnoea and shortness of breath. Nourishing Kidney will benefit both asthma and Graves' disease. As the Liver and Kidney have a common source, nourishing the Kidney helps reduce Liver Fire, accelerating rehabilitation for both diseases.

(3) Case three

Chinese medicine considers the human body holistically. Therefore, diagnosis and treatment are based on an overall analysis of symptoms and signs, the causes, nature and location of an illness, and the patient's physical condition according to the basic theories of Chinese medicine. As a result, the diagnosis of Chinese medicine may include two or more diseases of Western medicine. The best example is the patient in Case three. She had multiple diagnoses and over ten diseases according to Western medicine, which were distributed throughout several systems with different symptoms. Yet the combination of all of the Western medical diagnoses and their symptoms can be summarized in Chinese medicine as Fire rising due to Yin deficiency with Liver Qi stagnation and Blood stasis.

The patient originally came for treatment of constipation, because it was repeatedly causing ileus. When the patient's constipation improved, she told us more about her other symptoms and conditions, and her laboratory results and diagnoses, allowing us to help her more.

(1) When the patient came to us, she had already been diagnosed with Graves' disease for over 15 years and had been taking a beta-blocker. Therefore, because the beta-blocker had already reduced the symptoms of Graves' disease, at first she almost had no symptoms of the condition; the only signs we could see were goitre and exophthalmos. However, it should be understood that the primary problem is that antibodies were still present in her body; they were not eliminated by the beta-blocker. Once the patient stopped taking the medication, the symptoms would return – possibly even more severely. Therefore, we prescribed Chinese medicine treatment based on her laboratory results and Western medical diagnosis. As the medication had masked symptoms and signs, we had to rely on laboratory reports to determine how to prescribe herbs and acupuncture points.

Her Western medical practitioner reduced her medication (Tapazole), because her thyroid function remained within normal range, she had no symptoms, and antibody levels were ten times lower than before the treatment.

(2) Generally speaking, diabetes belongs to the Chinese medical category of *Xiao Ke* 消渴. However, this patient had no obvious symptoms and signs showing she had *Xiao Ke*; only the laboratory results were abnormal. We know that type II diabetes mellitus is the most common type of diabetes. Unlike type I diabetes, patients may produce healthy or even high levels of insulin, yet their body cells do not use insulin effectively. This resistance to insulin is often caused by obesity. The high sugar content in the bloodstream, over time, may cause serious damage to the eyes, kidneys, nerves and heart. The manner by which organ damage results from exposure to high levels of glucose is probably due to a combination of factors: metabolic factors, such as high blood glucose, long duration of diabetes, possibly low levels of insulin and abnormal blood fat levels; neurovascular factors leading to damage of blood vessels that carry oxygen and nutrients to organs; autoimmune factors that cause inflammation in organs; and genetics. The result of diabetes is that organs and cells are destroyed. In terms of Chinese medicine, this is Yin deficiency. Following treatment, the patient's glucose and haemoglobin A_{1c} levels both decreased to normal. Obesity not only has the potential to cause diabetes but also may cause breast cancer. However, after treatment the patient was losing weight.

(3) Insomnia is a symptom that can be triggered by Graves' disease, as well as other autoimmune diseases. According to the patient's symptoms and signs, Fire was flaring up due to Yin deficiency. During the first session of acupuncture, she was already asleep on the treatment table and had no problem sleeping at night.

(4) Depression and anxiety belong to Liver Qi stagnation. Disordered Liver Qi and Qi stagnation lead to the flaring of Liver Fire, resulting in emotional disorders. In a journal article¹ we explained the treatment of mental illness using acupuncture on channels that course through the nervous system, possibly causing neuronal improvements in symptoms of anxiety, depression and insomnia. Although the three diseases are pathogenically different in Western medicine, we can use the same treatment method for good clinical results.

(5) Acid reflux is a symptom of gastro-oesophageal reflux disease (GORD). It is caused by relaxation of the oesophageal sphincter so that it is unable to close well, leading to the reflux of food and acid upwards through the oesophagus, which then becomes irritated and/or inflamed. The patient had had a gastrointestinal check prior to her visit for treatment and she did not have *Helicobacter pylori* infection. Therefore, we were not concerned about an infective process in the disease. The real cause of reflux is unknown in Western medicine, although it may be related to dysfunction of the vagus nerve. If this were true, we would be concerned about GORD and constipation, because they could result from an autoimmune attack of the nerves of the central nervous system (CNS), or an emotional disorder triggering the vagus to function improperly. Yet in Chinese medical theory, reflux and heartburn belong to the transverse invasion of hyperactive Liver Qi (Fire) attacking the Stomach, resulting in Stomach Qi being unable

to move downward smoothly. Instead, the upset Qi moves upward in a reverse direction, bringing food and acid to the oesophagus. Obviously, the treatment principle should be to clear Liver Fire and stop the acid reflux. We used both acupuncture and herbal medicine to accomplish this. The acupuncture points were Du-20 Baihui, ST-25 Tianshu, TB-6 Zhigou, Ren-12 Zhongwan and ST-34 Liangqiu. The herbal medicine we used was **ZUO JIN WAN** /*Left Metal Pill* with **Huang Lian** *Coptidis Rhizoma* and **Wu Zhu Yu** *Evodiae Fructus* to eliminate Liver Fire and check the upward reverse flow of Qi. The treatment benefited the reflux, the Graves' disease and the constipation. The result was that the patient's reflux had gone completely a few months later. The symptoms disappeared gradually, with small reductions.

In Western medical theory, the cause of symptoms of reflux is unknown. Western medical treatment usually uses H₂-receptor blockers to reduce the symptoms of acid reflux, but patients may need to take this medication for the rest of their lives. The treatment we offer may affect the CNS to mediate the stomach and intestinal peristalsis and cardiac notch function, as well as acid secretion. Usually, during acupuncture treatment, the symptoms can be reduced on the treatment table. Our clinical research is still ongoing.

(6) The patient also complained of seasonal allergy in the spring, asthma during the spring and winter, and food allergies to such substances as wheat, nuts and milk (to name but a few) since she was a little girl. During the treatment we were able to see that her remission time was extended and, even though she had some symptoms, they were not severe. Two years later, the patient reported that her allergy symptoms were almost gone, she had never had a subsequent asthma attack, and even her food allergies were better. Allergy and asthma seem like Chinese medicine's description of the transverse invasion of overactive Liver Qi (Wood) attacking the Spleen, because of Spleen Qi deficiency (Earth) being unable to nourish the Lung (Metal). So Lung Qi becomes deficient, leading naturally to a decline in Wei Qi, defensive Qi. In Western medicine we understand that higher than normal levels of immunoglobulin (Ig) E in the bloodstream is a key pathology that induces type I hypersensitivity. Although this process is not the result of an autoimmune disorder, it does occur because of an immune system function disorder. How to reduce the IgE levels is the key point in treating and healing allergy and asthma, including food allergies, called *Fa Wu* 发物 in Chinese.

Our treatment does not directly treat Lung Qi and replenish Spleen Qi, but, by using the indirect method of eliminating Liver Fire to free the Spleen, Lung Qi is improved, which in turn strengthens defensive Qi. Therefore, the clinical result was that the patient's symptoms went away. We cannot say we cured the patient's seasonal allergy, asthma and food allergies, but during the treatment the patient entered remission. The Chinese medical treatment plan is that during summer and autumn we help T cells mature in the thymus gland. According to Western medical theory, we should stimulate both helper and suppressor T cells simultaneously. However, if there is not enough antigen to stimulate helper T cells to create IgE, suppressor T cells will suppress the antibody secretion, thus lowering the IgE level. When the season for allergy and asthma came, IgE was already lower than in previous years, which may be the reason the patient avoided or had

reduced allergy and asthma symptoms. Perhaps that is why Chinese medical theory tells us that in the summer we should treat the illnesses that occur in winter. Seasonal treatments may help us to avoid antigens that predominate in certain seasons. However, one must be careful about replenishing Qi and warming Yang because the patient's antibody (antithyroid antibody) is still positive and such treatments can stimulate the production of T cells, including helper and suppressor T cells. The antibody plus the antigen will stimulate helper T cells to secrete more antibodies, with the result that the disease is worsened.

To treat seasonal allergy, asthma and food allergies, we combined acupuncture and herbal medicine, using bitter tasting and cold herbs. We selected Ren-22 Tiantu, Ren-4 Guanyuan, ST-36 Zusanli and KI-3 Taixi to help tonify Kidney and Spleen Qi, and to nourish the Lung. Ren-22 Tiantu has two functions in this case : (1) it is a local point for Graves' disease, and (2) it stimulates the thymus gland indirectly and is close to the bronchi. So, when there is an asthma attack, the point can be used to help relax the bronchi to relieve asthma symptoms.

(7) The patient also had type II diabetes (see Figure 2.2) so that her body could not make or use insulin properly. Insulin is a hormone that helps control blood glucose levels. Glucose is the main source of fuel for the body. Raised blood glucose levels can cause symptoms such as blurred vision, frequent urination, thirst, and feelings of hunger and tiredness. It can also lead to hypertonic pressure that can destroy the cells of vision, and the heart and kidney. These symptoms and signs occur as Yin deficiency, which is a common fundamental pathological change in all her Western-diagnosed diseases. Therefore, the treatment principle and prescription coincide. In this instance it was important to remind the patient to drink the herbal tea 30 min before meals. This is because the herbal medicine was designed to nourish Yin with a naturally sweet flavour. Therefore, a higher than natural blood sugar surge would occur after drinking the herbs, but 30 min later the herbs would function to reduce the blood sugar surge.

To summarize, although the patient in Case three had many Western medical diagnoses, there was only one according to Chinese medical theory: Liver Fire flaring up due to Yin deficiency, Heat singeing the Blood causing Blood stasis, or Liver Qi stagnation preventing the Blood from moving normally in the blood vessels, resulting in Blood stasis. As the Liver opens on the eye, Liver Qi stagnation and Fire flaring up both cause Blood stasis, the clinical signs of which are exophthalmos and goitre.

In Case three we used both acupuncture and herbal medicine, because 'two hands are better than one' to get good results. As explained above, through the treatment the patient's T4 and T3 levels declined to the normal range first. After this, the TSH concentration started to rise, and then went to the normal range. Finally, the thyroid antibody level reduced too. Through Case three, we can see that Chinese medicine appears to work on the antigen. After the treatment, the patient's abnormal T4 and T3 levels gradually returned to normal as the antigen was disappearing. TSH then increased to normal levels, and antibody levels reduced. Therefore, because the antibodies could not find the antigen to react to, they were reduced in number. If the antibody level had not decreased to normal range, the disease would always have the opportunity to flare up again. The

purpose of the treatment is that, ultimately, the antibody titre would decrease to normal levels.

The patient's T4, T3 and TSH levels all returned to normal, and the other treatment benefited the patient's blood sugar and haemoglobin A_{1c}, both of which also normalized. She lost weight and had no more insomnia, emotional problems or constipation.

(4) Case four

This patient had been diagnosed with Graves' disease and also had a long history of infertility, but no physician had found the cause for it. However, for more than 10 years she had employed multiple methods to treat her infertility. She had even used donated eggs, but unfortunately never became pregnant.

According to her age and the combination of diseases, we decided to treat both the Graves' disease and the infertility simultaneously. We were not entirely sure of the cause of the infertility. Her only laboratory reports showed that her FSH level of 21 mIU/mL was high (normal <9), although the reports were 3 years old, taken when she was aged 39 years. They indicated that she was perimenopausal. What was the reason for this? Was it natural ageing or due to the autoimmune disease? There was no correct answer for her. We did not know the answer, and neither did the patient. There were two reasons for asking the patient to check her BBT (basal body temperature) every morning if she could: (1) Graves' disease typically manifests with a higher than normal BBT, because the basal metabolism is higher than that of a normal person; (2) during the menstrual cycle, the temperature should show approximately when ovulation occurs. A menopausal woman will have a higher than normal ovulatory temperature, similar to the temperature found in Graves' disease, but more irregular.

The patient's BBT started at 98.5°F and even went as high as 99.0°F. Therefore, the treatment for the patient was to eliminate Liver Fire, nourish Liver and Kidney Yin and remove Blood stasis. After regular treatment, the BBT began to decline and her periods became more regular. Her flow was extended from only 1 day to 3 days, and finally to 5 days, and the volume of menstrual blood increased.

During treatment the patient's T4, T3 and TSH levels were returning to normal range, the antithyroid antibody level was decreasing, and even the FSH concentration reduced to normal (from 21 to 2 mIU/mL).

The treatment technique in this case is first to clear Heat to reduce T3 and T4 concentrations. Once the BBT has lowered, one can start to treat both of the illnesses. After menstruation, the treatment is to nourish Liver and Kidney Yin, clear Liver Fire and remove Blood stasis. Before menses, the treatment is to replenish Qi, nourish Yin, clear Heat and remove Blood stasis. From the start of the period of flow until the middle of the cycle, the treatment is to nourish Liver and Kidney Yin, and clear Heat. The treatment principle for both the hyperthyroidism and infertility should be the same in this phase: from the middle of the cycle to right before flow, infertility treatment should be to warm the Yang and replenish the Qi. However, such treatment is contraindicated in hyperthyroidism, because replenishing Qi poses the risk of exacerbating the Graves' disease (see Figure 2.3).

The method of replenishing Qi and warming Yang will destroy more antigen in the thyroid, but here we are nourishing Yin, clearing Heat and removing Blood stasis to mask the antigen, thus protecting the target tissue.

Through the process of treating Graves' disease, we see the following pattern: first there is a reduction to normal or near-normal ranges of T3 and T4, then the TSH level, and finally the number of antibodies. This phenomenon tells us that Chinese medicine treatment may work on the antigen and organs that are the target tissues of disordered immunity. When the autoantigen has been reduced or even masked, the antigen does not stimulate the immune system to overproduce an imbalanced antibody. The remaining autoantibodies are found only in the patient's bloodstream, with no reserve force. As the amount of antigen continues to be reduced, so does the autoantibody, which may even disappear.

6. Lifestyle prescriptions and health issues

- 1 Graves' disease belongs to the Chinese medicine pattern of Liver Fire rising, which damages Liver and Kidney Yin. Excess is the principal feature in the early phase of this phenomenon. The Chinese medicine treatment principle is to reduce the excess Fire in the Liver. Case one involves a young woman with no other disease or symptoms. Therefore, the treatment involved the reducing and eliminating method, although this was not used with the other patients.
- 2 Graves' disease is an autoimmune disease that can combine with other autoimmune and/or immune disorder diseases, or other system diseases. The Chinese medicine treatment is not only to focus on the diseases but also to analyse all the symptoms and signs that exist beyond the Western medical diagnosis to prescribe and treat the diseases. For instance, the patients in Case two and Case three both had Graves' disease combined with asthma and allergy. That is, the additional diseases were not autoimmune, but immune function disorders. Case two was acute and Case three was in remission. For the patient in Case two, we had to think about treating the symptoms to stop the asthma; in Case three we were concerned about treating the primary problem. This reflects the Chinese medical treatment principle: 'Treat symptoms in an acute emergency case; treat the primary in chronic conditions'. Autoimmune disease is different from immune system function disorder; Graves' disease is different from asthma. However, in Chinese medical theory they have identical patterns; that is, Graves' disease belongs to the pattern of Liver Fire rising due to Yin deficiency. Case two is an acute asthma situation due to Liver Fire rising up to the Lung, but the Kidney Yin is also deficient, which is the primary problem. The treatment is to clear Heat. Case three is a chronic asthma situation and the Graves' disease is due to Liver Fire rising, because of Yin deficiency. Therefore the treatment is to nourish Yin and clear Heat.
- 3 Case four is also Graves' disease. However, it differs in that the patient was also diagnosed with infertility. Both of the illnesses have a similar sign: BBT is higher than normal. These both belong to the pattern of Liver Fire rising. We

used Chinese medical methods to treat both of the diseases at the same time, using the same prescription. Laboratory findings showed that both problems returned to normal or near-normal ranges.

- 4 During treatment, the practitioner must be cautious in the use of herbal medicine that is warm or hot in nature, because warming the Yang may aggravate the disease.
- 5 In terms of diet, we suggest that patients avoid spicy food, alcohol and smoking.
- 6 The amount of iodine in the diet can influence hormone synthesis activity in the thyroid gland. Iodine-rich food decreases ^{131}I uptake, a radioactive isotope of iodine that can be used to test how well the thyroid gland is functioning and that can also damage the thyroid gland.
- 7 Regarding activity, given the high output of the heart, strenuous exercise may be detrimental in Graves' disease. The patient should be advised to avoid severe fatigue from exercise.

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1. Hou W. Clinical observations of the acupuncture treatment of insomnia, emotional disorder, and ADHD. *International Journal of Clinical Acupuncture* 2005; 14(3):221–224.

Hashimoto's thyroiditis

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Hashimoto's thyroiditis is a chronic inflammatory autoimmune disease of the thyroid gland. The disease is named after its discoverer, Hakaru Hashimoto. It is also called chronic thyroiditis and Hashimoto's, and it is one type of hypothyroidism.

1. Western medical aetiology and pathology

The thyroid gland produces two main hormones, thyroxine (or T4) and tri-iodothyronine (or T3). Together, they maintain the body's rate of metabolism by helping to control body temperature, influence heart rate and help regulate the production of protein. The pituitary gland controls the rate of thyroxine and tri-iodothyronine production by secreting thyroid-stimulating hormone (TSH). In turn, the pituitary is controlled by the hypothalamus, which

signals the pituitary gland to release TSH. The amount of TSH secreted by the pituitary depends on how much thyroxine and tri-iodothyronine are in the bloodstream. This process usually works well with the proper balance of TSH, T3 and T4 in the blood.

Hashimoto's thyroiditis is an autoimmune disorder in which the immune system creates antibodies that damage the thyroid gland by causing inflammation, or thyroiditis. The inflammation impairs the ability of the thyroid to produce hormones, which leads to hypothyroidism. In an attempt to stimulate the thyroid to produce more hormones, the pituitary increases its secretion of TSH, resulting in the hypertrophy of glandular tissue. This is called a goitre, which is an enlarged thyroid gland.

2. Diagnosis by Western medicine

Diagnosis is based on serological tests for antibodies and hormone levels in the blood.

- 1 Subclinical hypothyroidism: normal free T4, but raised TSH levels.
- 2 Clinical primary hypothyroidism: low free T4, low T3 and raised TSH levels.
- 3 Needle biopsy and serological tests for antibodies:

Antithyroid peroxidase antibody: autoantibodies of clinical influence in thyroid disease include thyroid-stimulating antibodies (TSAb), TSH receptor-binding inhibitory immunoglobulins (TBII), antithyroglobulin antibodies (anti-TG Ab) and the antithyroid peroxidase antibody (anti-TPO Ab). Anti-TPO Ab has emerged as the most generally useful marker for the diagnosis and management of autoimmune thyroid disease.

The Anti-TPO Ab was historically referred to as the antimicrosomal antibody. The thyroid peroxidase enzyme (responsible for iodinating tyrosine residue in the thyroglobulin molecule) was subsequently identified as the major microsomal component recognized by these autoantibodies.

Anti-TPO Ab mediates antibody-dependent thyroid cell destruction; its concentration correlates with the active phase of the disease. Measurement of this autoantibody is useful for resolving the diagnostic dilemma presented by the apparent inconsistency between increased TSH and normal free T4 results. Given abnormally increased TSH and euthyroid, or normal T4 results, a positive anti-TPO Ab test result provides strong evidence for early, subclinical autoimmune disease. This assay is also used to monitor response to immunotherapy and to identify at-risk individuals who have a family history of thyroid disease.

- 4 Cholesterol and triglyceride levels may be increased.

3. Chinese medicine aetiology and pathology

The body's metabolism is governed by Spleen and Kidney Qi and Yang. The Spleen function is to transport and transform food Essence and provide material basis for the acquired constitution. The Kidney stores the Essence that supports the function of all other organs; it is the foundation of the pre-heaven constitution.

The Spleen cannot function well without Kidney Qi and Yang; if the Kidney is deficient, this may lead to Spleen Qi and Yang deficiency, resulting in insufficient energy to support the Kidney. The Spleen and Kidney promote each other physiologically and also affect one another pathologically. Spleen deficiency affects the Kidney, and vice versa. Eventually, both the Spleen and Kidney develop deficiency together.

Qi is one manifestation of Essence. The patency of Liver Qi is important to help Spleen Qi function well. Water and food are the chief source of the nutrients that maintain life and health after birth; they are also the material basis for the production of Qi and Blood, which the Spleen transports, distributes and transforms. If there is Spleen dysfunction, this will cause poor absorption and delivery of nutrients, and the person will have fatigue and weak muscles. There will also be poor transformation of water, which can cause water retention and inability to control Blood circulating in the vessels. In women, this can result in heavy menstrual flow.

When Spleen Qi is deficient, food Essence cannot be transformed in a timely way. It may accumulate in the Middle Jiao, which can block the smooth flow of Liver Qi in the channels, causing Liver Qi stagnation and Blood stasis. This may also cause goitre and emotional disorder.

Spleen Qi deficiency can develop into Yang deficiency and then affect Kidney function, making the disease more severe.

4. General treatment principle

Replenish Spleen Qi and Kidney Qi or warm Spleen Yang and Kidney Yang, promote the flow of Liver Qi and remove Blood stasis.

DIFFERENTIATION AND TREATMENT

1. SPLEEN QI DEFICIENCY

CLINICAL MANIFESTATIONS

Facial pallor, fatigue, weight gain, sleepiness, loose stools and a chilly sensation. The tongue is light pink or pale with teeth marks. The pulse is deep and slow.

TREATMENT PRINCIPLE

Nourish Qi and restore Spleen function.

HERBAL TREATMENT

SI JUN ZI TANG *variation*

Four Gentlemen Decoction

Dang Shen *Codonopsis Radix* 12 g

Huang Qi *Astragali Radix* 12 g

Fu Ling *Poria* 12 g

Bai Zhu *Atractylodis macrocephalae Rhizoma* 10 g

Gan Cao *Glycyrrhizae Radix* 3 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

BL-20 Pishu, ST-9 Renying, Ren-6 Qihai and ST-36 Zusanli.

SUPPLEMENTARY TREATMENT

If a patient has ankle oedema, add **Zhu Ling** *Polyporus* and **Ze Xie** *Alismatis Rhizoma*, and needle Ren-9 Shuifen and SP-9 Yinlingquan; if a patient has fatigue and dizziness, add **Tian Ma** *Gastrodiae Rhizoma*, **Dang Gui** *Angelicae sinensis Radix* and **Shu Di Huang** *Rehmanniae Radix preparata*, and needle GB-20 Fengchi and KI-3 Taixi.

2. SPLEEN QI DEFICIENCY WITH LIVER QI STAGNATION**CLINICAL MANIFESTATIONS**

Fatigue, depression, panic, weight gain and discomfort in the throat with the sensation that there is something lodged in it that cannot be swallowed (plum pit sensation). The tongue is pale with teeth marks and a thin, white coating. The pulse is deep and thready.

TREATMENT PRINCIPLE

Nourish Spleen Qi and smooth Liver Qi.

HERBAL TREATMENT

SHEN Ling Bai Zhu San and **CHAI Hu Shu Gan San** variation

Ginseng, Poria and Atractylodis Macrocephalae Powder, and Bupleurum Powder to Spread the Liver

Dang Shen *Codonopsis Radix* 12 g

Fu Ling *Poria* 12 g

Bai Zhu *Atractylodis macrocephalae Rhizoma* 10 g

Sheng Ma *Cimicifugae Rhizoma* 3 g

Chai Hu *Bupleuri Radix* 10 g

Zhi Ke *Aurantii Fructus* 10 g

Bai Shao *Paeoniae Radix alba* 12 g

Yu Jin *Curcumae Radix* 6 g

Gan Cao *Glycyrrhizae Radix* 3 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

ST-9 Renyin, Ren-22 Tiantu, BL-18 Ganshu, ST-36 Zusanli and LIV-3 Taichong.

SUPPLEMENTARY TREATMENT

If a female patient has heavy menstrual flow, add **Ren Shen** *Ginseng Radix*, and needle and apply moxibustion to SP-1 Yinbai.

3. QI DEFICIENCY AND BLOOD STASIS**CLINICAL MANIFESTATIONS**

Fatigue, weakness, sleepiness, decrease in appetite, goitre, hair loss, feeling cold, weight gain, coarse dry skin and constipation. The tongue is pale purple with a thin, white coating. The pulse is uneven or thready.

TREATMENT PRINCIPLE

Replenish Spleen Qi and remove Blood stasis.

HERBAL TREATMENT

BU FEI TANG and **XUE FU ZHU YU TANG** variation

Tonify the Lungs Decoction and Drive Out Stasis in the Mansion of Blood Decoction

Dang Shen *Codonopsis Radix* 12 g

Huang Qi *Astragali Radix* 12 g

Bai Zhu *Atractylodis macrocephalae Rhizoma* 12 g

Fu Ling *Poria* 12 g

Dang Gui *Angelicae sinensis Radix* 10 g

Sheng Di Huang *Rehmanniae Radix* 10 g

Tao Ren *Persicae Semen* 10 g

Hong Hua *Carthami Flos* 10 g

Chi Shao *Paeoniae Radix rubra* 12 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

ST-9 Renying, Ren-22 Tiantu, BL-20 Pishu, BL-17 Geshu, SP-10 Xuehai and ST-36 Zusanli.

SUPPLEMENTARY TREATMENT

If a patient has symptoms of constant pain in the stomach, add **Yan Hu Suo** *Corydalis Rhizoma*, **Xiang Fu** *Cyper Rhizoma* and **Yu Jin** *Curcumae Radix*, and needle ST-25 Tianshu and SP-10 Xuehai.

4. SPLEEN QI DEFICIENCY WITH WATER RETENTION

CLINICAL MANIFESTATIONS

Weakness, sleepiness, weight gain, goitre, bradycardia and palpitations, oedema of the skin of the hands, feet and eyelids, and a heavy feeling of the body. The tongue is pale and tender. The pulse is deep and weak.

TREATMENT PRINCIPLE

Restore Spleen Qi and eliminate Water.

HERBAL TREATMENT

SHEN LING BAI ZHU SAN variation

Ginseng, Poria and Atractylodis Macrocephalae Powder

Dang Shen *Codonopsis Radix* 12 g

Huang Qi *Astragali Radix* 12 g

Fu Ling *Poria* 12 g

Zhu Ling *Polyporus* 12 g

Ze Xie *Alismatis Rhizoma* 10 g

Che Qian Zi *Plantaginis Semen* 12 g

Chen Pi *Citri reticulatae Pericarpium* 10 g

Zhi Ke *Aurantii Fructus* 10 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

ST-9 Renying, Ren-9 Shuifen, BL-20 Pishu, BL-27 Xiaochangshu and SP-9 Yinlingquan.

SUPPLEMENTARY TREATMENT

If a patient's cholesterol is high, add Shan Zha *Crataegi Fructus* and Jue Ming Zi *Cassiae Semen*, and needle ST-25 Tianshu and ST-40 Fenglong.

5. SPLEEN AND KIDNEY YANG DEFICIENCY

CLINICAL MANIFESTATIONS

Diarrhoea in the early morning, intolerance of cold, cold limbs, fatigue and weight gain. The tongue is pale and tender with a white coating. The pulse is deep, thready and weak.

TREATMENT PRINCIPLE

Warm Spleen and Kidney Yang.

HERBAL TREATMENT

JIN GUI SHEN QI WAN and SI SHEN WAN variation

Kidney Qi Pill from the Golden Cabinet and Four Miracle Pill

Zhi Fu Zi *Aconiti Radix lateralis preparata* 6 g

Rou Gui *Cinnamomi Cortex* 3 g

Dang Shen *Codonopsis Radix* 12 g

Fu Ling *Poria* 12 g

Bai Zhu *Atractylodis macrocephalae Rhizoma* 12 g

Shan Zhu Yu *Corni Fructus* 10 g

Bu Gu Zhi *Psoraleae Fructus* 10 g

Rou Dou Kou *Myristicae Semen* 10 g

Wu Wei Zi *Schisandrae Fructus* 10 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

BL-20 Pishu, BL-23 Shenshu, ST-9 Renying, Ren-22 Tiantu, Ren-4 Guanyuan, ST-36 Zusanli and KI-3 Taixi.

SUPPLEMENTARY TREATMENT

If the patient has oedema, add Ze Xie *Alismatis Rhizoma*, Che Qian Zi *Plantaginis Semen* and Yi Yi Ren *Coicis Semen*, and needle Ren-9 Shuifen and Ren-6 Qihai; if the patient has frequent colds or flu, use SNIFF & RELIEVE¹ aromatherapy and prescribe YU PING FENG SAN/Jade Windscreen Powder with Huang Qi *Astragali Radix*, Fang Feng *Saposhnikoviae Radix* and Chen Pi *Citri reticulatae Pericarpium*, and needle ST-36 Zusanli and Ren-6 Qihai, and apply moxibustion to both points.

6. BOTH QI AND YIN DEFICIENCY

CLINICAL MANIFESTATIONS

Dry mouth or lips with no desire to drink water, fatigue and difficulty concentrating. The tongue is pale with teeth marks and/or a red tip with fissures on the surface. The pulse is deep and weak.

TREATMENT PRINCIPLE

Replenish Qi and nourish Yin.

HERBAL TREATMENT

SHI PI YIN and LIU WEI DI HUANG WAN *variation*

Bolster the Spleen Decoction and Six-Ingredient Pill with Rehmannia

Huang Qi *Astragali Radix* 20 g

Dang Shen *Codonopsis Radix* 15 g

Bai Zhu *Atractylodis macrocephalae Rhizoma* 12 g

Fu Ling *Poria* 12 g

Yi Yi Ren *Coicis Semen* 20 g

Zhu Ling *Polyporus* 12 g

Sheng Di Huang *Rehmanniae Radix* 12 g

Shan Zhu Yu *Corni Fructus* 10 g

Mu Dan Pi *Moutan Cortex* 6 g

Ze Xie *Alismatis Rhizoma* 10 g

Chu Shi Zi *Broussonetiae Fructus* 10 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

BL-20 Pishu, BL-23 Shenshu, Ren-22 Tiantu, SP-6 Sanyinjiao and KI-3 Taixi.

SUPPLEMENTARY TREATMENT

If a patient is overweight, add Zhi Ban Xia *Pinelliae Rhizoma preparatum* and Ze Xie *Alismatis Rhizoma*, and needle ST-25 Tianshu and ST-40 Fenglong; if a patient has high blood glucose levels, add Tian Hua Fen *Trichosanthis Radix* and Gou Qi Zi *Lycii Fructus*, and needle Yishu (extra).

5. Appendix and complications

- 1 When Hashimoto's thyroiditis occurs with adrenal insufficiency and type I diabetes mellitus, the condition is called type II polyglandular autoimmune syndrome (PGA-II).
- 2 When Hashimoto's thyroiditis occurs with hypoparathyroidism, adrenal insufficiency and fungal infections of the mouth and nails, the condition is called type I polyglandular autoimmune syndrome (PGA-I).

CASE STUDIES

CASE ONE

BN was a 30-year-old woman who, on her first office visit, came in complaining of fatigue, anxiety, depression, insomnia, hair loss, loose stools, stomach pain during menstrual flow, and dysmenorrhoea with dark blood and clots. She had been married for 11 years, but had never been pregnant. Her periods had started when she was 14 years old. She had a 38-day cycle with 4–5 days of flow. Her last period started 26 days previously. Her mother had been diagnosed with Hashimoto's thyroiditis and she had also been diagnosed a few years ago. She had also been diagnosed with endometriosis. She had been trying to get pregnant for the past 10 years.

Physical examination: basal body temperature (BBT) 96.8°F after flow ended, and 97.5°F before flow began. The patient had a pale tongue with deep teeth marks and a thin, white coating. Her pulse was deep and thready, and the left guan position was slightly taut.

4 months prior to office visit: laboratory reports

Anti-TPO Ab: 185 IU/mL (normal value <35)

TSH: 10.31 mIU/L (0.35–5.50)

T4: 0.02 ng/dL (0.61–1.76)

T3: 28 ng/dL (60–181)

Impression:

1. Hashimoto's thyroiditis (Spleen Qi deficiency with Blood stasis)
2. Endometriosis
3. Infertility

TREATMENT PRINCIPLE

Tonify Spleen Qi and remove Blood stasis.

HERBAL TREATMENT

BA ZHEN TANG *variation*

Eight-Treasure Decoction

Dang Gui *Angelicae sinensis Radix* 12 g

Chuan Xiong *Chuanxiong Rhizoma* 10 g

Bai Shao *Paeoniae Radix alba* 12 g

Shu Di Huang *Rehmanniae Radix preparata* 10 g

Gou Qi Zi *Lycii Fructus* 12 g

Tu Si Zi *Cuscutae Semen* 10 g

Xu Duan *Dipsaci Radix* 10 g

Bai Zhu *Atractylodis macrocephalae Rhizoma* 10 g

Fu Ling *Poria* 12 g

Huang Qi *Astragali Radix* 10 g

Dang Shen *Codonopsis Radix* 12 g

The herbs above were decocted in water for oral administration.

ACUPUNCTURE

LIV-3 Taichong, KI-3 Taixi, SP-6 Sanyinjiao, ST-36 Zusanli, SP-10 Xuehai, TB-6 Zhigou, Ren-4 Guanyuan, KI-16 Huangshu, Ren-22 Tiantu, ST-9 Renying, Front head line 3 (extra, make a line from the outer canthus 0.5 cun into the hairline to treat diseases of the Lower Jiao) and Du-20 Baihui.

Additional recommendations: the patient was told to check her BBT every day and to have her anti-TPO Ab level checked within 6 months.

The patient received five bags of herbal medicine per week and acupuncture once a week.

6 months after office visit

TSH: 2.25 mIU/L (normal range 0.35–5.50)

Anti-TPO Ab: 19 IU/mL (0–34)

T4: 0.82 ng/dL (0.61–1.76)

T3: 93 ng/dL (60–181)

8 months after office visit The patient's BBT rose to a normal value of 97.5°F 6 days after her period and she had no stomach pain during flow.

CASE TWO

TC was a 62-year-old woman who, on her first office visit, came in complaining of fatigue, weight gain that even exercise could not help her lose, depression, insomnia with difficulty falling asleep, nausea, loss of appetite, a burning sensation in the stomach, headaches, full body muscle pain, tenderness in the right breast and loose stools.

Past medical history: she had been diagnosed with hepatitis C 35 years ago. She had had breast cancer surgery, and surgery for chronic sinusitis three times, the third time being earlier the previous spring. Following this third surgery, her liver enzymes increased to four times the normal level and she was again diagnosed with hepatitis C. The patient refused the use of any steroids. Additionally, she was diagnosed with hypothyroidism and had a positive antibody test result.

Physical examination: liver palms,² no goitre, pale purple tongue, and deep and slow pulses with the left guan being taut.

2 months prior to office visit: laboratory results

Alanine aminotransferase (ALT): 78 IU/L (normal range 5–31)

Aspartate aminotransferase (AST): 102 IU/L (5–31)

γ-Glutamyl transpeptidase (r-GT): 60 IU/L (7–32)

T4: 0.4 ng/dL (0.8–1.9)

T3: 0.09 ng/mL (0.7–1.70)

Impression:

1. Hashimoto's thyroiditis (Spleen Qi deficiency, Liver Heat and Liver Qi stagnation)
2. Hepatitis C
3. Sinusitis

TREATMENT PRINCIPLE

Activate Spleen Qi, smooth Liver Qi and clear Liver Heat.

HERBAL TREATMENT

SHI PI YIN *variation*

Bolster the Spleen Decoction

Huang Qi *Astragali Radix* 12 g

Zhi Zi *Gardeniae Fructus* 10 g

Bai Hua She She Cao *Hedyotis diffusae Herba* 12 g

Hong Hua *Carthami Flos* 10 g

Tao Ren *Persicae Semen* 8 g

Dang Gui *Angelicae sinensis Radix* 10 g

Yan Hu Suo *Corydalis Rhizoma* 10 g

Xiang Fu *Cyperi Rhizoma* 6 g

Yi Yi Ren *Coicis Semen* 15 g

Fu Ling *Poria* 10 g

Wu Wei Zi *Schisandrae Fructus* 6 g

Chen Pi *Citri reticulatae Pericarpium* 6 g

Yuan Zhi *Polygalae Radix* 6 g

Shi Chang Pu *Acori tatarinowii Rhizoma* 10 g

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

Du-20 Baihui, Front head 5 needles (extra, the five needles are located on the front of the head 0.5 cun inside of the hairline. The middle line is on the Ren channel; line 1 follows the trajectory of the inner canthus; line 2 follows the trajectory of the pupil; line 3 follows the trajectory from the outer canthus. Separately, these points treat emotions and Upper, Middle and Lower Jiao diseases), Yintang (extra), LI-20 Yinxiang, LI-4 Hegu, LI-11 Quchi, Ren-22 Tiantu, ST-9 Renying, ST-36 Zusanli, SP-6 Sanyinjiao and hepatitis point (extra, located 0.7 cun distal to the carpal bones between the fourth and fifth metacarpal bones).

The patient received seven bags of herbal medicine per week and acupuncture once a week. She was also asked to have her liver enzymes checked once a month and antibodies within 6 months.

2 months after office visit

ALT: 41 IU/L (5–31)

AST: 37 IU/L (5–31)

r-GT: 35 IU/L (7–32)

6 months after office visit

TSH receptor antibody (TRAb): 2.78 mIU/mL (<20)

T4: 1.16 ng/dL (0.8–1.9)

T3: 1.03 ng/mL (0.7–1.70)

α-Fetoprotein (AFP): 3.59 ng/mL (<12)

Antithyroglobulin Ab: <20.0 IU/mL (<40)

Anti-TPO Ab: <10 IU/mL (<35)

The patient received the treatment for 1 year. Thyroid function returned to normal range and thyroid antibodies were checked three times – each time levels were found to be in the normal range. Liver enzymes decreased and the sinusitis was healed. Three years later, thyroid function and antibodies were still within normal range.

CASE THREE

PM was a 54-year-old man who, on his first office visit, came in complaining of extreme fatigue, constant sleepiness causing him to drink large volumes of coffee to go to work, then falling asleep again. Three years earlier he had been diagnosed with Hashimoto's thyroiditis and had been taking levothyroxine (Synthroid) to treat the hypothyroidism. Additionally, based on ultrasonographic findings, he had been diagnosed with a thyroid cyst.

Physical examination: no goitre, mild teeth marks on the tongue with a small fissure in the middle, and a light purple colour.

1 day prior to office visit

T4: 1.30 ng/dL (normal range 0.8–1.8)

TSH: 15.4 µIU/mL (0.4–5.5)

Impression:

1. Hypothyroidism (Spleen Qi deficiency with Blood stasis)
2. Thyroid cyst

TREATMENT PRINCIPLE

Activate Spleen Qi and remove Blood stasis.

HERBAL TREATMENT

TAO HONG BA ZHEN TANG *variation*

Eight-Treasure Decoction with Safflower and Peach Pit

Dang Shen *Codonopsis Radix* 12 g

Huang Qi *Astragali Radix* 12 g

Bai Zhu *Atractylodis macrocephalae Rhizoma* 10 g

Fu Ling *Poria* 12 g

Chen Pi *Citri reticulatae Pericarpium* 6 g

Xia Ku Cao *Prunellae Spica* 10 g

Sheng Di Huang *Rehmanniae Radix* 12 g

Chi Shao *Paeoniae Radix rubra* 10 g

Bai Shao *Paeoniae Radix alba* 10 g

Chuan Xiong *Chuanxiong Rhizoma* 6 g

Tao Ren *Persicae Semen* 10 g

Hong Hua *Carthami Flos* 10 g

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

Ren-22 Tiantu, Ren-23 Lianquan, ST-9 Renying, KI-16 Huangshu, Ren-4 Guanyuan, Ren-6 Qihai, Ren-17 Tanzhong, SP-10 Xuehai, ST-36 Zusanli, SP-6 Sanyinjiao, KI-3 Taixi and LIV-3 Taichong.

7 weeks after office visitTSH: 0.78 μ U/mL (normal range 0.4–5.5)

Anti-TPO Ab: >70 IU/mL (<2)

Thyroglobulin Ab: 8 IU/mL (<2)

Thyroglobulin: <0.9 ng/mL (3.5–56.0)

5 months after office visit

T4: 1.39 ng/dL (0.8–1.8)

TSH: 1.8 μ U/mL (0.4–5.5)

7 months after office visit The patient visited his physician and was told that the thyroid cyst had disappeared.

1 year after office visit

Anti-TPO Ab: >70 IU/mL (normal value <2)

Thyroglobulin Ab: 4 IU/mL (<2)

TSH: 3.9 μ U/mL (0.4–5.5)

The patient reported that the fatigue disappeared by the second treatment. His thyroid function returned to the normal range, TSH declined to a normal level, and the anti-TPO Ab level was also reduced. In addition, the patient's thyroid cyst had disappeared.

6. Analysis of the cases

The thyroid is located in the neck, anterior to the trachea. The thyroid hormones, thyroxine (T4) and tri-iodothyronine (T3) maintain metabolic homeostasis. Thyroid disease frequently arises from autoimmune processes that stimulate overproduction of hormones or cause gland destruction, leading to underproduction of hormones. In Hashimoto's thyroiditis, the disease mechanism is follicular cell apoptosis resulting in an inability to produce enough T3 and T4 for homeostasis, characterized by the stimulation or inhibition (or both) of antibodies.

Thyroid hormone homeostasis can be characterized as the relationship between Spleen and Liver. The symptoms of Spleen deficiency are similar to those of hypothyroidism; Liver Fire rising has symptoms similar to those of hyperthyroidism.

However, Hashimoto's thyroiditis is not simply inflammation of the thyroid; it is caused by disordered immunity. Therefore, the treatment must not only address damaged follicular cells but also rebuild thyroid function and treat disordered immunity by regulating the immune system.

Replenishment of Spleen and Kidney Qi or even Yang helps to stimulate and increase metabolism and maintain homeostasis. We replenished Spleen Qi to rebuild thyroid function in all three cases; smoothing Liver Qi and removing Blood stasis may have improved the microcirculation and prevented antibodies from continuing to damage antigens, which are thyroid cells in this case. Tissues and cells, as visible substances, belong to Yin, but thyroid function belongs to Qi and Yang, as it warms the body and maintains metabolism and temperature. *Nan Jing/The Classic of Difficulties* says: 'Qi has a warming action'. Qi is the main source of heat needed by the body. Deficiency of Qi or Yang can cause lowered body temperature, cold intolerance and cold limbs. If the fundamental function of the thyroid is impaired by autoimmunity and

you do not recover the tissue, but only replenish Qi and warm Yang, symptoms may be reduced for a while, because of improved thyroid function. However, they will return. This is because replenishing Qi and warming Yang may stimulate T cells to produce more helper T cells and suppressor T cells. In hypothyroidism, both antigens and antibodies are present. T cells would produce more helper T cells to create more and more antibodies (see Figure 2.5). The antibody could exacerbate the illness. Therefore, Hashimoto's thyroiditis is not simply hypothyroidism, but is caused by autoantibodies attacking thyroid tissue causing follicular cells to die. Replenishing Qi and Yang may help raise the BBT and daytime temperature, but it is difficult to mediate the inter-relationship of the hypothalamus, pituitary and thyroid, and to rebuild that inter-relationship in concordance with the immune system. Between these complicated relationships, the key point is the damage to follicular cells and to recover them. While replenishing Qi and warming Yang is necessary for symptom reduction, nourishing Yin protects target cells against tissue damage; removing Blood stasis increases the micro-circulation, inhibiting inflammation and reducing the chance for antibodies to stick on to antigens. If we can accomplish these three steps, the first one of replenishing and warming will make T cells produce more suppressor T cells and decrease the production of antibodies, and the illness will improve.

In observing the three cases above, we see the laboratory reports changing in the following order: T4 and T3 levels increase to the normal range and then TSH decreases to a normal level. Finally, antibody levels decrease to the normal range (except in Case three). Once T3 and T4 levels had increased, the damaged thyroid started to work. When the thyroid is functioning, the pituitary gland does not have to work so hard to continue to stimulate the thyroid gland to work and their inter-relationship improves; when an antibody cannot find its target antigen, the antibody level in the bloodstream will gradually decrease. In addition, suppressor T cells will join in suppressing the process and antibody levels will decline until they disappear. If one only replenishes and warms Qi and Yang, T cells will continue to stimulate helper T cells and make more antibodies, and the illness will continue. That is why, when we finished the treatment, the patients' T3, T4, TSH and antibody levels were still in normal range. For example, we followed the patient in Case two for a few years after she had concluded her treatment, but her antibodies stayed in the negative range, and T3 and T4 levels remained in normal range.

(1) Case one

This patient not only had Hashimoto's thyroiditis but also had been diagnosed with endometriosis and infertility, and her mother had also been diagnosed with hypothyroidism. She had sought treatment in the past 10 years, but without success. The treatment for this patient was: (1) to improve thyroid function by replenishing Spleen Qi; (2) to remove antibodies by removing Blood stasis; (3) to mask and recover damaged follicular cells by nourishing Yin; and (4) to treat the endometriosis by removing Blood stasis, which is the same method as treatment (2) above. Therefore, even though there were three diagnoses, the treatment for the patient was still a single prescription. The patient used Chinese medicine to treat Hashimoto's thyroiditis and endometriosis with great success. Finally, T4, T3 and TSH levels returned to the normal range, antibodies declined to normal, and the dysmenorrhoea disappeared. There were also benefits to the hormone levels, as evidenced by the BBT chart showing normal temperatures.

(2) Case two

This case was a little bit complicated. The patient was not only diagnosed with hypothyroidism but also had hepatitis C and a severe sinus infection. She wanted to receive the treatments for all three conditions simultaneously. Chinese medicine treatment plans are based on clinical symptoms and are not dependent on Western medical diagnoses alone. This is called *Bian Zheng Shi Zhi*, or diagnosis and treatment based on overall analysis of symptoms and signs. This includes the cause, nature and location of the illness and the patient's physical condition according to the basic theories of Chinese medicine. Can three different Western medicine diagnoses be treated together by Chinese medicine? First we need to analyse all the conditions using both Chinese and Western medical theory.

(1) Hashimoto's thyroiditis has symptoms characterized by Spleen Qi deficiency. The patient complained about water retention in her whole body, weight gain that occurred even with exercise, and depression. We know the symptoms were caused by hypofunction of thyroid hormone. According to the patient's tongue and pulse, which were pale purple and deep and slow, with the left guan being taut, respectively, this was Spleen Qi deficiency causing an inability to transport, distribute and transform well. The essential substance accumulated in the Middle Jiao became Phlegm-Dampness.

(2) Sinus infection in Chinese medical terms is *Nao Lou* 脑漏 or *Bi Yuan* 鼻渊. The nose is a special body opening of the Lung. When the Lung has an illness, it manifests on the nose. The causes generally come from two sources:

- From an exopathogen, one of the six pathogenic factors that can invade the body. If vital Qi is strong enough, a person will not contract an exopathogen and get sick. Otherwise, the person becomes ill, for example with an acute infection such as a cold or flu. The organ impaired first is usually the Lung, leading to a stuffy nose, congestion, difficulty breathing and rhinitis.
- From Spleen Qi deficiency, causing food Essence to turn into Dampness and Phlegm that stagnates in the Middle Jiao. Chinese medicine points out that the Spleen is the source of Phlegm and Dampness; the Lung is the container that stores Phlegm and Dampness. This makes the nose stuffy, congested and painful, as occurs during chronic infection. Although the patient had had sinus surgery three times, this did not cure the problem. Therefore, Qi sufficiency is very important for fighting sinus infections.

It is also informative to consider the sinus condition from an anatomical and pathophysiological perspective to see how the treatments for chronic sinus infection and autoimmune diseases are both similar and different. The sinuses are hollow air spaces within the bones surrounding the nose. They produce mucus, which drains into the nose. Many patients with chronic sinusitis are prescribed antibiotics over a long period of time. This may result in an imbalance of the patient's natural bacterial flora, which can cause a secondary fungal infection. If a patient also has an autoimmune disease or immune disorder, their natural immunity is without the strength to control the chronic sinusitis and fungal infection. Therefore, we use **Huo Xiang** *Pogostemonis/Agastaches Herba* and **Pei Lan** *Eupatorii Herba* to eliminate the fungal infection, as these aromatic herbs have a function to transform Dampness.

(3) The patient had had hepatitis C since receiving a blood transfusion 35 years previously. Her liver enzyme levels were always higher than normal. Hepatitis C is due to a viral infection that triggers the immune system to attack the target, which is liver cells, causing an increase in liver enzymes. The disease is a postinfectious autoimmune disorder. In this case, we needed to protect the liver cells from continuing attack by disordered immunity and prevent the liver condition from getting worse and developing into liver sclerosis or liver cancer. Normally, nourishing Liver Yin is the main method for keeping liver enzymes in the normal range. However, this patient also had a severe sinuses infection, which we diagnosed as Water retention and Phlegm and Dampness with Heat. In such a case, nourishing Yin would undoubtedly exacerbate the condition.

To summarize, replenishing Spleen Qi and nourishing Liver Yin would normally be the main treatment for the patient. However, according to the patient's unique needs, we were concerned that we would not be able to eliminate the pathogens of Phlegm and Dampness. Therefore, the treatment plan offered was to eliminate Phlegm and Dampness, clear Heat, replenish Spleen, and then to nourish Yin once Dampness and Phlegm had been eliminated. After a year of treatment, the T3, T4 and TSH levels had raised to normal, as had her antibodies. Not only this but also the patient's liver enzymes declined and the sinus problem was resolved.

(3) Case three

This patient was using Synthroid to replace thyroid function, but still felt extremely fatigued and had to drink coffee to go to work. Using Synthroid, his TSH level was still much higher than normal, in addition to his having positive antibodies. His condition was diagnosed as Qi deficiency and Blood stasis. Treatment resulted in thyroid function improving, as demonstrated by T3, T4 and TSH levels returning to normal range, the thyroid cyst disappearing, and his antibody levels declining, although they did not disappear completely.

In reviewing this case, it is clear that correct treatment was the cornerstone of the patient's recovery. However, at the same time, replacement of thyroxine via Synthroid influenced the recovery of thyroid function. This type of hypothyroidism is caused by autoantibodies destroying follicular cells of the thyroid, leading to Hashimoto's thyroiditis and resulting in insufficient thyroid function. Therefore, doctors typically prescribe thyroid hormone replacement, because this treatment is useful in reducing the symptoms, but it also negatively affects the thyroid's natural hormonal feedback loop with the pituitary and hypothalamus. This increases the difficulty of treating the actual disease. In our clinical experience, when thyroid function is close to normal, hormone replacement should be reduced to the minimum dosage needed to maintain the hormone at normal levels until the thyroid has the opportunity to recover. As thyroid function improves and returns to normal, hormone replacement can finally be reduced to zero. After having continued the treatment for 1 year, the patient's TSH decreased to the normal level. His antibodies also declined, although they did not go to the normal range. As a result, left without further treatment, there was the possibility that this patient might have a flare-up of disease in the future.

Autoimmune diseases often overlap and combine together. In such instances, pathological changes direct the treatment of Chinese medicine. Follow-up to laboratory reports helps us to select correct treatments, as well as to revise previous treatment plans. Clinical practice, which tends to focus on multiple health

issues simultaneously, is different from the classroom experience, which tends to focus on the treatment of a single disease. In practice, when combining our knowledge of Chinese and Western medicine, we can usually use herbal medicine and acupuncture to treat multiple problems at the same time, essentially 'killing two birds with one stone'.

7. Lifestyle prescriptions and health issues

- 1 The symptoms and signs of hypothyroid are characterized by Qi and Yang deficiency.³ Therefore, replenishing Qi and Yang will help to reduce such symptoms and signs. However, Hashimoto's thyroiditis is an autoimmune disease. If one simply increases Yang and Qi, this may exacerbate the disease. As replenishing Yang and Qi would boost immunity, it would lead to more severe autoimmune reactions. Su,⁴ using haemolytic plaque formation as a criterion, showed that Yin-nourishing, Qi-regulating and Blood-vitalizing formulas can reduce immunological attacks, such as those characteristic of autoimmunity and transplant rejection. Yin deficiency is the underlying pathogenesis in Hashimoto's thyroiditis, and Qi deficiency can develop from Yin deficiency. A Yang-nourishing formula enhanced immune responses.
- 2 Hashimoto's thyroiditis is not simply hypothyroidism. Therefore, the treatment not only nourishes Qi and Yang. We must also be concerned with the immune reaction, the inflammation it causes and the tissues it damages.
- 3 If patients have infertility and raised levels of follicle-stimulating hormone (FSH), we must mediate the relationship between the hypothalamus and the thyroid, and between the hypothalamus and the ovaries.
- 4 If a patient is using thyroid hormone replacement therapy during the Chinese medicine treatment, when the laboratory results have returned to or are close to a normal level, suggest reducing the replacement drug dosage gradually until it reaches zero, under a doctor's orders.
- 5 Dietarily, suggest avoiding foods that are cold in nature as they directly impair Spleen function.

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1. **SNIFF & RELIEVE** is an aromatherapy herbal formulation for external use. This is a patent remedy designed to decrease the frequency with which a person catches the common cold or flu; it reduces viral load and inhibits the virus from growing in the nasal vestibule.
 2. 'Liver palms' are a sign in a patient who has a history of liver illness and sclerosis that oestrogen is not being broken down properly, causing the blood vessels of the palm to become extended and red, and indicating a serious liver problem.
 3. Shen Z. Clinical observation on the role of thyroid contrasting older people with patients diagnosed with Kidney Yang deficiency. *Journal of Integrative Medicine* 1982; 2:9.
 4. Su X, Kong XT, Xie YH et al. Effect of Yin-nourishing and Blood-activating recipes on antibody formation in animals. *Journal of Traditional Chinese Medicine* 1984; 4(2):157-160.

Mental illness and autoimmune disease

CHAPTER 10

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The term mental illness refers to various mental disorders, including disorders of thought, mood, balance, or behaviour. In this chapter, we discuss mental illness caused by autoimmune disorders.

1. Western medical aetiology and pathology

Autoimmunity may occur in any tissue, organ, or system. Recent findings on the close relationship between the immune system and the central nervous system (CNS) lead to the conclusion that there may be a relationship among psychological, neurological, endocrine and immune factors. This may explain why individuals who experience a high degree of stress in their lives may be predisposed to an organ-specific autoimmunity.

Stanford University Medical Center¹ reported finding that a protein called osteopontin was abundant in multiple sclerosis (MS)-affected brain tissue, but not in normal tissue. Since then, other research groups have confirmed that levels of osteopontin are increased just before and during a relapse of MS, so that when

the immune system attacks the protective myelin sheath surrounding nerve cells, the volume of osteopontin increases. Osteopontin, produced by immune cells and brain cells themselves, promotes the survival of the T cells that damage myelin. By increasing the number of these T cells, osteopontin increases their destructive potential. This process may exist in many other autoimmune diseases, including rheumatoid arthritis, type I diabetes and lupus.

Indeed, osteopontin may have a great effect on the way the immune system works. Normally, after the immune system does its job of eradicating a microbe, its response is then reduced. If this did not happen, the immune response would go on indefinitely. Imagine having a cold or an attack of poison oak that would last forever. Osteopontin lets the T cells linger in the blood, ready to attack again. This process means that the disease moves in cycles, becoming progressively worse.

2. Diagnosis by Western medicine

The CNS manifestations of chronic autoimmune disease are broadly divided into neurological and psychiatric categories. The criteria for diagnosis of mental illness are to verify the presence of CNS dysfunction using laboratory serum and cerebrospinal fluid analyses, as well as radiological changes.

In mental illness, signs and symptoms generally include:

- behavioural changes, such as repeated hand washing and observation, and hyperactivity
- emotional changes, such as sadness, depression and anxiety
- cognitive changes, such as delusions that the television is controlling a patient's mind and paranoia
- physiological changes, such as spontaneous sweating and vertigo.

3. Chinese medical aetiology and pathology

Chinese medicine has few terms that characterize mental illness as a particular branch of study. Instead, it describes seven emotions: joy, anger, melancholy, anxiety, grief, fear and terror. These emotions reside in the mind and respond normally to normal changes in physical and environmental stimuli. However, persistent and violent emotions act as pathogenic factors that cause functional derangement of Qi, Blood and the Zang Fu. Chinese medicine uses terms such as *Ju Sang* 沮丧 depression, *Jiao Lu* 焦虑 anxiety, *Yu Zheng* 郁证 melancholia, *Zang Zao* 脏躁 hysteria, *Dian* 癫 depressive psychosis and *Kuang* 狂 mania to describe specific types of mental illness.

In Chinese medicine, the seven emotions relate to the five Zang viscera, both in terms of normal reactions and in terms of abnormal pathology. The Heart is related to joy, Liver to anger, Spleen to anxiety, Lung to melancholy and Kidney to fear. Experienced in excess or isolation, or out of balance with the other emotions, each of the seven emotions can damage the body directly and lead to disease by affecting its corresponding viscus. Chapter 5 of *Huang Di Nei Jing Su Wen/The Yellow Emperor's Inner Classic of Medicine Simple Questions* says: 'Anger impairs the Liver ...

joy impairs the Heart . . . anxiety impairs the Spleen . . . melancholy impairs the Lung . . . and . . . fear impairs the Kidney'. In Chinese medical theory, the Heart controls mental activities and is the emperor of the five viscera and six bowels. The seven emotions can not only cause diseases but also aggravate them. Chinese medicine pays great attention to calming patients' emotional state so as to prompt recovery from illness.

DIFFERENTIATION AND TREATMENT

1. STAGNATION OF PHLEGM AND QI

CLINICAL MANIFESTATIONS

Depression, apathy, dementia, lack of motivation and fatigue, muttering to oneself, frequent crying or laughing for no reason, caprice and no desire to eat. The tongue has a white, greasy coating. The pulse is taut and slippery.

TREATMENT PRINCIPLE

Expel Phlegm and regulate the flow of Qi.

HERBAL TREATMENT

DAO TAN TANG *variation*

Navigate Phlegm Decoction

Zhi Ban Xia *Pinelliae Rhizoma preparatum* 10 g

Chen Pi *Citri reticulatae Pericarpium* 10 g

Fu Ling *Poria* 12 g

Zhi Tian Nan Xing *Arisaematis Rhizoma preparatum* 10 g

Zhi Shi *Aurantii Fructus immaturus* 10 g

Yuan Zhi *Polygalae Radix* 10 g

Shi Chang Pu *Acori tatarinowii Rhizoma* 10 g

Yu Jin *Curcuma Radix* 12 g

The herbs above are decocted in water for oral administration twice daily.

ACUPUNCTURE

Du-20 Baihui, Du-14 Dazhui, PE-5 Jianshi, HE-7 Shenmen, ST-40 Fenglong and ST-36 Zusanli.

SUPPLEMENTARY TREATMENT

If the patient has a chronic illness with insomnia, fatigue, palpitations, and a pale tongue and deep and weak pulse, add Dang Shen *Codonopsis Radix*, Bai Zhu *Atractylodis macrocephalae Rhizoma* and Suan Zao Ren *Ziziphi spinosae Semen*, and needle BL-20 Pishu, BL-23 Shenshu and BL-15 Xinshu.

2. FLARING UP OF PHLEGM-FIRE

CLINICAL MANIFESTATIONS

Sudden onset, irritability, flushed face, pink eyes, unusual strength, insomnia and anorexia. The tongue is red with a yellow or greasy coating. The pulse is slippery and rapid.

TREATMENT PRINCIPLE

Purge Liver Fire, tranquilize the mind and remove Phlegm.

HERBAL TREATMENT

MENG SHI GUN TAN WAN and **SHENG TIE LUO YIN** variation

Chloriti Lapis Pill to Drive Out Phlegm and Iron Filings Decoction

Qing Meng Shi *Chloriti Lapis* 30 g (decoct first for 30 min)

Sheng Da Huang *Rhei Radix et Rhizoma* 6 g (decoct later)

Huang Qin *Scutellariae Radix* 12 g

Huang Lian *Coptidis Rhizoma* 6 g

Long Dan Cao *Gentianae Radix* 10 g

Zhi Shi *Aurantii Fructus immaturus* 10 g

Zhi Ban Xia *Pinelliae Rhizoma preparatum* 10 g

Zhi Tian Nan Xing *Arisaematis Rhizoma preparatum* 10 g

Shi Chang Pu *Acori tatarinowii Rhizoma* 12 g

Tian Zhu Huang *Bambusae Concretio silicea* 10 g

The above herbs are decocted in water for oral administration twice daily.

ACUPUNCTURE

PE-8 Laogong, Ren-26 Renzhong, Ren-13 Shangwan and KI-4 Dazhong.

SUPPLEMENTARY TREATMENT

If the patient suffers from illness for a long time, the pathogenic Phlegm-Fire will impair Yin and the manifestation will become chronic. Use herbs such as **Sheng Di Huang** *Rehmanniae Radix*, **Mai Men Dong** *Ophiopogonis Radix* and **Xuan Shen** *Scrophulariae Radix*, and needle KI-3 Taixi and BL-23 Shenshu.

3. FIRE FLARING UP DUE TO YIN DEFICIENCY**CLINICAL MANIFESTATIONS**

Insomnia, emaciation, flushed face and panic attacks. The tongue is red with less coating or with cracks on the surface. The pulse is thready and rapid.

TREATMENT PRINCIPLE

Eliminate Fire and nourish Yin.

HERBAL TREATMENT

AN SHEN BU XIN WAN variation

Nourish the Heart to Calm the Spirit Pill

Wu Wei Zi *Schisandrae Fructus* 6 g

Shi Chang Pu *Acori tatarinowii Rhizoma* 10 g

He Shou Wu *Polygoni multiflori Radix preparata* 12 g

He Huan Pi *Albiziae Cortex* 12 g

Zhen Zhu Mu *Margaritiferae Concha usta* 20 g (decoct first for 30 min)

Tong Ji Li *Astragali complanati Semen* 12 g

Nu Zhen Zi *Ligustri lucidi Fructus* 12 g

Sheng Di Huang *Rehmanniae Radix* 12 g

The above herbs are decocted in water for oral administration twice daily.

ACUPUNCTURE

BL-15 Xinshu, BL-14 Juiyinshu, BL-18 Ganshu, BL-23 Shenshu, HE-7 Shenmen and LIV-2 Xingjian.

SUPPLEMENTARY TREATMENT

If the patient has depression, coupled with pain and fullness in the chest, add **Chai Hu** *Bupleuri Radix*, **Yu Jin** *Curcumae Radix*, **Zhi Ke** *Aurantii Fructus* and **Bai Shao** *Paeoniae Radix alba*, and needle Ren-17 Tanzhong, PE-6 Neiguan and LIV-14 Qimen.

4. YIN DEFICIENCY WITH BLOOD STASIS

CLINICAL MANIFESTATIONS

Anxiety, insomnia, dizziness, tinnitus, thirst with no desire to drink, and headaches with a fixed location. The tongue is red with less coating and the sublingual veins are distended. The pulse is deep and weak.

TREATMENT PRINCIPLE

Nourish Yin and remove Blood stasis.

HERBAL TREATMENT

ZUO GUI WAN and XUE FU ZHU YU TANG variation

Restore the Left Kidney Pill and Drive Out Stasis in the Mansion of Blood Decoction

Sheng Di Huang *Rehmanniae Radix* 12 g

Bai Shao *Paeoniae Radix alba* 12 g

Shan Zhu Yu *Corni Fructus* 10 g

Mu Dan Pi *Moutan Cortex* 6 g

Suan Zao Ren *Ziziphi spinosae Semen* 10 g

Ze Xie *Alismatis Rhizoma* 10 g

Fu Ling *Poria* 12 g

Bie Jia *Trionycis Carapax* 30 g (decoct first for 30 min)

Hong Hua *Carthami Flos* 10 g

Tao Ren *Persicae Semen* 10 g

Dang Gui *Angelicae sinensis Radix* 12 g

Chi Shao *Paeoniae Radix rubra* 12 g

The above herbs are decocted in water for oral administration twice daily.

ACUPUNCTURE

BL-15 Xinshu, BL-17 Geshu, BL-23 Shenshu and SP-10 Xuehai.

SUPPLEMENTARY TREATMENT

If the patient suffers from severe insomnia, add **Sheng Long Gu** *Fossilia Ovis Mastodi* and **Mu Li** *Ostreae Concha*, and needle Du-20 Baihui, Yintang (extra), and Front head 5 needles (extra); if the patient has cold limbs, hands and feet, add **Chi Shao** *Paeoniae Radix rubra* and needle Baxie (extra) and Bafeng (extra).

CASE STUDIES

CASE ONE

CL was a 69-year-old woman who came in complaining of anxiety, depression and insomnia. She had taken antidepressants, anxiolytics and sleeping pills for over 20 years. Recently her symptoms became aggravated and could not be controlled by medication. Her insomnia sometimes prevented her from sleeping at all through the night and caused her to wake easily and not be able to fall back asleep. She was easily angry and cried without any reason, had nausea when she was anxious, wanted to commit suicide when she felt depressed and had night sweats. She also reported that she had been diagnosed with psoriasis. Her symptoms were intermittent and she had skin lesions on both elbows. She had also been diagnosed with Graves' disease and then received a diagnosis of thyroid cancer; her cancer and thyroid were excised 30 years ago. She had a red face and a red tongue with deep fissures on the surface. Her pulse was thready and taut.

Impression:

1. Anxiety (Kidney and Liver Yin deficiency with Liver Qi stagnation)
2. Depression
3. Insomnia
4. Psoriasis

TREATMENT PRINCIPLE

Nourish Kidney and Liver Yin, smooth Liver Qi and relieve Heart stress.

HERBAL TREATMENT

LIU WEI DI HUANG WAN and CHAI HU SHU GAN SAN *variation*

Six-Ingredient Pill with Rehmannia and Bupleurum Powder to Spread the Liver

Sheng Di Huang *Rehmanniae Radix* 12 g

Shu Di Huang *Rehmanniae Radix preparata* 12 g

Chi Shao *Paeoniae Radix rubra* 10 g

Bai Shao *Paeoniae Radix alba* 10 g

Shan Zhu Yu *Corni Fructus* 10 g

Mu Dan Pi *Moutan Cortex* 6 g

Mai Men Dong *Ophiopogonis Radix* 10 g

Sha Shen *Glehniae/Adenophorae Radix* 12 g

Wu Wei Zi *Schisandrae Fructus* 6 g

Chai Hu *Bupleuri Radix* 6 g

Zhi Ke *Aurantii Fructus* 6 g

Huai Shan Yao *Dioscoreae Rhizoma* 10 g

Zhi Mu *Anemarrhenae Rhizoma* 10 g

Gan Cao *Glycyrrhizae Radix* 5 g

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

Du-20 Baihui, Front head 5 needles (extra), Yintang (extra), HE-7 Shenmen, SP-6 Sanyinjiao, KI-3 Taixi and LIV-2 Xingjian.

The patient received five bags of herbal medicine per week and acupuncture once a week.
2 days after office visit The patient reported that she felt much calmer and had no vomiting or sweating at night. She continued the treatment.

6 months after office visit The patient reported that she had discontinued the medications for anxiety, depression and insomnia the previous week. She no longer had insomnia and she could sleep for about 7 hours at night. She experienced no emotional disruption or nausea, but was unable to think too much, or these symptoms would return. She used *Zzzz Cap*² every day at home for her emotional disorder and insomnia.

CASE TWO

DT was a 32-year-old man who had been diagnosed with obsessive-compulsive disorder 7 years previous to his first office visit. The condition also caused anxiety, depression and insomnia. DT could not sleep at night and was hyperactive, excited and uncomfortable in his body, but could not identify precisely where. He could not sit down for long, had a hot and burning sensation in his entire body, sweats and panic attacks. He felt as though he was always 'on tenterhooks'. He would often have to call his parents over 20 times during the night to explain how he was feeling. He had dry, itchy skin with lesions beside his nose and in the front hairline. His stool and urination were normal. He had been diagnosed with ulcerative colitis 8 years previously, but was in remission when he came in. Recently he had also been diagnosed with paranoia. He had no friends in his life. He lived in a dark room in which he never opened his curtains, and he never took a shower. He sought out and picked up every small piece of paper he saw on the road when he went shopping. He paced back and forth, and had difficulty going shopping or returning home. His mother and sister also had autoimmune disease, specifically hypothyroidism.

Physical examination: red skin on his face, thick, peeling and dry skin lesions on the side of his nose and front of his head in the hairline. The tongue was red and dark with a deep fissure in the central surface. Both of his guan pulses were taut.

Impression:

1. Obsessive-compulsive disorder (Kidney Yin deficiency and Liver Fire rising with Blood stasis)
2. Paranoia
3. Anxiety
4. Depression
5. Panic
6. Insomnia
7. Ulcerative colitis
8. Psoriasis

TREATMENT PRINCIPLE

Clear Liver Fire, protect Kidney and Liver Yin, calm the Heart, relieve Heart stress and remove Blood stasis.

HERBAL TREATMENT

ZHI BAI DI HUANG WAN and XUE FU ZHU YU TANG variation

Anemarrhena, Phellodendron and Rehmannia Pill, and Drive Out Stasis in the Mansion of Blood Decoction

Sheng Di Huang *Rehmanniae Radix* 12 g
 Chi Shao *Paeoniae Radix rubra* 12 g
 Bai Shao *Paeoniae Radix alba* 12 g
 Mu Dan Pi *Moutan Cortex* 10 g
 Huai Hua *Sophorae Flos immaturus* 10 g
 Ze Xie *Alismatis Rhizoma* 10 g
 Wu Wei Zi *Schisandrae Fructus* 10 g
 Zhen Zhu Fen *Margarita* 5 g
 Zhi Zi *Gardeniae Fructus* 10 g
 Dan Shen *Salviae miltiorrhizae Radix* 10 g
 Hong Hua *Carthami Flos* 10 g
 Tao Ren *Persicae Semen* 10 g
 Mai Men Dong *Ophiopogonis Radix* 10 g
 Huang Qin *Scutellariae Radix* 10 g
 Ku Shen *Sophorae flavescens Radix* 10 g
 Tu Fu Ling *Smilacis glabrae Rhizoma* 10 g
 Bai Ji Li *Tribuli Fructus* 12 g
 Yu Jin *Curcuma Radix* 10 g

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

Du-20 Baihui, Front head 5 needles (extra), Yintang (extra), HE-7 Shenmen, SP-10 Xuehai, LI-11 Quchi, SP-6 Sanyinjiao, KI-3 Taixi and LIV-2 Xingjian.

One month later, the patient's psoriasis was completely gone. He was much calmer and could sleep for about 7–8 hours at night. He had stopped calling his parents every night, but was still unable to go shopping by himself.

CASE THREE

DP was a 31-year-old woman who, on her first office visit, came in complaining of insomnia, bipolar disorder and acne for the past 11 years. In recent years her symptoms had begun to get worse. DP had been diagnosed with anxiety, depression, bipolar disorder and Hashimoto's thyroiditis. She also experienced fatigue and frequent panic attacks. Several times she had attempted suicide and been sent to the hospital for observation. She had frequent urination, sometimes with a burning sensation, and six to eight bowel movements in the morning with formed stools. She sweated easily and had pain in her left costal margin that felt warm when pressed. Autoimmune disease ran in her family. Her mother had Hashimoto's thyroiditis and her brother had both psoriasis and ulcerative colitis.

Physical examination: red tongue with multiple deep cracks on the surface. The pulse was thready and rapid.

5 days prior to office visit: laboratory reports

Antithyroid antibody group:

Antithyroid peroxidase Ab: 293.7 IU/mL (normal value <2)
 Antithyroglobulin Ab: <0.3 IU/mL (<0.1)
 TSH: <0.10 mIU/L (0.4–5.6)
 T3, total: 1.56 ng/mL (0.6–2.0)
 Free T3: 4.20 pg/mL (2.3–4.2)
 Medications: levothyroxine (Levothyroid), liothyronine (Cytomel) and others.

Impression:

1. Anxiety spectrum disorder (Liver Fire rising due to Kidney and Liver Yin deficiency, Liver Qi stagnation and Spleen Qi deficiency)
2. Bipolar affective disorder
3. Insomnia
4. Hashimoto's thyroiditis (hypothyroid)

TREATMENT PRINCIPLE

Calm and clear Liver Fire, nourish Kidney, Heart, and Liver Yin, and remove Liver Qi stagnation.

HERBAL TREATMENT

GAN MAI DA ZAO TANG, GUI PI TANG and CHAI HU SHU GAN SAN variation
Licorice, Wheat and Jujube Decoction, Restore the Spleen Decoction, and Bupleurum Powder to Spread the Liver

Zhi Gan Cao *Glycyrrhizae Radix* 10 g

Fu Xiao Mai *Tritici Fructus levis* 15 g

Tian Men Dong *Asparagi Radix* 10 g

Mai Men Dong *Ophiopogonis Radix* 10 g

Bo He *Menthae haplocalycis Herba* 6 g

Bai Shao *Paeoniae Radix alba* 10 g

Chai Hu *Bupleuri Radix* 6 g

Xiang Fu *Cyperi Rhizoma* 6 g

Da Zao *Jujubae Fructus* 10 g

Suan Zao Ren *Ziziphi spinosae Semen* 10 g

Zhen Zhu Fen *Margarita* 5 g

Ye Jiao Teng *Polygoni multiflori Caulis* 12 g

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

Du-20 Baihui, Yintang (extra), Front head 5 needles (extra), Ren-22 Tiantu, ST-9 Renying, SP-10 Xuehai and LIV-2 Xingjian.

The patient received Chinese herbal medicine and acupuncture as alternative therapies. When she received acupuncture, she could fall asleep on the treatment table and was much calmer. We also prescribed Zzzz Wrap³ for use at home. She reported that it helped her to control her emotions and to sleep, but was not strong enough to help her stop taking all of her medications.

CASE FOUR

AF was a 33-year-old woman who, on her first office visit, came in complaining of insomnia, emotional disorder, inability to concentrate and pain in her whole body. The body pain included her muscles and joints, especially in the fingers of both hands. AF also had insomnia with difficulty falling asleep and waking up around 4.00–5.00 a.m., then having difficulty falling back asleep. During the day, she could not focus on things, experienced anxiety and depression, and had to take care of four children at home. When she had visited her gynaecologist a year and a half previously, she was told her oestrogen levels were lower than normal. Since then she had received hormone replacement therapy (HRT). Once she was on the HRT, her sleep problems improved, but 5 months ago her symptoms had returned and gradually became worse. Her hands and feet had a cold feeling, she had thirst with a desire to drink cold liquids, and fatigue in the afternoon. However, she had no hot flushes. She had been diagnosed with Lyme disease 34 years earlier and since then she had experienced the pain in her whole body, particularly the muscles and joints. Autoimmune disease ran in her family. She had twin sons who were both diagnosed with attention deficit hyperactivity disorder (ADHD).

Physical examination: AF was emaciated. Her tongue was red with less coating and small fissures on the front. Her pulse was thready and taut.

3 months prior to office visit: laboratory results

Anti-antinuclear antibody (anti-ANA): positive

Impression:

1. Insomnia (Yin deficiency cannot nourish the Heart)
2. Anxiety
3. Depression
4. Fibromyalgia
5. Raynaud's phenomenon (Blood stasis)

TREATMENT PRINCIPLE

Nourish Heart and Liver Yin, calm the spirit and help sleep, and remove Blood stasis.

HERBAL TREATMENT

AN SHEN BU XIN WAN *and* LIU WEI DI HUANG WAN *variation*

Nourish the Heart to Calm the Spirit Pill and Six-Ingredient Pill with Rehmannia

Sheng Di Huang *Rehmanniae Radix* 12 g

Shan Zhu Yu *Corni Fructus* 10 g

Fu Ling *Poria* 12 g

Mu Dan Pi *Moutan Cortex* 6 g

Ze Xie *Alismatis Rhizoma* 10 g

Wu Wei Zi *Schisandrae Fructus* 10 g

Suan Zao Ren *Ziziphi spinosae Semen* 10 g

Mu Xiang *Aucklandiae Radix* 6 g

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

Du-20 Baihui, Yintang (extra), Front head 3 needles (extra), SP-10 Xuehai, ST-36 Zusanli, SP-6 Sanyinjiao and LIV-2 Xingjian.

The patient received herbal medicine 5 days per week, and acupuncture once or twice per week. After the first session of acupuncture, she reported that she felt a little different. She could sleep for longer than before and had more focus during the day. Her last laboratory report, 5 months after her first office visit, showed that the anti-ANA was negative. Her symptoms were all gone and the crack in her tongue had reduced. She then sent one of her twin sons in for treatment of his ADHD, which was also successful.

CASE FIVE

T1 was a 26-year-old man who, on his first office visit, came in complaining of insomnia, anxiety and dizziness for over 2 years. The patient had been a college student. He had left campus on vacation for a month and suddenly was unable to sleep at night, and began to experience anxiety and depression. He could not bear to hear the sound of cars, trains and aeroplanes. He could not drive on the highway or even sit in a car. He was very sensitive to any kind of voice and could not stay in a room alone. He believed somebody wanted to kill him. He even hit his mother and anyone else present when he was feeling unpleasant. He was already receiving Western medicine and had been seeing a psychologist for more than 2 years. He was displeased with what he viewed as a lack of improvement and the fact that he had gained 18 pounds during the Western treatment. On his own, T1 discontinued all prescribed medication. He had to quit school and stay at home. The patient also had a history of severe asthma and eczema.

Physical examination: both eyes were dull, both lungs had sounds of wheezing, there were skin lesions on the front of the chest and the inside of both elbows. The patient had dry, red skin on his face. He was overweight and had a 'beer belly'. The tip of his tongue was red with less coating, and geographical (like a map) with teeth marks. The pulse was taut and rapid.

Impression:

1. Acute schizophrenia (Both Liver and Kidney Yin deficiency, Spleen Qi deficiency, Liver Fire rising and Blood stasis)
2. Insomnia
3. Depression
4. Anxiety
5. Panic attack

TREATMENT PRINCIPLE

Nourish Liver and Kidney Yin, calm the spirit, clear Liver Fire, replenish Spleen and remove Blood stasis.

HERBAL TREATMENT

DAN ZHI XIAO YAO SAN, ZHI BAI DI HUANG WAN and AN SHEN BU XIN WAN
variation

Rambling Powder with Moutan and Gardenia, Anemarrhena, Phellodendron and Rehmannia Pill, and Nourish the Heart to Calm the Spirit Pill

Zhi Zi *Gardeniae Fructus* 12 g

Mu Dan Pi *Moutan Cortex* 10 g

Chai Hu *Bupleuri Radix* 10 g

Bai Shao *Paeoniae Radix alba* 12 g

Chi Shao *Paeoniae Radix rubra* 12 g
 Suan Zao Ren *Ziziphi spinosae Semen* 12 g
 Sheng Di Huang *Rehmanniae Radix* 12 g
 Shan Zhu Yu *Corni Fructus* 10 g
 Yuan Zhi *Polygalae Radix* 6 g
 Shi Chang Pu *Acori tatarinowii Rhizoma* 10 g
 Zhi Mu *Anemarrhenae Rhizoma* 10 g
 Huang Bai *Phellodendri Cortex* 12 g

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

Du-20 Baihui, Yintang (extra), Front head 5 needles (extra), SP-10 Xuehai, HE-7 Shenmen, ST-36 Zusanli, SP-6 Sanyinjiao, KI-3 Taixi and LIV-2 Xingjian.

The patient refused to take the herbal tea, even when prescribed in pill form, but was willing to receive acupuncture two to three times per week.

6 days after office visit On his third visit, TI's mother reported that his sleep had improved, as had his spirits. He could sleep for 10 hours a night, but his mother still had to stay with him.

2 months after office visit The patient no longer had any problems with his sleep and emotions. He could remain in his room alone. Both of his lungs were normal and his skin was better. He no longer took any medications.

6 months after office visit His mother reported he could go to the library by himself and take the bus. He never hit anyone again. He hoped to re-enter college and try to live a normal life as a student.

4. Analysis of the cases

The human brain has a complex of chemical and bioelectrical processes that allow us to speak, move, see, think, and memorize and recall things. To accomplish this, the brain operates a vast communication network made up of billions of neurons. Within this network, neurotransmitters pass in fractions of a second from one neuron to another. An electrical charge travels to the end of the neuron, resulting in the release of messages along countless pathways.

The role of antibodies in specific neuronal and muscle ion channels in the aetiology of neuromuscular transmission disorders is now well accepted. Maternal antibodies can cross the placenta and cause neonatal disease, or even alter the development of an infant, raising the possibility that some neurodevelopmental conditions could be caused by maternal antibodies. Voltage-gated ion channels are expressed in the brain as well as at the neuromuscular junction, and in recent

years it has become clear that antibodies to some CNS channels can be associated with CNS disease. A review by Vincent et al⁴ highlighted the features of these conditions using preliminary investigations into neurodevelopmental disorders.

(1) When neurons or their myelin sheaths die as a result of apoptosis or other reason, their function is affected and the result may be different mental illnesses. We do not know whether brain cells can recover following treatment by Chinese herbal medicine and acupuncture, but the therapy offered to these patients had relatively successful results.

Regardless of whether or not the protein osteopontin is present in the bloodstream and is the trigger for autoimmune disease, or whether it is the result of brain cell death or shrinkage, our treatment seems to protect and/or rebuild brain cells that are already damaged, through nourishing Yin. Through our clinical practice, we found that the results of acupuncture seemed faster than Chinese herbal medicine in some cases. Some patients with insomnia or emotional disorder could sleep on the treatment table, and their emotions calmed down immediately during the treatment. Thus, the bioelectricity effect of the CNS and its voltage-gated ion channels may be one explanation for how acupuncture works. For instance, the patient in Case one had had insomnia and emotional disorder for over 20 years, but responded to the treatment very well. Eventually, she could stop the medications that she had been using for more than 20 years. It seems that Chinese medicine may help abnormal brain cells gradually to return to normal.

(2) The patients in Cases two and three were actually brother and sister. Both of them had mental illness and autoimmune diseases, and autoimmune disease ran in their family on their mother's side. After the treatment, both of them could sleep better at night. In Case two, the patient went from sleeping during the day to falling asleep at night. His panic attacks decreased in frequency and the psoriasis cleared up. However, his obsessive-compulsive disorder and paranoia responded only slightly during the 4 months of treatment. He could open his curtains just enough to peek outside the window. If there was somebody to take him shopping, it was easy for him to go and return home.

The patient in Case three hated medications. She often stopped all her medications suddenly, or would overdose in order to attempt suicide. She had been diagnosed with hypothyroidism, but the blood results almost always showed hyperthyroidism, with lower TSH and higher T4 and T3 levels. The lab results did not conform to her primary hypothyroidism. Her treatment was slightly confusing because the thyroid hormone that she was taking masked her symptoms. When she took the high dosage that she required, her symptoms were exaggerated, and if she did not take enough she experienced fatigue. The symptoms of hypothyroidism usually manifest as Qi deficiency, but not with this patient. Her symptoms manifested more as Yin deficiency and Yang rising. In both cases, the patients' insomnia improved.

(3) The patient in Case four had clinical symptoms and signs of Yin deficiency. As autoimmune disease ran in her family, we nourished Yin, cleared Heat and removed Blood stasis. In addition to her symptoms improving, the anti-ANA

turned negative. We followed this patient for 2 years after treatment and her antibodies remained negative. She also reported that she had almost no symptoms.

(4) The patient in Case five had mental illness with severe asthma and eczema, both of which were in remission during the treatment of his mental illness. We deduced that the mental illness may have been caused by an autoimmune disorder. When the patient came to clinic, the tip of his tongue was red, geographical, and with cracks. This was a case of Liver and Kidney Yin deficiency, Liver Fire rising, Blood stasis and Spleen Qi deficiency. The acupuncture treatment plan included body acupuncture and scalp acupuncture points. Based on Western medical theory, the CNS has an input (afferent or sensory nerves that carry nerve impulses from receptors, or sense organs, toward the CNS) and an output system (efferent or autonomic nerves that carry nerve impulses away from the CNS to effectors such as muscles or organs). Acupuncture may affect both of these by mediating neurotransmitters, rebuilding the neuronal network, and possibly recovering impaired CNS tissues. Acupuncture needles may work bioelectrically by causing different electrical potentials in conductive tissue, thereby stimulating neurons physically or biochemically and causing bioelectric waves in the neuronal network. It does not produce a special chemical change like Western medication, but may be able to balance deficient or excess chemical changes in the brain or CNS naturally.

We have published clinical data from research that supports this.⁵ The groups of acupuncture points we used not only treat mental illness but also treat CNS-related diseases such as menopause, hypertension, gastro-oesophageal reflux disease, insomnia, depression, anxiety, Alzheimer's disease, Parkinson's disease and ADHD. There are 12 pairs of cranial nerves that can cause clinical manifestations, and can also be treated by the method we used.

5. Lifestyle prescriptions and health issues

The pathogenesis of autoimmune disorder-caused mental illnesses has recently been found to be based on damage to brain cells, including neurons and/or myelin. Protecting damaged tissues and recovering already impaired cells is important work in the clinic. There is no name for neurons and myelin in Chinese medical terminology, but Chinese medicine considers the brain to be an organ that is governed by the Kidney. If there is a Kidney deficiency, the Kidney cannot nourish the brain, which can result in different symptoms of mental illness.

(1) Nourishing Yin may help to protect cells that are damaged by autoimmunity. It can also help cells regenerate and new cells develop. When brain cells are impaired by disordered autoimmunity, there are two aspects to consider:

- Antigens that trigger immune cells to attack in the CNS. We do not know whether such antigens result from genes, drugs or infection. However, cells must be protected. If there was a way to 'mask' the antigen so that it would no longer be an exposed target, it would not be found by the specific

antibody. This might result in a reduction of antibodies to the normal level. Case four is a good example of this.

- In order to protect impaired cells and tissues and inhibit excessive immune response, it is important to clear excess and deficient Heat, including clearing Heat in the Qifen, Yingfen and Xuefen.

(2) Acupuncture may be able to help existing neurons work well. Neuronal communication is based on chemical and electrical signals that travel within and among the neurons. Each neuron, on average, makes more than 1000 synaptic connections with other neurons. One type of cell – a Purkinje cell – may make between 100 000 and 200 000 connections with other neurons. In aggregate, there may be between 100 trillion and a quadrillion synapses in the brain. These synapses are far from random. Within each region of the brain, there is an exquisite architecture consisting of layers and other anatomical substructures in which synaptic connections are formed. Ultimately, the pattern of synaptic connections gives rise to what are called ‘circuits’ in the brain. At the integrative level, large- and small-scale circuits are the substrates of behaviour and of mental life. One of the most awe-inspiring mysteries of brain science is how neuronal activity within circuits gives rise to behaviour and even consciousness.

When mental illness occurs, for whatever reason, it may be because neurons cannot correctly transfer the electric signals to one another. Electrical signals within neurons are converted at synapses into chemical signals, which then elicit electrical signals on the other side of the synapse. These chemical signals are neurotransmitters. There are two major kinds of neurotransmitter: small molecules, such as dopamine, serotonin or noradrenaline, and larger molecules, which are essentially protein chains (peptides). These include the endogenous opiates, substance P and corticotrophin-releasing factor (CRF), amongst others. All told, there appear to be more than 100 different neurotransmitters in the brain, which makes brain chemistry quite complicated. Although acupuncture does not inject any biochemical medication into the brain, it can still treat mental illness effectively. Acupuncture may cause biochemical reversing, to help, balance and increase neuron transmitters and to recover impaired CNS tissue, rebuilding the brain neuronal network.

(3) It is difficult to diagnose autoimmune disorders that cause mental illnesses. For example, psychiatric abnormalities are common in lupus, with a prevalence of 17–75%, reflecting different methods of patient selection and assessment, the different professional orientation of clinicians and lack of an accepted consensus for diagnosing active neuropsychiatric systemic lupus erythematosus (NPSLE).⁶ The psychiatric syndromes included in the American College of Rheumatology Neuropsychiatric Lupus Nomenclature Committee criteria are cognitive dysfunction, acute confusional state (delirium), anxiety disorder, mood disorder and psychosis. The patients discussed above are generally diagnosed according to autoimmune disorder symptoms.

(4) Cho and colleagues⁷ and Hou et al⁵ of the All Natural Medicine Clinic report that acupuncture stimulates neurons and the cortex layer bioelectrically. The clinical research attempts to explain how acupuncture’s use of channel and

point stimulation affects neurons and their networks, and balances neuron transmitters in the body to treat mental illness. The white matter is akin to wiring that conveys information from one region to another. It has an insulation function to protect information in the grey matter from the white matter. Grey matter regions include the basal ganglia, the part of the brain that is involved in the initiation of motion. The important grey matter structures in the brain include the amygdala and the hippocampus. The amygdala is involved in the assignment of emotional meaning to events and objects, and appears to play a special role in aversive, or negative, emotions such as fear. The hippocampus includes among its many functions responsibility for initially encoding and consolidating explicit or episodic memories of persons, places and things. These functions are described by Chinese medical theory as 'the Kidney governs Brain marrow'.

When autoimmune cells attack the brain, they can impair any area of it. Symptoms that may occur depend on where the damage is. According to research, MS has the highest rate of depression of any chronic disease, and suicide is the third leading cause of death. There is a prevalence of 50% cognitive impairment in patients with MS. Evidence supports both demyelinated brain lesions and cytokine effects as causes of depression and cognitive dysfunction in patients with MS. Depression, or *Yu Zhen* 郁证, relates to Liver Qi stagnation and/or Spleen Qi deficiency. However, if treatment is focused only on treating Liver Qi and Spleen Qi, it will only resolve the symptoms, but not the root of the problem.

Here is one hypothesis for how acupuncture may work for mental illness: according to Western medical research on brain anatomy, structure and function, acupuncture may treat mental illness in two different ways:

- Stimulation of body and/or scalp points on the Heart, Liver, Spleen and Kidney channels may send bioelectric signals to the brain through the sensory nervous system. These signals may positively affect an imbalance in brain biochemistry, and may also help in the repair of impaired tissues.
- Scalp points on several channels may affect the sensory and/or motor nervous system. Specifically, the Du channel governs the Yang of the entire body; the Bladder is a channel that has an exterior–interior relationship with the Kidney; it is the governor of the viscera of the whole body and equilibrates deficiency and excess; and the Gallbladder moderates an exterior–interior relationship with the Liver. The motor system regulates the corpus callosum via the frontal cortex and cellular conduction in order to balance the neuronal circuitry. Both groups of acupuncture points used together are a Chinese medical method of 'distal–proximal point association' to ensure treatment success.

This hypothesis is supported by the following evidence. First, patients who have been diagnosed with autoimmune diseases normally receive a prescription for steroids. A high dosage of steroids makes patients anxious and hyperactive, and leads to insomnia. When we use acupuncture to treat these patients, the results are impressive: patients normally calm down faster with needles than with herbal

medicine. Perhaps acupuncture works through bioelectrical changes to neurotransmitters – this may be why it works so quickly. Second, patients with mental illness who receive the above treatment often have an immediate improvement in their sleep pattern. Following this change in sleep pattern, the symptoms of mental illness also change, as in Cases one, four and five. Third, in Cases one, four and five all the symptoms had resolved. In Cases two and three, symptoms had improved. We explain these clinical results as the healing of damaged tissues and the mediation of disordered immunity. In Chinese medical theory, the brain is related to Kidney function as ‘the Kidney governs Brain marrow’. Therefore, we use acupuncture and herbal medicine to nourish Kidney Yin, remove Blood stasis and address the patients’ symptoms. We also use information on the tongue and pulse to select the relevant and appropriate acupuncture points and herbal medicine.

(5) Based on research on the use of acupuncture to treat brain illness, we designed the devices Zzzz Cap, also called Zzzz Wrap, for patients to use at home.

(6) Medication or drugs are often prescribed to affect neurotransmitters in order to reduce symptoms. However, the body has feedback mechanisms, so that when the levels of particular biochemicals are lower than normal, this causes body tissues to secrete relevant chemicals. However, because the structure of these drugs mimics that of neurotransmitters, although they may reduce symptoms they may also suppress the ability of tissues to engage in normal secretion, leading to their eventual atrophy. Therefore, when patients with mental illness resulting from autoimmune disorder take these medications, it may cause neuronal apoptosis, or the patient may become addicted to the medication, as in Case three. The patient in Case one had a history of more than 20 years of mental illness and had taken medications for that length of time, but finally stopped those medications by accident when she forgot to take them on a regular basis. This is evidence that Chinese medicine can repair damaged tissues and allow those tissues to function better. These treatment processes are totally different from Western medicine.

(7) Food selection is important for patients recovering from autoimmune diseases, including mental illness. Some foods may trigger an immune attack, thereby exacerbating diseases. In Chinese medical theory, such foods are known as *Fa Wu* 发物. Therefore, patients must pay attention to their food and avoid pungent foodstuffs, such as hot pepper and leeks, and foods to which they are allergic, so that non-self proteins do not trigger a disease and extend its duration.

(8) Proper activity and exercise is suggested.

(9) In practice, we feel that Chinese medical theory and clinical treatment are correct, but ancient formulas are not sufficient to cover all the clinical needs of the modern era. Therefore, we need to think more about modern medical research in pathogenesis and pathology in order to develop treatment plans and formulas to match individual need. With our clinical experience and understanding, we look forward to better methods, laboratory results, images, etc., to help explain the results of treatment and perhaps eventually to prevent and heal these devastating diseases.

1. Hur E M, Youssef S, Haws ME et al. Osteopontin-induced relapse and progression of autoimmune brain disease through enhanced survival of activated T cells. *Nature Immunology* 2006; 8:74–83.
2. Zzzz Cap is a device, created by the All Natural Medicine Clinic, that helps to control emotions and improve sleep and emotional disorder.
3. Zzzz Cap and Zzzz Wrap are devices with the same purpose, but made into different shapes.
4. Vincent A, Dalton P, Clover L et al. Antibodies to neuronal targets in neurological and psychiatric diseases. *Annals of the New York Academy of Sciences* 2003; 992:48–55.
5. Hou W, Xu G, Wang H. Clinical observations of the acupuncture treatment of insomnia, emotional disorders, and ADHD. *International Journal of Clinical Acupuncture* 2005; 14(3):221–224.
6. Stojanovich L, Zandman-Goddard G, Pavlovich S et al. Psychiatric manifestations in systemic lupus erythematosus. *Autoimmunity Reviews* 2007; 6(6):421–426.
7. Cho ZH, Wong EK, Fallon J. *Neuro-Acupuncture*. Vol. I: Neuroscience Basics. Los Angeles: Qpuncture, 2001.

Multiple sclerosis

CHAPTER 11

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Multiple sclerosis (MS) is an inflammatory disease of the central nervous system (CNS). In this disease, myelin, a substance that insulates certain nerve cells and aids in the conduction of electrochemical messages, is assaulted by the immune system.

1. Western medical aetiology and pathology

The real cause of MS is unknown. However, in recent years scientists have begun to posit that a viral infection may be the underlying cause. The hypotheses are:

- 1 The autoimmune mechanism of MS is activated through molecular mimicry. This idea has been supported by studies that have found homologous proteins in antigenic regions of Epstein–Barr virus (EBV) and myelin basic protein.

- 2 Infection by a virus during adolescence could establish a latent infection in the CNS. Scientists propose that reactivation of this latent virus could lead to 'cytopathic and/or immunological damage to oligodendrocytes'.
- 3 Viral infection may cause exacerbations of MS that already exists, leading to the further development of lesions. This influence on exacerbation rate may be through the activation of immune host response, leading to upregulation of the immune system or alteration of the permeability of the blood-brain barrier.

Regardless of the cause, the immune system plays an important role in the destruction of myelin, which results in MS. During the disease process, leukocytes are drawn to regions of the white matter of the brain where they initiate inflammatory response reactions. During the inflammation, the myelin gets stripped from the axons in a process called demyelination. Additionally, the inflammation can also damage the underlying axonal membrane. This membrane is a sophisticated structure that enables the action potential, or nerve transmission, to travel along the nerve. The inflammation also kills the glial cells, particularly the myelin-producing oligodendrocytes, which are lost in great numbers. Almost no oligodendrocytes persist in the middle of chronic MS lesions.

During the secondary phase of this progressive disease, inflammation decreases but the axons still continue to die. The lost myelin can be replaced with scar tissue (sclerosis), which can block the formation of new myelin. Once axons have become scarred they do not fully regain their former function. All of these processes of inflammation – demyelination, oligodendrocyte death, membrane damage and axonal death – produce the symptoms of MS. Therefore, the result of MS is primarily axonal loss and neurodegeneration. The disease process begins with brain and spinal cord atrophy, and advances relentlessly throughout the course of the disease.

2. Diagnosis by Western medicine

The brain and spinal cord are damaged in the earlier stage of the development of MS, even before symptoms occur. The diagnosis of MS is usually made from clinical symptoms and a neurological examination.

- Some patients have increased γ -globulin levels, called oligoclonal bands in their cerebrospinal fluid.
- Evoked response tests may indicate short-circuiting in the CNS.
- Different parts of the CNS demonstrate different types of damage and can be tested by different examinations:
 - Romberg's sign
 - Gait and coordination
 - Heel-shin test
 - Lhermitte's sign
 - Optic neuritis
 - Hearing loss test
 - Muscle strength test

- Reflexes test
- Babinski's sign
- Hoffman's sign
- Doll's eye sign
- Sensory test.
- Magnetic resonance imaging (MRI) allows the brain to be seen without surgery. MRI is particularly sensitive to MS, and has therefore become an important aid to diagnosis.

3. Chinese medical aetiology and pathology

Some of the symptoms of MS are difficulty walking, paraesthesias such as numbness or 'pins and needles' on the skin, loss of vision, tremors, poor coordination, slurred speech, paralysis and a decline in cognitive function. These symptoms can be characterized in Chinese medicine as *Wei Zheng* 痿证, flaccidity syndrome, *Ji Bi* 肌痹, rheumatism with muscle involvement, *Bi Zheng* 痹证, arthralgia syndrome, *Shi Yin* 失音, aphonia, *Xuan Yun* 眩晕, vertigo, *Zhen Chan* 震颤, tremors and *Niao Shi Jin* 尿失禁, urinary incontinence.

According to Chinese medicine theory, the causes of MS are invasion of external pathogens and/or the presence of internal pathogens such as Heat and Dampness that block the channels. Or the external invasions and internal pathogens damage the Yin, causing deficiency syndromes. Yin deficiency is a prerequisite that allows pathogens to remain in the body and induce more Heat syndromes. These Heat syndromes singe the Blood and cause Blood stasis, and aggravate diseases.

Invasion of external Wind, Cold and Dampness are important causes of the disease in the beginning stages when the body has insufficient vital Qi to prevent it from happening. The external pathogens invade muscles, limbs and joints, and obstruct the channels, leading to pain and numbness in the impaired area. Chinese medicine says: 'Wind, Cold and Dampness are three pathogens that invade the body and cause Bi (pain) syndrome'. The predisposing factor is that a person has had some history of living in damp or foggy weather, or has worn wet clothes or sat on the cold, wet ground. Or women may have been invaded by pathogens particularly during menstrual flow and after childbirth. This latter additional predisposing factor may be why MS appears more frequently in women than in men.

When the body cannot eliminate external pathogens that obstruct the channels for a long period of time, Qi and Blood cannot flow through them to nourish organs and the pathogens sink deeper into the organs and destroy them, leading to chronic illness. The clinical symptoms and signs can be very complicated, manifesting as both excess and deficiency. The pathogens stagnate in the body, turning into Fire. In addition, as these patients usually have a constitutional Yin deficiency, deficient Fire causes the condition to damage Yin further. The Fire, whether excess or deficient, singes the Blood, thus causing Blood stasis. Finally, the body, joints and limbs become difficult to move and the illness results in deformities in the body.

4. General treatment principle

Eliminate pathogenic Wind, Cold and Dampness in the channels, remove Blood stasis and prevent Yin damage.

DIFFERENTIATION AND TREATMENT

1. INVASION BY WIND, COLD AND DAMPNESS

CLINICAL MANIFESTATIONS

Pain, numbness or a tingling sensation in the back and limbs, cold intolerance, headache, dizziness and a heavy sensation in the body making it difficult to move. The tongue is white with a sticky, greasy coating. The pulse is slippery.

TREATMENT PRINCIPLE

Dispel external pathogenic Wind and Cold, drain Dampness, open the channels and stop pain.

HERBAL TREATMENT

QIANG HUO SHENG SHI TANG *variation*

Notopterygium Decoction to Overcome Dampness

Qiang Huo *Notopterygii Rhizoma seu Radix* 6 g

Du Huo *Angelicae pubescentis Radix* 10 g

Gao Ben *Ligustici Rhizoma* 10 g

Chuan Xiong *Chuanxiong Rhizoma* 10 g

Fang Feng *Saposhnikoviae Radix* 12 g

Man Jing Zi *Vitidis Fructus* 10 g

Gan Cao *Glycyrrhizae Radix* 3 g

Ji Xue Teng *Spatholobi Caulis* 20 g

Xi Xin *Asari Herba* 3 g

The herbs above are decocted in water for oral administration twice daily.

ACUPUNCTURE

Du-14 Dazhui, BL-13 Feishu, LI-11 Quchi, LI-4 Hegu, TB-5 Waiguan and GB-30 Huantiao.

SUPPLEMENTARY TREATMENT

If a patient has Yin deficiency and a tongue with a red tip and fissures on the surface, you cannot nourish the Yin yet owing to the existence of the external Cold, Wind and Dampness. The first formula prescribed must be designed to expel the external pathogens; if the patient has a cough, a chilly sensation, fever, and a sore throat, add Jin Yin Hua *Lonicerae Flos* and Lian Qiao *Forsythiae Fructus*, needle LI-1 Shangyang, LU-7 Lieque, Du-13 Taodao and Du-14 Dazhui, and apply moxibustion to Du-14 Dazhui; once the patient has entered a state of remission, you can nourish Yin, in which case the formula changes to LIU WEI DI HUANG WAN *Six-Ingredient Pill with Rehmannia variation*, and needle BL-23 Shenshu and KI-3 Taixi.

2. DAMP HEAT

CLINICAL MANIFESTATIONS

Flaccid legs, pain and tingling in the limbs with slightly swollen legs, and a slight hot sensation when the skin is touched. The tongue has a yellow sticky coating. The pulse is soft and rapid.

TREATMENT PRINCIPLE

Clean the pathogenic Heat and drain Dampness.

HERBAL TREATMENT

XUAN BI TANG *variation*

Disband Painful Obstruction Decoction

Han Fang Ji *Stephaniae tetrandrae Radix* 6 g

Yi Yi Ren *Coicis Semen* 20 g

Hua Shi *Talcum* 15 g (decocted first for 30 min)

Lian Qiao *Forsythiae Fructus* 12 g

Shan Zhi Zi *Gardeniae Fructus* 12 g

Zhi Ban Xia *Pinelliae Rhizoma preparatum* 10 g

Luo Shi Teng *Trachelospermi Caulis* 30 g

The herbs above are decocted in water for oral administration twice daily.

ACUPUNCTURE

LI-11 Quchi, ST-36 Zusanli, ST-40 Fenglong and SP-9 Yinlingquan.

SUPPLEMENTARY TREATMENT

If the patient has tingling or sharp pain and it is fixed in location, add **Hong Hua** *Carthami Flos* and **Tao Ren** *Persicae Semen*, and needle BL-17 Geshu and SP-10 Xuehai; if the upper limbs are involved, add **Qiang Huo** *Notopterygii Rhizoma seu Radix* and needle LI-15 Jianyu, LI-11 Quchi, LI-4 Hegu and TB-5 Waiguan; if the lower limbs are involved, add **Du Huo** *Angelicae pubescentis Radix* and **Wei Ling Xian** *Clematidis Radix*, and needle ST-31 Biguan, GB-30 Huantiao, GB-34 Yanglingquan, ST-41 Jiexi and GB-39 Xuanzhong.

3. DEFICIENCY OF LIVER AND KIDNEY YIN

CLINICAL MANIFESTATIONS

Weakness and flaccidity of the muscles, thirst with no desire to drink, sore and numb limbs, dizziness and blurred vision. The tongue is red with less coating. The pulse is thready and rapid.

TREATMENT PRINCIPLE

Nourish Liver and Kidney Yin.

HERBAL TREATMENT

ZUO GUI WAN *variation*

Restore Left Kidney Pill

Sheng Di Huang *Rehmanniae Radix* 12 g

Shu Di Huang *Rehmanniae Radix preparata* 12 g

Shan Yao *Dioscoreae Rhizoma* 12 g

Gou Qi Zi *Lycii Fructus* 12 g

Fu Ling *Poria* 10 g

Shan Zhu Yu *Comi Fructus* 10 g

Mu Dan Pi *Moutan Cortex* 6 g

Bie Jia *Trionycis Carapax* 15 g (decocted first for 30 min)

Ze Xie *Alismatis Rhizoma* 10 g

Ji Xue Teng *Spatholobi Caulis* 20 g

The herbs above are decocted in water for oral administration twice daily.

ACUPUNCTURE

Du-20 Baihui, BL-18 Ganshu, BL-23 Shenshu, SP-6 Sanyinjiao and KI-3 Taixi.

SUPPLEMENTARY TREATMENT

If the Yin deficiency causes stirring up of Liver Wind and the limbs shake, use DA DING FENG ZHU/Major Arrest Wind Pearl with Sheng Di Huang *Rehmanniae Radix*, Zhi Mu *Anemarrhenae Rhizoma*, Huang Bai *Phellodendri Cortex*, Gui Ban *Testudinis Plastrum*, Bie Jia *Trionycis Carapax*, Wu Wei Zi *Schisandrae Fructus* and Mu Li *Ostreae Concha*, and needle GB-20 Fengchi and GB-31 Fengshi.

4. TREMOR

CLINICAL MANIFESTATIONS

Spasm, twitching of the limbs, unsteadiness when walking, shaking or paralysed limbs, all of which may be accompanied by incontinence of urine and faeces. The tongue is pink or red with a thin white coating. The pulse is fine and relaxed.

TREATMENT PRINCIPLE

Calm Liver, extinguish Wind and stop tremors.

HERBAL TREATMENT

ZHEN GAN XI FENG TANG variation

Sedate the Liver and Extinguish Wind Decoction

Huai Niu Xi *Achyranthis bidentatae Radix* 10 g

Dai Zhe Shi *Haematitum* 30 g (decocted first for 30 min)

Sheng Long Gu *Fossilia Ovis Mastodi* 30 g (decocted first for 30 min)

Sheng Mu Li *Ostreae Concha* 30 g (decocted first for 30 min)

Gui Ban *Testudinis Plastrum* 30 g (decocted first for 30 min)

Bai Shao *Paeoniae Radix alba* 12 g

Xuan Shen *Scrophulariae Radix* 12 g

Tian Men Dong *Asparagi Radix* 12 g

Gan Cao *Glycyrrhizae Radix* 5 g

The herbs above are decocted in water for oral administration twice daily.

ACUPUNCTURE

BL-18 Ganshu, BL-23 Shenshu, Du-20 Baihui and GB-20 Fengchi.

SUPPLEMENTARY TREATMENT

If the patient has a vertex headache, add **Wu Zhu Yu** *Evodiae Fructus*; if the headache is temporal, add **Chai Hu** *Bupleuri Radix*; if the headache is frontal, add **Man Jing Zi** *Vitidis Fructus*; if the headache is occipital and also affects the neck, add **Ge Gen** *Puerariae Radix*, and needle LI-4 Hegu and LIV-3 Taichong. If the patient has sharp pain in the upper body, add **Qiang Huo** *Notopterygii Rhizoma seu Radix*; if the sharp pain is in the lower body, add **Du Huo** *Angelicae pubescentis Radix*. For the upper body, needle TB-15 Jianyu and LI-11 Quchi; for the lower body, needle ST-31 Biguan and ST-36 Zusanli.

5. BLOOD STASIS**CLINICAL MANIFESTATIONS**

Weak legs, unsteadiness when walking or even paralysis, numbness throughout the body or parts of the body, and unclear speech. The tongue is red with less coating and the sublingual veins are distended. The pulse is deep and fine.

TREATMENT PRINCIPLE

Remove Blood stasis and nourish Yin.

HERBAL TREATMENT

SHEN TONG ZHU YU TANG variation

Drive Out Blood Stasis from a Painful Body Decoction

Qin Jiao *Gentianae macrophyllae Radix* 10 g

Chuan Xiong *Chuanxiong Rhizoma* 10 g

Tao Ren *Persicae Semen* 10 g

Hong Hua *Carthami Flos* 10 g

Qiang Huo *Notopterygii Rhizoma seu Radix* 6 g

Mo Yao *Myrrha* 6 g

Huai Niu Xi *Achyranthis bidentatae Radix* 10 g

Di Long *Pheretima* 10 g

Dang Gui *Angelicae sinensis Radix* 12 g

Wu Ling Zhi *Troglodytes Faeces* 5 g

Gan Cao *Glycyrrhizae Radix* 3 g

The herbs above are decocted in water for oral administration twice daily.

ACUPUNCTURE

BL-17 Geshu, BL-18 Ganshu, SP-10 Xuehai and Du-20 Baihui.

SUPPLEMENTARY TREATMENT

If a patient has blurred vision, add **Gou Qi Zi** *Lycii Fructus* and **Mu Zei Cao** *Equiseti hiemalis Herba*, and needle GB-37 Guangming and BL-1 Jingming; if there are palpitations, add **Wu Wei Zi** *Schisandrae Fructus* and **Mai Men Dong** *Ophiopogonis Radix*, and needle PE-6 Neiguan and HE-7 Shenmen. If the pain is chronic and difficult to control, add **Quan Xie** *Scorpio*, **Wu Gong** *Scolopendra* and **Lei Gong Teng** *Tripterygii wilfordii Radix*.

CASE STUDIES

CASE ONE

ES was a 46-year-old woman who, on her first office visit, came in complaining of headache and pain, and numbness in the legs, arms and face for over 10 days. The patient had been diagnosed with MS over 12 years ago, and had had paralysis six times. When she came in, ES had a frontal headache, sharp pain in her right arm and left leg that felt electric, occasional inability to use her right arm, numbness on the right side of her face, difficulty maintaining balance when she walked, a dry mouth, thirst, memory loss and inability to concentrate. Additionally, she had used heavy doses of medication over the years that caused kidney failure.

ES had a family history of autoimmune disease as her father had been diagnosed with rheumatoid arthritis. He had died from heart failure shortly before the patient came for treatment.

Physical examination: limited mobility of the arms and legs. There were a few thin fissures in the middle of the tongue, which was red and had less coating. The pulse was deep and thready.

Impression:

1. Multiple sclerosis (pathogenic Heat in the Ying and Xuefen due to Liver and Kidney Yin deficiency, and Blood stasis)

TREATMENT PRINCIPLE

Clean Heat-Toxin in the Ying and Xuefen, remove Blood stasis and stop the pain.

HERBAL TREATMENT

XI JIAO DI HUANG TANG *variation*

Rhinoceros Horn and Rehmannia Decoction

Shui Niu Jiao *Bubali Cornu* 10 g

Sheng Di Huang *Rehmanniae Radix* 20 g

Chi Shao *Paeoniae Radix rubra* 12 g

Bai Shao *Paeoniae Radix alba* 12 g

Mu Dan Pi *Moutan Cortex* 10 g

Xuan Shen *Scrophulariae Radix* 12 g

Zhi Mu *Anemarrhenae Rhizoma* 10 g

Zhi Zi *Gardeniae Fructus* 10 g

Huang Qin *Scutellariae Radix* 12 g

Mu Gua *Chaemonelis Fructus* 6 g

Ji Xue Teng *Spatholobi Caulis* 15 g

Lei Gong Teng *Tripterygii wilfordii Radix* 10 g

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

Du-20 Baihui, ST-8 Touwei, ST-2 Sibai, Yintang (extra), LI-4 Hegu, SP-10 Xuehai, SP-6 Sanyinjiao and LIV-2 Xingjian.

The pain was reduced after the patient received acupuncture and herbal medicine. She planned to join a clinical study the same month as she came for treatment, during which she was given a brain MRI. When she began participating fully in the study, the following month, the patient was told her MRI had improved. Two months later she was told her MRI had even further improvement and she was rejected by the institute for participation in the clinical research.

CASE TWO

MP was a 45-year-old woman who, on her first office visit, came in complaining of pain radiating from her neck and head to the left arm and thumb and the right great toe and left leg for 2 months. She had been diagnosed with MS for over 16 years. It had attacked her several times already. Two months prior to her visit, she had an itchy sensation on the left side of her neck and behind her left ear, but she could find no changes on her skin. She had taken antihistamines for 10 days without result. The itchy skin gradually became worse and she developed the pain symptoms described above. After that, she had an MRI that showed she had active MS. When she came in, she had finished a course of prednisone, but the symptoms had not changed. The patient had had blurred vision in the right eye for 8 years. She also had a tendency to cry for no reason.

Autoimmune diseases ran in her family. She had four sisters in her family; three of whom also had a history of autoimmune diseases, including MS, and one who suffered from depression and emotional disorder. However, her two sons, aged 25 and 19 years, were healthy.

She had a red tongue with less coating and a small crack on the surface. Her pulse was thready and taut.

3 weeks prior to office visit: laboratory report

MRI:

1. There were multiple periventricular white matter lesions, predominantly in the peritrigonal white matter. The orientation and appearance of the lesions raised the possibility of MS plaques.
2. Some of the lesions were new since the previous study.

Impression:

1. Multiple sclerosis (Yin deficiency of Liver and Kidney with Blood stasis)
2. Depression

TREATMENT PRINCIPLE

Nourish Yin, remove Blood stasis and stop pain.

HERBAL TREATMENT

LIU WEI DI HUANG WAN and SHEN TONG ZHU YU TANG variation

Six-Ingredient Pill with Rehmannia and Drive Out Blood Stasis from a Painful Body Decoction

Sheng Di Huang *Rehmanniae Radix* 12 g

Shan Zhu Yu *Corni Fructus* 10 g

Gou Qi Zi *Lycii Fructus* 12 g

Mu Dan Pi *Moutan Cortex* 10 g

Chi Shao *Paeoniae Radix rubra* 12 g

Bai Shao *Paeoniae Radix alba* 12 g

Ge Gen *Puerariae Radix* 10 g

Hong Hua *Carthami Flos* 10 g

Tao Ren *Persicae Semen* 10 g

Dan Shen *Salviae miltiorrhizae Radix* 10 g

Qin Jiao *Gentianae macrophyllae Radix* 10 g

Shan Zhi Zi *Gardeniae Fructus* 10 g

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

Du-20 Baihui, GB-20 Fengchi, Jiaji at C 2–5 (extra), LI-11 Quchi, LI-4 Hegu, BL-57 Chengshan, SP-6 Sanyinjiao, KI-3 Taixi and LIV-2 Xingjian.

The patient received the treatment for 4 months, after which the symptoms had disappeared completely. We then changed the herbal medicine dosage from twice a day to once a day. Ten months later the patient requested to discontinue the treatments; at that time she had no symptoms.

5. Analysis of the cases

Although MS was first described over 150 years ago, the aetiology and pathology of the disease remain under debate. The leading hypothesis is that MS occurs as the result of viral infection in genetically susceptible individuals. Its pathology provides the first type of evidence in support of an infectious association. The inflammatory demyelinating lesions, abnormalities in oligoclonal bands, as well as the increased immunoglobulin (Ig) G levels in the cerebrospinal fluid, which are oligoclonal in type, are characteristic of infectious or autoimmune disorders. Therefore, most scientists believe that MS is a slowly progressive autoimmune disease characterized by the process of demyelination in the brain and spinal cord. This demyelination results in multiple and varied neurological symptoms and damage. The clinical symptoms depend on what part of the brain and spinal cord are involved.

Myelin is a type of insulating substance that covers certain nerves, just as wires can be covered by insulation. When this insulation is impaired by autoimmune cells, the neuronal bioelectricity can leak from the damaged places to local tissues or it can block neurotransmitters and cause abnormal symptoms, such as pain or paralysis. The illness usually is insidious and marked by alternating periods of remission and exacerbation. Possibly it can be triggered by weather changes, emotional lability, or viral or bacterial infection. However, the illness is like other autoimmune diseases: a disordered immune system attacks components of the body, myelin in this case, as if they are foreign. The attack causes inflammation and scar tissue proliferation, which in this disease causes demyelination. The Chinese

medicine treatment is to increase the chance of remyelination, inhibit inflammation, degenerate the scar tissue and recover myelin function.

While Chinese medicine has no name for MS, according to its complicated symptoms it can be characterized as *Ma Mu* 麻木, numb or tingling sensation, Bi syndrome, pain in the muscles or joints, *Wei Zheng* 痿证, fatigued limbs, and *Ban Shen Bu Sui* 半身不遂, hemiplegia (paralysis in half the body).

(1) The evidence is increasing that tissue destruction, primarily axonal loss and neurodegeneration, is a key element in the pathology of MS. In addition, it is now known that brain and spinal cord atrophy begins early in the disease process and advances relentlessly throughout its course, and the axonal loss is the major determinant of progressive neurological disability and brain atrophy in patients. Therefore, the treatment must focus on the demyelination–remyelination process. Myelin is a fatty tissue in the body that protects nerve fibres and ensures that the CNS functions correctly in its transmission of information from one cell to another.

(2) Both of the patients presented with a chronic disease process with Yin deficiency symptoms and signs. Both of the patients had a family history of autoimmune disease. Pain was a common symptom in both cases. The patient in Case one was unable to describe any trigger for her condition flaring up; the patient in Case two recalled that a flu vaccination may have triggered her flare-up, as she had received the injection about a month before the exacerbation.

(3) Although symptoms in Case one began only 10 days before the patient came in, she could discern no reason for the illness to have been triggered. However, she had symptoms and signs of Yin deficiency and Heat-Toxin in the Ying and Xuefen: thirst, a dry mouth, a red tongue with fissures in the middle and less coating, and a deep and thready pulse. For this patient, we used **XI JIAO DI HUANG TANG** to clean the Heat-Toxin in the Ying and Xuefen. We used **Shui Niu Jiao** *Bubali Cornu* instead of **Xi Niu Jiao**, accompanied by **Xuan Shen** *Scrophulariae Radix*, **Mu Dan Pi** *Moutan Cortex* and **Mai Men Dong** *Ophiopogonis Radix* to clean the Heat in the Ying and Xuefen. This Heat may have been from chronic inflammation caused by an antigen triggering an antibody to impair it locally. In this phase, the apoptosis process is more than just acute inflammation, because it manifested with Heat-Toxin symptoms and signs. Myelin is a type of fat, without fluid in it. So we can see that patients in a chronic phase almost always have a Yin deficiency pattern. However, in patients experiencing an acute attack, inflammation causes exudation of cellular material from the vessels. The purpose of the treatment is to inhibit the chronic inflammation, protect myelin, increase remyelination and stop the pain. The Heat-Toxin is the inflammation, and the destruction of the myelin is called Fire flaring up due to Yin deficiency, excess Yang, and Fire leading to Toxin in the body. The herbal medicine that has a function of cleaning Heat-Toxin could suppress inflammation and reduce pain; nourishing Yin could repair or protect myelin; removing Blood stasis could remove and degenerate the scar tissue, giving the body a chance for remyelination. **Shui Niu Jiao** *Bubali Cornu*, **Sheng Di Huang** *Rehmanniae Radix*, **Mu Dan Pi** *Moutan Cortex* and **Xuan Shen** *Scrophulariae Radix* are components of **XI JIAO DI HUANG**

TANG; **Zhi Mu** *Anemarrhenae Rhizoma*, **Zhi Zi** *Gardeniae Fructus* and **Huang Qin** *Scutellariae Radix* clean the Heat in the Qifen, and are three herbs that suppress disordered immune function and inflammation and also conform to the Chinese medical concept of ‘cleaning the Ying and Xuefen of Heat-Toxin, and resolving and returning it to the Qifen’; **Mu Gua** *Chaemonelis Fructus* and **Ji Xue Teng** *Spatholobi Caulis* nourish Yin, dredge the channels and stop the pain; **Chi Shao** *Paeoniae Radix rubra* and **Bai Shao** *Paeoniae Radix alba* nourish Yin and remove Blood stasis; finally, we choose **Lei Gong Teng** *Tripterygii wilfordii Radix* to suppress overactive immunity and reduce the pain. The specific treatment is called using Toxin (a herb, **Lei Gong Teng** in this case) to treat Toxin (disease). In acupuncture, the basic theory is the same as in herbal medicine, but the tool is different. Acupuncture uses bioelectric changes to produce biochemical changes in the body. Using both herbal medicine and acupuncture, the patient’s two brain MRIs taken after the initial MRI showed improvement.

(4) Case 2 involved a patient with autoimmune disease who had autoimmune disorder running in her family. The flare-up, according to the patient’s recollection, occurred after she had received a flu vaccine. About a month after the injection, her skin started to itch and she had an MS attack. There are two ways in which a vaccine can trigger an MS flare. First, the vaccine acts just like a viral infection, leading the patient’s immune system to react to the vaccine and at the same time damage the myelin. Second, the contents of vaccine (viral RNA) may mimic a patient’s myelin tissue. The hyperactive antibody reacts to the antigen (virus) and at the same time impairs the myelin. The patient first received steroid treatment, but her symptoms did not change. Steroids are a common medication for treating autoimmune disease. Their function is to suppress overactive immunity and reduce exudation, but denatured and apoptotic cells still exist in the local area and continue to trigger immunity to clear it out. The chronic inflammation continues stimulating nerves and local tissues, thus causing the symptoms. Chinese medicine is totally different from Western medicine in that it attempts to mask or hide the antigen. Perhaps this method renders the specific antibody unable to find its target, thus preventing the antigen from continuing to cause damage. Therefore, the treatment is to protect the antigen from causing impairment of the tissue, degenerating the fibrosis and opening space for remyelination. The herbal medicines **Sheng Di Huang** *Rehmanniae Radix*, **Shan Zhu Yu** *Corni Fructus*, **Gou Qi Zi** *Lycii Fructus* and **Bai Shao** *Paeoniae Radix alba* nourish Yin; **Mu Dan Pi** *Moutan Cortex* cleans the Heat and removes Blood stasis, accompanied by **Chi Shao** *Paeoniae Radix rubra*, **Hong Hua** *Carthami Flos*, **Tao Ren** *Persicae Semen* and **Dan Shen** *Salviae miltiorrhizae Radix* to enhance the function of removing Blood stasis; **Ge Gen** *Puerariae Radix* has a special function to increase circulation to the neck area, and it can nourish Yin and relax muscles; **Shan Zhi Zi** *Gardeniae Fructus* cleans the rest of the pathogenic Heat and Fire, and suppresses inflammation; one herb, **Qin Jiao** *Gentianae macrophyllae Radix*, opens the channels and reduces the pain and numbness sensation. The illness affects the patient’s brain with the symptom of depression. This is partially related to Liver Qi stagnation, but if our treatment addresses only Liver Qi stagnation, we

may never heal this patient from depression. This is because we realize that the Liver, as a Yin organ, stores Blood. Yet the function of Liver belongs to Yang, with its upward or downward movement of Qi, and its going in and out to support all the organs well. However, function is based on structure. If Yin structure is impaired, how can anything function well? Therefore, if the practitioner sees only the depression, he or she will see only Liver Qi stagnation and treat it by removing Liver Qi stagnation. Thereby, the treatment addresses only the symptoms, but not the underlying illness. This also matches Western medical theory that MS is an autoimmune disorder. The disordered immunity impairs not only myelin, but other parts of the body as well, including the tissue that affects emotions in the brain (see Chapter 10). First of all, we were sure the patient's symptom of depression was secondary to MS. We did not prescribe any herbal medicine for the symptoms of depression, but instead nourished the Yin, or the structure of the Liver. In addition, we used acupuncture so as to affect the neurotransmitters and brain, and the spinal cord white matter bioelectrically, as described by Hou, Xu and Butler.² Following treatment, both of the patients' MS symptoms and emotions returned to normal.

(5) MS is unpredictable and varies in severity. In some people, it is a mild illness, but it can lead to permanent disability in others. Treatments can modify the course of the disease and relieve symptoms. If integrative medicine is practised well in clinic, patients will receive great benefit.

6. Lifestyle prescriptions and health issues

MS is a chronic, long-term condition that affects the CNS, including the brain and spinal cord. It is an autoimmune disease, which means that the body's immune system mistakenly attacks itself, targeting the cells, tissues and organs. MS is a part of the family of autoimmune diseases that includes rheumatoid arthritis, psoriasis, type I diabetes, lupus and Crohn's disease. Scientists now believe that MS results from an abnormal response to an infection or an environmental factor. Numerous studies show that genetics may play a role in the development of MS, but are not the sole cause of the disease. However, the immune system plays a role in the destruction of myelin, which causes MS. Scientists realize that leukocytes are drawn to regions of white matter in the CNS; they initiate and take part in what is known as the inflammatory response. During the inflammation, the myelin gets stripped from the axons in a process known as demyelination. The inflammation also kills the glial cells; in particular, it seems to kill the myelin-producing oligodendrocytes, which are lost in great numbers. Almost no oligodendrocytes persist in the middle of chronic MS lesions. During the secondary progressive phase of the disease, inflammation becomes less and less common, but the axons still continue to die. This degeneration of axons is known as Wallerian degeneration. The lost myelin may be replaced with scar tissue (sclerosis), and can block the formation of new myelin. Once axons have become scarred they do not fully regain their former function.

Chinese medicine cannot change human genes, heredity and environmental factors, but it can work in the human body by:

- 1 Preventing and treating infection that results from viruses, bacteria, fungi and other microbes.
- 2 When the immune system is already disordered, the treatment will be mediating disordered immunity, remyelination and suppression of inflammation, and protection of antigens, reducing antigen impairment, and degenerating the scars (fibrosis).
- 3 When the patient experiences paralysis, the Chinese medical treatment is usually to treat the *Yang Ming* channel, which is rich in Qi and Blood, to help to address the paralysis. However, this is not the case with MS. Refer to Figure 2.3, which shows that when an antigen exists in the body replenishing Qi and Yang may increase the number of helper T cells, resulting in exacerbation of an autoimmune disease. Otherwise, do not replenish Qi and warm Yang or, if you must, also use the method of masking and hiding the antigen, but remember the possible risk of triggering a flare-up of the illness. However, this principle does not apply to the practice of acupuncture.
- 4 MS is characterized by Bi syndrome. One usually uses herbs with a function to dispel Wind-Dampness. These herbs are aromatic and dry in nature, and warm in character. If they are used for too long a period of time, this may lead to further Yin damage. Therefore, selection of the treatment must rely on symptoms and signs more than just the causes of the illness.
- 5 Patients should stay far away from pungent and warm food, as well as herbal medicine.
- 6 Patients should also stay far away from foods and other substances to which they may have an allergic reaction, as this allergic reaction could trigger the illness to flare. We call allergies such as these *Fa Wu* 发物, or products that can make an illness worse.
- 7 The patient should attempt to control emotions that may trigger immunity disorders.
- 8 Proper exercise is needed to remain healthy.

-
1. Lei Gong Teng *Tripterygii wifordii Radix* is considered a toxic herb. The US Food and Drug Administration blocks the importation of this herb, although for appropriate conditions it is used regularly in China.
 2. Hou W, Xu G, Butler J. Clinical observation of the acupuncture treatment of insomnia, emotional disorders, and ADHD. *International Journal of Clinical Acupuncture* 2005; 14 (3):221–224.

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Psoriasis is a common, genetically determined, chronic, inflammatory skin disease characterized by rounded erythematous, dry, scaling patches and water drop-shaped scaly macula on the skin. It can occur on nails, the scalp, genitalia, extensor surfaces of the joints and the lumbosacral region. It is also called guttate psoriasis.

1. Western medical aetiology and pathology

There is no known cause for psoriasis. It may be related to immune function disorder, genes, infection and emotional disorder. Disordered immunity has some involvement in the process of psoriasis. T cells, unlike B lymphocytes, do not produce antibodies. However, if T cells become activated, an immune response is initiated, leading to the development of skin lesions. One part of this response includes the release of cytokines. Cytokines act on keratinocytes to induce changes characteristic of psoriasis. Indeed, cytokines from lesional psoriatic T-cell clones

directly alter in-vitro keratinocyte phenotype through induction of intercellular adhesion molecule 1 (ICAM-1) and HLA-DR cell-surface expression.¹ Furthermore, the cytokines enhance keratinocyte growth. Essentially, cytokines stimulate skin cells to reproduce and mature at an accelerated rate. They cause other reactions, including inflammation, the activation of additional T cells, the recruitment of T cells into the skin and the release of more cytokines. The end result is a cycle of skin cells growing too fast, moving to the surface of the skin, and piling up as dead cells. The epidermal layer of the skin thickens, resulting in psoriasis. Redness develops as blood vessels expand and multiply, and blood flow to the skin increases.

Psoriasis is an immunologically mediated disease in which activation of T lymphocytes is central to the inflammation in the dermal microenvironment, and the epidermal hyperproliferation is secondary to the inflammatory events that follow a T helper cell type 1 (Th1) immune response.¹ Psoriasis is the most common Th1 type of immunological skin disease.

2. Diagnosis by Western medicine

Diagnosis of psoriasis usually occurs by visual inspection, although a skin biopsy is sometimes needed to confirm the diagnosis. Generally, laboratory studies are not performed, unless the patient also has other autoimmune diseases.

There are several types of psoriasis, but the most common form, plaque psoriasis, causes dry, red skin lesions covered with silvery scales. These usually itch or feel sore, and may occur anywhere on the body, including the genitals, the soft tissue inside the mouth, and fingernails and toenails. However, plaques are most common on the knees, elbows, trunk, palms, soles and scalp. A patient may have just a few plaques, or many. The skin may also crack and bleed.

3. Chinese medical aetiology and pathology

Psoriasis is not a Chinese medicine diagnosis, but the symptoms and signs of psoriasis are described as *Bai Bi* 白乚, *Bi Feng* 乚风 and *Song Pi Xuan* 松皮癬, all of which refer to the skin conditions of psoriasis.

A patient may have a constitution of Fire flaring due to Yin deficiency following the invasion of Wind-Heat. The external and internal pathogenic Heat together impair Yin. As Yin is deficient, it cannot nourish the skin. As a result, the skin becomes damaged, causing dry skin, itching and peeling. Or, Heat-Toxin can invade directly and impair the skin. In this case, the skin becomes red and there is a clear boundary line between damaged and normal tissues. Or, the existence of Liver Qi stagnation over a long period of time turns into Fire, which then sings the already damaged Yin. The deficient Yin cannot nourish the skin, and psoriasis develops.

In short, psoriasis results from constitutional Yin deficiency allowing pathogenic Heat or Heat-Toxin to invade the body and trigger psoriasis, or emotional disorder causes Liver Qi stagnation, leading to Fire flaring and damaging the skin. Regardless of whether the Fire is excess or deficient, it will singe the Blood and cause Blood stasis; when Liver Qi stagnation occurs, the Qi cannot push Blood smoothly through the vessels, leading to Blood stasis.

The pathogenic change is always the result of Yin deficiency coupled with excess Heat, Heat-Toxin, deficient Fire due to Yin deficiency, or Liver Qi stagnation, and Blood stasis.

4. General treatment principle

Dispel Wind, clear pathogenic Heat, remove Blood stasis and smooth Liver Qi.

DIFFERENTIATION AND TREATMENT

1. WIND-HEAT

CLINICAL MANIFESTATIONS

A red halo around erythematous lesions on the skin, scaly and peeling skin, red papules, severe itching and the recent development of skin lesions. The tongue is red with a thin white or yellow coating. The pulse is taut and rapid.

TREATMENT PRINCIPLE

Expel pathogenic Wind, clear pathogenic Heat and Toxin, and cool the Blood.

HERBAL TREATMENT

YIN QIAO SAN and TU FU LING TANG variation

Honeysuckle and Forsythia Powder and Smilax Decoction

Jin Yin Hua *Lonicerae Flos* 15 g

Tu Fu Ling *Smilacis glabrae Rhizoma* 20 g

Sheng Di Huang *Rehmanniae Radix* 15 g

Huang Qin *Scutellariae Radix* 12 g

Zhi Mu *Anemarrhenae Rhizoma* 9 g

Zi Cao *Anebiae/Lithospermi Radix* 9 g

Chai Hu *Bupleuri Radix* 6 g

Chan Tui *Cicadae Periostracum* 6 g

Wu Shao She *Zaocys* 9 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

LU-7 Lieque, LI-11 Quchi, SP-10 Xuehai, SP-6 Sanyinjiao and LIV-2 Xingjian.

SUPPLEMENTARY TREATMENT

If a patient complains of stress and insomnia, add Mu Dan Pi *Moutan Cortex*, Chai Hu *Bupleuri Radix* and Bai Shao *Paeoniae Radix alba*, and needle Du-20 Baihui and Yintang (extra); if the patient has thick skin, add Dan Shen *Salviae miltiorrhizae Radix*, Tao Ren *Persicae Semen* and Hong Hua *Carthami Flos*, and needle SP-10 Xuehai and SP-6 Sanyinjiao; if the patient's skin lesions are red or bleeding, add Shui Niu Jiao *Bubali Cornu* and Sheng Di Huang *Rehmanniae Radix*, and needle BL-17 Geshu and SP-10 Xuehai to cool the Blood-Heat.

2. BLOOD STASIS

CLINICAL MANIFESTATIONS

Silver scales on erythematous lesions. The skin becomes thick and the itchy feeling is less obvious. The tongue is dark red with a thin white coating and sublingual varicosities. The pulse is taut and uneven.

TREATMENT PRINCIPLE

Remove Blood stasis, promote Blood circulation and cool pathogenic Heat in the Blood, and disperse Wind and stop itching.

HERBAL TREATMENT

HUO XUE QU FENG TANG *variation*

Remove Blood Stasis and Expel Wind Decoction

Chi Shao *Paeoniae Radix rubra* 15 g

Dan Shen *Salviae miltiorrhizae Radix* 12 g

Tao Ren *Persicae Semen* 9 g

Hong Hua *Carthami Flos* 9 g

Dang Gui *Angelicae sinensis Radix* 9 g

Chuan Xiong *Chuanxiong Rhizoma* 9 g

Quan Xie *Scorpio* 3 g

Chan Tui *Cicadae Periostracum* 4 g

Bai Ji Li *Tribuli Fructus* 9 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

BL-17 Geshu, BL-18 Ganshu, SP-10 Xuehai, SP-6 Sanyinjiao and LIV-3 Taichong.

SUPPLEMENTARY TREATMENT

If a patient has joint pain in the upper body and likes warmth, add **Qiang Huo** *Notopterygii Rhizoma seu Radix* and needle Baxie (extra) for the upper body; for the lower body, add **Du Huo** *Angelicae pubescentis Radix* and needle Bafeng (extra) to help expel Wind-Dampness and stop pain in the joints.

3. YIN DEFICIENCY WITH BLOOD-HEAT

CLINICAL MANIFESTATIONS

Dry skin with silvery scales on the top of the lesions, thirst, and a dry mouth but without desire to drink. The tongue is red with a thin white coating and fissures. The pulse is deep and rapid.

TREATMENT PRINCIPLE

Nourish Yin and remove Blood stasis, expel Wind and stop the itching.

HERBAL TREATMENT

DANG GUI YIN ZI *variation*

Tangkuei Decoction

Dang Gui *Angelicae sinensis Radix* 12 g

Sheng Di Huang *Rehmanniae Radix* 15 g
 Bai Shao *Paeoniae Radix alba* 12 g
 He Shou Wu *Polygoni multiflori Radix preparata* 12 g
 Chuan Xiong *Chuanxiong Rhizoma* 9 g
 Jing Jie *Schizonepetae Herba* 9 g
 Fang Feng *Saposhnikoviae Radix* 9 g
 Bai Ji Li *Tribuli Fructus* 9 g
 The herbs above are decocted in water for oral administration.

ACUPUNCTURE

LIV-2 Xingjian, KI-3 Taixi, SP-6 Sanyinjiao, SP-10 Xuehai, BL-23 Shenshu and BL-18 Ganshu.

SUPPLEMENTARY TREATMENT

If the patient has cracked, dry and bleeding skin, add Xuan Shen *Scrophulariae Radix*, Mai Men Dong *Ophiopogonis Radix* and Shui Niu Jiao *Bubali Cornu*, and needle BL-17 Geshu, TB-21 Jianjing and BL-40 Weizhong to nourish Yin and cool the Blood; if a patient has difficulty withstanding the itching of the skin, add Quan Xie *Scorpio*, Wu Gong *Scolopendra* and Chuan Shan Jia *Manitis Squama*,² and needle HE-7 Shenmen and BL-15 Xinshu; for skin lesions with erythema that does not subside and from which it is difficult to recover, add San Leng *Sparganii Rhizoma*, E Zhu *Curcuma Rhizoma* and Tu Bie Chong *Eupolyphaga/Stelesophaga*.

4. LIVER QI STAGNATION

CLINICAL MANIFESTATIONS

Itchy skin and lesions occur in the presence of stress or may be aggravated by strong emotion. The tongue has a thin and white coating. The pulse is taut in the left guan position.

TREATMENT PRINCIPLE

Smooth Liver Qi and remove Blood stasis.

HERBAL TREATMENT

SI NI SAN *variation*
 Frigid Extremities Powder
 Chai Hu *Bupleuri Radix* 10 g
 Bai Shao *Paeoniae Radix alba* 12 g
 Zhi Ke *Aurantii Fructus* 10 g
 Gan Cao *Glycyrrhizae Radix* 3 g
 Dan Shen *Salviae miltiorrhizae Radix* 10 g
 Bai Xian Pi *Dictamni cortex* 12 g
 The herbs above are decocted in water for oral administration.

ACUPUNCTURE

LIV-3 Taichong, BL-17 Geshu, BL-18 Ganshu and SP-10 Xuehai.

SUPPLEMENTARY TREATMENT

If a patient has constipation, add **Zhi Shi** *Aurantii Fructus immaturus* and **Da Huang** *Rhei Radix et Rhizoma*, and needle TB-6 Zhigou and ST-25 Tianshu; for palpitations and insomnia, add **Suan Zao Ren** *Ziziphi spinosae Semen* and **Wu Wei Zi** *Schisandrae Fructus*, and needle Du-20 Baihui and HE-7 Shenmen.

5. Appendix

- 1 Some 10–30% of patients with psoriasis have a condition called psoriatic arthritis. This is an arthritic condition that causes inflammation of the joints, similar to rheumatoid arthritis (see Chapter 5).
- 2 Psoriasis may also coexist with mental disorders (see Chapter 10).
- 3 Psoriasis may also coexist with stress (see Chapter 10).

CASE STUDIES**CASE ONE**

FR was a 46-year-old man who had had a diagnosis of psoriasis for over 20 years before his first office visit. The skin lesions came and went; they were worse in winter and better in summer. The psoriasis appeared on the extensor surface of his elbows and the skin was itchy, rough, dry and peeling. He had used steroid cream on the lesions and, after use, the skin was better, but the problem would return and be worse. The patient denied any emotional disorder. He did not smoke, but he liked to drink.

Physical examination: local skin change to rough, thick and peeling on the extensor aspect of both elbows. The multiple lesions were approximately 3 × 3 to 4 × 5 cm in dimension. His tongue was red with a thin white coating, with fissures in the back. His pulse was thready and taut.

Impression:

I. Psoriasis (Yin deficiency with Blood stasis).

TREATMENT PRINCIPLE

Increase circulation of Qi, remove Blood stasis, clear Heat-Toxin, and tonify Liver and Kidney Yin.

HERBAL TREATMENT

TU FU LING TANG *variation*

Smilax Decoction

Tu Fu Ling *Smilacis glabrae Rhizoma* 15 g

Sheng Di Huang *Rehmanniae Radix* 12 g

Mu Dan Pi *Moutan Cortex* 6 g

Chi Shao *Paeoniae Radix rubra* 12 g

Huang Qin *Scutellariae Radix* 12 g

Zhi Zi *Gardeniae Fructus* 10 g

Ku Shen *Sophorae flavescentis Radix* 10 g

Huai Hua *Sophorae Flos immaturus* 10 g

Ju Hua *Chrysanthemi Flos* 10 g

Bai Ji Li *Tribuli Fructus* 12 g

Bai Xian Pi *Dictamni cortex* 12 g

Jing Jie *Schizonepetae Herba* 10 g

Fang Feng *Saposhnikoviae Radix* 12 g

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

- 1 Surrounding needle acupuncture technique, one needle every 1 cun in distance.
- 2 Moxibustion over the area.

The patient received the above treatment every day for 4 days. Each day the skin lesions decreased in size. After 4 days, the patient left the area. He called our office and reported that his skin lesions were getting progressively better. Two years later, he returned to the office and showed us that the psoriasis on both of his elbows was completely gone. Five years later, he told us that the lesions never returned.

CASE TWO

GC was a 22-year-old man who, on his first office visit, came in complaining of itchy skin all over his body for the previous 2–3 years. He used creams that his dermatologist had prescribed. When he used them the itching improved, but when he stopped using the creams the itching returned repeatedly. He realized that the creams only provided temporary relief, but did not cure his problem. Additionally, he had difficulty concentrating in class and as a result his grades had declined. He had to quit college to go to work.

Physical examination: the patient's skin was dry all over. He had skin lesions with small papular changes with clear demarcations. The dimensions of the lesions were about 1 × 1 to 1 × 2.5 cm. There were multiple lesions on the back and front of his body and scalp. The tip of his tongue was red with a thin, white coating. His pulse was taut in the left guan position.

Laboratory results: not available.

Impression:

1. Psoriasis (Yin deficiency with Blood stasis).

TREATMENT PRINCIPLE

Nourish Liver and Kidney Yin, and remove Blood stasis.

HERBAL TREATMENT

Patient declined.

ACUPUNCTURE

Surrounding needle technique, HE-7 Shenmen, BL-40 Weizhong, SP-6 Sanyinjiao, KI-3 Taixi and LIV-2 Xingjian.

The patient required acupuncture twice a week, as he was unwilling to take herbs. He received six sessions of acupuncture, after which the symptoms were much reduced almost to the point that his skin was normal.

CASE THREE

PO was a 48-year-old woman who, on her first office visit, came in complaining of itchy skin under her right breast and bilaterally in the groin area for 5–6 months. She had used clobetasol propionate, a topical corticosteroid indicated for the treatment of skin conditions including severe psoriasis. After its use her skin was better, but when she stopped the skin became itchy again and it was getting worse. She had a stressful job working in a busy restaurant. Her skin condition got worse whenever she was working.

Physical examination: the skin under the patient's right breast and bilateral groin area was thick and red with a little bleeding. The lesion under her breast was approximately 7 × 15 cm. The lesions in her groin area were approximately 24 × 30 cm. Her tongue had deep teeth marks and fissures in the middle and back with a white, greasy coating. Her pulse was slightly taut in the right cun and left guan positions, and the rest were deep.

Laboratory results: not available.

Impression:

I. Psoriasis (pathogenic Wind-Heat in the Qi and Heat in the Yingfen)

TREATMENT PRINCIPLE

Dispel Wind, and clear Heat and Toxin.

HERBAL TREATMENT

XI JIAO DI HUANG TANG and TU FU LING TANG variation

Rhinoceros Horn and Rehmannia Decoction and Smilax Decoction

Shui Niu Jiao Bubali Cornu 10 g

Xuan Shen Scrophulariae Radix 10 g

Sheng Di Huang Rehmanniae Radix 15 g

Mu Dan Pi Moutan Cortex 6 g

Chi Shao Paeoniae Radix rubra 12 g

Bai Shao Paeoniae Radix alba 12 g

Huang Qin Scutellariae Radix 12 g

Bai Xian Pi Dictamni Cortex 12 g

Zhi Zi Gardeniae Fructus 12 g

Jing Jie Schizonepetae Herba 10 g

Fang Feng Saposhnikoviae Radix 10 g

Ku Shen Sophorae flavescens Radix 10 g

Cang Zhu Atractylodis Rhizoma 10 g

Tu Fu Ling Smilacis glabrae Rhizoma 20 g

The herbs above were decocted in water for oral administration twice daily.

2½ weeks after office visit The patient returned and reported that her skin condition was much better. The colour was already returning to pink and the damaged area of skin was smaller. She had stopped using the clobetasol propionate. After she had taken the prescribed herbal medicine for 10 days, the psoriasis was healed.

6. Analysis of the cases

Psoriasis research is benefiting from the fact that psoriasis is driven by the immune system and responds to drugs that suppress the body's immune response (immunosuppressive therapy). However, this immune suppression is usually temporary, because the antigen trigger still exists. As long as the antigen exists, it continues to stimulate the immune system to try to clear the fragment away. Therefore immunosuppressive drugs generally do not solve the problem induced by autoimmune disorders, including psoriasis.

Psoriasis can occur both in isolation and as a disease that overlaps with other autoimmune diseases. For instance, psoriasis can overlap with rheumatoid arthritis, mental illness and lupus, as well as type I diabetes. With the first three conditions, the use of immunosuppressive therapy may help to suppress symptoms. However, with type I diabetes, the use of immunosuppressive therapy such as steroids could aggravate the diabetes. Thus, immunosuppressive therapy cannot be used for every autoimmune disease.

Psoriasis is a disease that is easily visible on the skin; it provides an excellent model for studying the effectiveness of various Chinese medicine modalities in the treatment of diseases of the immune system, including herbal medicine and acupuncture.

Chinese medicine has no specific name for psoriasis, but, according to the symptoms, the pathological change is due to Wind, Heat, Yin deficiency, Liver Qi stagnation and Blood stasis.

Ancient Chinese medical theory tells us the key to treating itchy skin is to remove Blood stasis. Itchiness is a symptom of Wind pathogen. Chinese medicine directs that one must first treat the Blood when treating Wind (itching) symptoms. If the Blood moves smoothly through the vessels, Wind will become calm by itself. In Western medicine, the symptom of itching skin is almost always caused by an immune reaction or an autoimmune disorder where antibodies are attacking an antigen (skin). T cells start off as inactive, unable to recognize foreign invaders (or antigens), and have no specific instinct to attack the skin. However, once T cells are exposed to an antigen, they bind together with that antigen and become active. They can then recognize the signal given by the antigen and target it for destruction whenever the signal is picked up.

In psoriasis, activated T cells move to the skin. This triggers the release of proteins called cytokines that serve as chemical messengers in the immune system.

These cytokines send out the false alarm to skin cells, activating an accelerated reproduction cycle. Cytokines also turn the process into a snowball-rolling-down-a-hill effect, where it gains speed and strength. They trigger inflammation. They cause the activation of even more T cells, and induce T cells in other parts of the body to come to the skin. They even set off the release of more cytokines by the skin cells themselves.

Once the immune system is triggered, this sends a false alarm to the skin cells telling them that they have been damaged. The skin cells react by attempting to repair this 'damage'. They begin reproducing at an accelerated rate (the process that takes roughly 26 days in normal skin now occurs in about 5 days), rising to the skin surface, dying, and building up there. The skin surface thickens. As blood vessels expand and more blood flows to the skin, it becomes red. The result is the flaky, red patches we call plaques. One of the cytokines released by T cells is called tumour necrosis factor (TNF). TNF plays a role in almost all psoriasis symptoms: inflammation, redness, pain and itching in the plaques. It can make blood vessels multiply and white cells move from the blood vessels into the skin.

(1) Case one

Chinese medicine has no specific name for psoriasis, but, according to its symptoms and character, it is due to Yin deficiency and Blood stasis, pathogenic Heat, and Wind. The patient in Case one had been diagnosed with psoriasis for more than 20 years. We offered a treatment of acupuncture every day for 4 days and herbal medicine for 7 days, because he did not live or work in the area. The herbal medicine was **Ku Shen** *Sophorae flavescentis Radix*, **Huang Qin** *Scutellariae Radix*, **Zhi Zi** *Gardeniae Fructus* and **Mu Dan Pi** *Moutan Cortex* to clear Heat-toxin; **Mu Dan Pi** *Moutan Cortex*, **Chi Shao** *Paeoniae Radix rubra* and **Huai Hua** *Sophorae Flos immaturus* to remove Blood stasis; **Sheng Di Huang** *Rehmanniae Radix* and **Bai Ji Li** *Tribuli Fructus* to nourish Yin, cool Blood and calm Wind; and **Jing Jie** *Schizonepetae Herba* and **Fang Feng** *Saposhnikoviae Radix* to calm Wind and stop the itching. The acupuncture treatment used surrounding needle technique, which works under the bottom of the lesions to stimulate circulation and remove Blood stasis, plus moxibustion to increase this function. In Chinese medicine, we call this 'using Heat to treat disease caused by a Heat pathogen'.

(2) Case two

This patient was a 22-year-old man who only wanted acupuncture to treat his psoriasis. We treated him with surrounding needle technique plus moxibustion. Additionally, we needled BL-40 Weizhong to remove Blood stasis and clear Blood-Heat, SP-6 Sanyinjiao to nourish Yin and remove Blood stasis, KI-3 Taixi to nourish Yin, LIV-2 Xingjian to clear Heat, and HE-7 Shenmen to calm the spirit, because *Huang Di Nei Jing/The Yellow Emperor's Inner Classic of Medicine* says: 'all feelings of pain and itching belong to the Heart'. The treatment ameliorated his condition very well, but when he went to the beach the skin lesions increased and extended to both sides of the upper area of his head on both ears, to the left side of his neck, and the left side of his chest. Possibly sunlight impaired his skin

so that his disordered immunity continued to destroy it. However, the areas of skin that had been healed already did not have a recurrence of psoriasis. In later treatments, we added Ren-22 Tiantu to nourish Yin for the entire body. The Western medicine interpretation of this treatment is that it may stimulate the thymus gland to mature more T cells.

(3) Case three

For this patient we used only Chinese herbal medicine: **Shui Niu Jiao** *Bubali Cornu*, **Sheng Di Huang** *Rehmanniae Radix* and **Xuan Shen** *Scrophulariae Radix* to clear pathogenic Heat-Toxin in the Ying and Xuefen; **Huang Qin** *Scutellariae Radix*, **Bai Xian Pi** *Dictamni cortex*, **Zhi Zi** *Gardeniae Fructus*, **Tu Fu Ling** *Smilacis glabrae Rhizoma* and **Ku Shen** *Sophorae flavescentis Radix* to clear pathogenic Heat-Toxin in the Qifen; **Chi Shao** *Paeoniae Radix rubra* and **Mu Dan Pi** *Moutan Cortex* to clear Heat and remove Blood stasis; **Jing Jie** *Schizonepetae Herba* and **Fang Feng** *Saposhnikoviae Radix* to dispel Wind and stop itching; **Bai Shao** *Paeoniae Radix alba* to nourish the Blood; and **Cang Zhu** *Atractylodis Rhizoma* to prevent a formula with too many bitter tasting and cold herbs from impairing the physiological function of the Stomach and Spleen. The formula has the function of dispelling Wind and clearing Heat and Toxin.

7. Lifestyle prescriptions and health issues

Psoriasis is a disease caused by disordered immunity that impairs normal skin and leads to the process of inflammation. This impairment is visible, so treatment allows us to monitor improvements by direct observation. The use by patients of immunosuppressive medication may actually aggravate skin lesions once they stop using it. Immunosuppressive medication normally consists of steroids that suppress immune reaction, and reduce blood circulation and exudation, but do not work against antigens. Thus antigens continue to be present and to stimulate antibodies or cytokines. This causes skin cells to thicken. Antibodies continue to impair the antigen (skin), causing continual inflammation.

Researchers now believe that psoriasis is an immune-mediated condition. This means the condition is caused by faulty signals in the body's immune system. It is believed that psoriasis develops when the immune system tells the body to overreact and accelerate the growth of skin cells. Normally, skin cells mature and are shed from the skin surface every 28–30 days. When psoriasis develops, the skin cells mature in 3–6 days and move to the skin surface. Instead of being shed, the skin cells pile up, causing visible lesions.

In Chinese medicine, 'to treat Wind (itchy skin), one must treat Blood first, because when Blood moves freely, the Wind becomes calm naturally'. This gives us a direction for treatment: we must remove Blood stasis in immune-reactive diseases. This method may have the function of reducing the chance of antibodies attacking and destroying antigens and inhibiting cellular proliferation, thereby returning rough skin to its normal thickness. By combining this with the method of clearing Heat-Toxin, we can reduce cellular damage caused by inflammation

and prevent Heat from damaging Yin. Dispelling Wind can reduce the symptoms of itching. Nourishing Yin may protect those cells from continuing to be damaged. Chinese medicine clearly uses multiple methods to treat complicated disorders and achieve success. Chinese medicine may not only benefit the symptoms and promote skin healing but also benefit disordered immunity, possibly by mediating the ratio of suppressor and helper T cells in the thymus gland. The evidence comes from patients who have both psoriasis and a food or pollen allergy. These patients generally have higher than usual immunoglobulin (Ig) E levels. Even when we do not treat the allergies, but do treat the psoriasis, the patient's allergy symptoms improve or disappear.

The patient in Case one, who had the longest history of illness (more than 20 years), frequently used steroid cream when the condition flared. The lesions came and went, but always returned. The patient in Case two selected only acupuncture for treatment, and the patient in Case three selected only herbal medicine. Yet all three patients had successful results. This suggests that Chinese medicine works, regardless of whether herbal medicine or acupuncture is used.

Given this background on the immunological dysfunction of psoriasis, there are various methods for its targeted treatment. However, there are additional factors that could trigger a flare-up of the disease. To prevent this, we make the following suggestions:

- 1 Decrease the number of activated T cells in order to inhibit inflammation and cover and recover damaged skin cells.
- 2 Inhibit the cell-cell interaction that leads to T-cell activation and migration of T cells to the skin.
- 3 Prevent antibodies from binding to and inactivating proinflammatory cytokines to prevent the effects on keratinocytes and regulate the inflammatory process.
- 4 Do not use herbs that warm the Yang and Qi, because 'If there are even a few symptoms or signs of Fire, then Heat exists'. The Fire can be acute or chronic inflammation. Therefore, avoid using herbs that are Warm or Hot in nature or tonify and replenish.
- 5 Avoid stress and emotional overstimulation, and regulate your life by the clock.
- 6 Avoid drinking alcohol.
- 7 Stop smoking.
- 8 Do not eat spicy or pungent food.

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1. Mehlis SL, Gordon KB. The immunology of psoriasis and biological immunotherapy. *Journal of the American Academy of Dermatology* 2003; 49(Suppl):S44-S50.
 2. This herb is no longer available in the USA and Europe, but is listed here to illustrate one of its classical uses.

Raynaud's phenomenon

CHAPTER 13

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Raynaud's disease, or primary Raynaud's, is idiopathic. Raynaud's phenomenon, or secondary Raynaud's, occurs secondary to other conditions, which are often autoimmune diseases. Both of these disorders affect blood vessels. This chapter mainly discusses Raynaud's phenomenon and how Chinese medicine treats disordered immunity that affects the blood vessels in the fingers, toes, ears and nose. This disorder is characterized by vasospastic attacks that cause the blood vessels in the digits to constrict.

I. Western medical aetiology and pathology

Raynaud's phenomenon is often a complex and serious disorder, caused by an underlying disease or condition. Connective tissue diseases are the most common cause of Raynaud's phenomenon, which is seen in patients with such diseases as

scleroderma, mixed connective tissue disease and lupus. Some of these diseases reduce blood flow to the digits by causing blood vessel walls to thicken and the vessels to constrict too easily.

There are various abnormalities that can induce symptoms of Raynaud's phenomenon. Generally, they affect the blood vessel wall (particularly the endothelium), the neural control of vascular tone, and the many circulating factors that can impair blood flow and/or cause endothelial injury. Vascular abnormalities include those of both structure and function. Neural abnormalities include deficiency of the vasodilator calcitonin, gene-related peptide (released from sensory afferents), α_2 -adrenoreceptor activation, and a central nervous system component, such as stress or emotional disorder. Intravascular abnormalities include platelet activation, impaired fibrinolysis, increased viscosity and probably oxidative stress. As our understanding of the pathophysiology of Raynaud's phenomenon increases, so do the possibilities for identifying effective treatments.¹

2. Diagnosis by Western medicine

The criteria used to diagnose Raynaud's disease include:

- Periodic vasospastic attacks of pallor or cyanosis. Note: an additional criterion is the presence of these attacks for at least 2 years
- Normal nailfold capillary pattern
- Negative antinuclear antibody (ANA) test
- Normal erythrocyte sedimentation rate (ESR)
- Absence of pitting scars or ulcers of the skin, or gangrene in the fingers or toes.

The criteria used to diagnose Raynaud's phenomenon include:

- Periodic vasospastic attacks of pallor and cyanosis
- Abnormal nailfold capillary pattern
- Positive ANA test
- Abnormal ESR
- Presence of pitting scars or ulcers of the skin, or gangrene in the fingers or toes.

3. Chinese medical aetiology and pathology

Chinese medical theory does not specifically speak of Raynaud's phenomenon. However, according to its symptoms, the illness can be characterized by *Yu Zheng* (Qi Yu)² 郁证, or melancholia,³ and *Jue Zheng* 厥证, cold extremities (symptoms are very cold hands and feet).

Chinese medicine theorizes that the movement of Qi follows the flow of Blood in the body. Qi has the function to warm the Blood and push it smoothly through the vessels. Qi also dominates the flow of Blood in the body and prevents it from leaving the vessels. Therefore, when Qi stagnation occurs for any reason, the Qi can neither move well, nor warm the Blood and promote Blood circulation; then Blood stasis occurs. This is an internal cause. The patient will have symptoms of

Heat and a burning sensation in the body, but the fingers of both hands and the toes of both feet will be cold, because blood circulation is blocked by Blood stasis. Thus, the Qi cannot perform its function of warming the body, particularly the fingers and toes. Another cause of Blood stasis is that pathogenic Heat in the Blood singes the Blood, which becomes Blood stasis. The Blood stasis then blocks the channel Qi, and Blood and Qi cannot pass through the channel, causing Yu Zheng and Jue Zheng.

An external reason, specifically exposure to Cold, can also affect circulation in the fingers and toes. For instance, if the weather becomes very cold it will physically cause extreme artery constriction, thereby blocking circulation and leading to Yu Zheng and Jue Zheng.

4. General treatment principle

According to the symptoms of Raynaud's, the treatment principle should be to remove Blood stasis and activate the Qi.

DIFFERENTIATION AND TREATMENT

Raynaud's phenomenon is associated with symptoms of multiple autoimmune diseases. Therefore, its treatment is usually combined with the treatment of other autoimmune diseases. If both the Raynaud's phenomenon and another autoimmune disease are active, the autoimmune disease can be treated first, or both conditions treated simultaneously. Or, when the autoimmune disease goes into remission, the Raynaud's phenomenon can then be treated. Which treatment plan is chosen depends on the main condition of the disease. If the condition of the disease is serious, the treatment plan should be to treat the main symptoms to save the patient's life; if the patient's condition is less serious and there is a cold sensation in both hands and feet, the treatment plan chosen should remove the Blood stasis and activate channel Qi and Yang. This means that treatment of Raynaud's phenomenon is secondary unless the primary condition is in remission or is not severe.

1. BLOOD STASIS

CLINICAL MANIFESTATIONS

A cold feeling in both hands and/or feet, which may be pale or purple in colour. The tongue is pale with a thin white coating. The pulse is uneven.

TREATMENT PRINCIPLE

Warm the channels and remove Blood stasis.

HERBAL TREATMENT

TAO HONG GUI ZHI TANG *variation*

Cinnamon Decoction with Safflower and Peach Pit

Tao Ren *Persicae Semen* 10 g

Hong Hua *Carthami Flos* 10 g

Gui Zhi *Cinnamomi Ramulus* 12 g

Chi Shao *Paeoniae Radix rubra* 10 g

Bai Shao *Paeoniae Radix alba* 10 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

Baxie (extra), Bafeng (extra), SP-10 Xuehai and SP-6 Sanyinjiao.

2. BLOOD STASIS DUE TO QI STAGNATION

CLINICAL MANIFESTATIONS

The fingers and/or toes become pale or purplish in colour. This symptom is accompanied by scleroderma, depression and tenderness in the chest. The tongue has a thin, white coating. The pulse is taut.

TREATMENT PRINCIPLE

Promote circulation by moving the Qi.

HERBAL TREATMENT

SI NI SAN *variation*

Frigid Extremities Powder

Zhi Ke *Aurantii Fructus* 10 g

Chai Hu *Bupleuri Radix* 10 g

Dan Shen *Salviae miltiorrhizae Radix* 12 g

Gui Zhi *Cinnamomi Ramulus* 10 g

Chi Shao *Paeoniae Radix rubra* 12 g

Bai Shao *Paeoniae Radix alba* 12 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

Baxie (extra), Bafeng (extra), SP-10 Xuehai, SP-6 Sanyinjiao, LIV-3 Taichong and PE-6 Neiguan.

3. BLOOD STASIS WITH YIN DEFICIENCY

CLINICAL MANIFESTATIONS

Heat or burning sensation in the body (but normal temperature), thirst, dry mouth, night sweats, palpitations, and cold and purple fingers and toes. The tongue is red with less coating. The pulse is thready and uneven.

TREATMENT PRINCIPLE

Remove Blood stasis and nourish Yin.

HERBAL TREATMENT

LIU WEI DI HUANG WAN *plus* TAO REN *and* HONG HUA *variation*

Six-Ingredient Pill with Rehmannia plus Persica and Carthamus

Sheng Di Huang *Rehmanniae Radix* 12 g

Shan Zhu Yu *Corni Fructus* 10 g

Fu Ling *Poria* 10 g

Mu Dan Pi *Moutan Cortex* 10 g

Tao Ren *Persicae Semen* 10 g

Hong Hua *Carthami Flos* 10 g

Sang Zhi *Mori Ramulus* 10 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

Baxie (extra), Bafeng (extra), SP-10 Xuehai, BL-17 Geshu, BL-23 Shenshu and KI-3 Taixi.

4. BLOOD STASIS DUE TO COLD

CLINICAL MANIFESTATIONS

The fingers and toes change to pale and/or purplish in colour during cold weather and in cold temperatures. The tongue is pale. The pulse is deep and thready.

TREATMENT PRINCIPLE

Remove Blood stasis and activate the Yang.

HERBAL TREATMENT

DANG GUI SI NI TANG *variation*

Tangkuei Decoction for Frigid Extremities

Dang Gui *Angelicae sinensis Radix* 12 g

Bai Shao *Paeoniae Radix alba* 12 g

Chi Shao *Paeoniae Radix rubra* 12 g

Gui Zhi *Cinnamomi Ramulus* 10 g

Xi Xin *Asari Herba* 3 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

Baxie (extra), Bafeng (extra), SP-10 Xuehai, SP-6 Sanyinjiao, BL-17 Geshu and BL-23 Shenshu.

5. Appendix

HEAT TRANSFERENCE FROM COLD

CLINICAL MANIFESTATIONS

Fingers and/or toes are pale and purple. There are scleroderma and some ulceration on the tips of the fingers and toes, accompanied by pus and scabs. The tongue has a greasy coating. The pulse is rapid.

TREATMENT PRINCIPLE

Clean Heat-Toxin in the channels, remove Blood stasis and activate Qi.

HERBAL TREATMENT

HUANG LIAN JIE DU TANG and GUI ZHI TANG *variation*

Coptis Decoction to Relieve Toxicity and Cinnamon Twig Decoction

Huang Lian *Coptidis Rhizoma* 6 g
 Huang Qin *Scutellariae Radix* 12 g
 Zhi Zi *Gardeniae Fructus* 12 g
 Dang Gui *Angelicae sinensis Radix* 12 g
 Chuan Xiong *Chuanxiong Rhizoma* 12 g
 Bai Shao *Paeoniae Radix alba* 12 g
 Dan Shen *Salviae miltiorrhizae Radix* 12 g
 Chi Shao *Paeoniae Radix rubra* 12 g
 Gui Zhi *Cinnamomi Ramulus* 10 g
The herbs above are decocted in water for oral administration.

ACUPUNCTURE

Acupuncture is not recommended for this condition, because needling areas with ulceration, pus and scabs may cause cross-infection in the body and aggravate the problem.

CASE STUDIES

CASE ONE

CA was a 63-year-old woman who, on her first office visit, came in complaining of cold, numb and painful toes that changed colour to white and purple in the winter. When her toes changed colour, she felt dizzy and headachy, her blood pressure rose, she had a dry mouth, eyes and vagina, and a sore throat with a desire to drink cold water. She also had fatigue, heartburn and insomnia, with difficulty falling asleep and waking easily, getting an average of only 4 hours of sleep. Her appetite was fine and her stool and urination were normal.

Physical examination: the patient had a red face, normal heart rate, and blood pressure was 130/70 mmHg. Her lungs were normal, she had no oedema, and her lips were dry. Her tongue was red, except for the front, which was purple with deep teeth marks and a fissure in the middle.

19 months prior to office visit: laboratory results

White blood cell count (WBC): $3.91 \times 10^3/\mu\text{L}$ (normal range 4.0–10.5)
 Chloride, serum: 92 mmol/L (96–109)
 Aspartate aminotransferase (AST): 51 IU/L (0–40)
 Alanine aminotransferase (ALT): 83 IU/L (0–40)
 Anti-SS-A Ab: positive
 Anti-SS-B Ab: negative
 Antithyroglobulin Ab: high
 Anticardiolipin Ab, IgA: 14 antiphospholipid units/mL (0–12)

5 months prior to office visit

WBC: $3.6 \times 10^3/\mu\text{L}$ (4.2–10.0)
 Red blood cell count (RBC): $3.77 \times 10^6/\mu\text{L}$ (4.2–5.4)
 C3: 87.0 mg/dL (90.0–207.0)

Impression:

1. Raynaud's phenomenon (Yin deficiency and Blood stasis)
2. Hashimoto's thyroiditis

3. Sjögren's syndrome
4. Stomach reflux
5. Insomnia

The patient was taking the following medications: levothyroxine (Synthroid) 0.75 mg q.d., alendronate (Fosamax) 70 mg weekly, losartan (Cozaar), calcium citrate (Citracal), multivitamins and Restasis (cyclosporin eye-drops).

HERBAL TREATMENT

LIU WEI DI HUANG WAN and GUI ZHI TANG variation

Six-Ingredient Pill with Rehmannia and Cinnamon Twig Decoction

Sheng Di Huang *Rehmanniae Radix* 12 g

Xuan Shen *Scrophulariae Radix* 10 g

Mai Men Dong *Ophiopogonis Radix* 10 g

He Shou Wu *Polygoni multiflori Radix preparata* 12 g

Bai Shao *Paeoniae Radix alba* 12 g

Shan Zhu Yu *Corni Fructus* 10 g

Gou Qi Zi *Lycii Fructus* 10 g

Zhi Mu *Anemarrhenae Rhizoma* 10 g

Bai Mao Gen *Imperatae Rhizoma* 12 g

Tian Hua Fen *Trichosanthis Radix* 10 g

Zhi Zi *Gardeniae Fructus* 12 g

Mu Dan Pi *Moutan Cortex* 6 g

Huang Lian *Coptidis Rhizoma* 3 g

Dan Shen *Salviae miltiorrhizae Radix* 10 g

Hong Hua *Carthami Flos* 10 g

Gui Zhi *Cinnamomi Ramulus* 10 g

The herbs above were decocted in water for oral administration.

ACUPUNCTURE

Du-20 Baihui, ST-6 Jiache, Ren-22 Tiantu, ST-9 Renying, SP-10 Xuehai, ST-36 Zusanli, SP-6 Sanyinjiao, KI-3 Taixi and Bafeng (extra).

The patient received the treatment for a few months (treatment is generally once a week for a total of 6 months). She had no more complaints of pain, cold or colour change in her toes. Her toes were warming up, even during the cold season, during which she still had no symptoms even though the temperature got as low as 15°F. Her doctor reduced the Synthroid when her thyroid function returned to normal range for a while.

CASE TWO

SD was a 26-year-old woman who, on her first office visit, came in complaining of chest pain for 5 months during which deep breathing provided no improvement. She had had joint pain around her body and in the small joints for over 3 years, with dry skin, especially on her face and both arms, a dry mouth, thirst with a desire to drink cold water, itchy eyes and face, fingers

that turned purple and/or white when the weather was cold, stiffness in the morning, difficulty breathing when she climbed the stairs, fatigue and hearing loss. She was told that she might only have 3–6 months to live, because there was no specific treatment for her condition. She was told to prepare for a lung and heart transplant.

Before the patient came to the clinic, she had tried intravenous prostacyclin (Flolan) for 3 months, but the therapy failed.

Physical examination: blood pressure 115/78 mmHg, heart rate 115 beats/min, loud on P2, red spots on the face (erythema), and both arms had dry skin that was peeling off and looked like fish scales. Her joints were not deformed and her extremities had no oedema. Her tongue was red with a fissure on the surface and less coating. Her pulse was thready and rapid.

2 weeks prior to office visit: laboratory studies

Total protein: 10.3 g/dL (normal range 6.3–8.2)

Albumin: 4.2 g/dL (3.5–5.0)

Globulin: 6.1 g/dL (1.8–3.7)

ALT: 65 U/L (9–52)

AST: 54 U/L (14–36)

Impression:

1. Raynaud's phenomenon (Liver Yin deficiency and Fire rising, Heat in the Ying and Xuefen, and Blood stasis)
2. Erythema
3. Ischaemic necrosis of the femoral head
4. Connective tissue disease with pulmonary hypertension
5. Scleroderma overlapping with lupus
6. Liver sclerosis

HERBAL TREATMENT

DU HUO JI SHENG TANG and XI JIAO DI HUANG TANG variation

Angelica Pubescens and *Sangjisheng* Decoction, and *Rhinoceros Horn* and *Rehmannia* Decoction

Du Huo *Angelicae pubescentis Radix* 10 g

Qin Jiao *Gentianae macrophyllae Radix* 10 g

Fang Feng *Saposhnikoviae Radix* 10 g

Xi Xin *Asari Herba* 3 g

Du Zhong *Eucommiae Cortex* 10 g

Huai Niu Xi *Achyranthis bidentatae Radix* 10 g

Gui Zhi *Cinnamomi Ramulus* 10 g

Bai Shao *Paeoniae Radix alba* 12 g

Tao Ren *Persicae Semen* 10 g

Hong Hua *Carthami Flos* 10 g

Shui Niu Jiao *Bubali Cornu* 10 g

Xuan Shen *Scrophulariae Radix* 10 g

Mu Dan Pi *Moutan Cortex* 10 g

The herbs above were decocted in water for oral administration.

ACUPUNCTURE

KI-3 Taixi, SP-6 Sanyinjiao, GB-29 Juliao, GB-30 Huantiao, BL-54 Zhibian, Baxie (extra) and ashi points on the face for erythema.

We did not treat the patient's Raynaud's phenomenon until there was no longer any flaring of the autoimmune diseases. At that time the ischaemic necrosis of the femoral head had become a major health problem, so we treated the Raynaud's phenomenon, erythema and ischaemic necrosis of the femoral head together. Three of the problems – Raynaud's phenomenon, erythema and ischemic necrosis of the femoral head – resolved during the 12 months for which the patient received treatment. She was also able to avoid surgery to replace the femoral head.

6. Analyses of the cases

There is no name for Raynaud's phenomenon in Chinese medicine. However, according to its symptoms, it can be characterized as *Yu Zheng* and *Jue Zheng*. This indicates that Raynaud's phenomenon is not a syndrome of Yang deficiency, but is Yang Qi stagnation, which cannot flow well in the channels and vessels. This results from Blood stasis blocking the channels and making the vessel diameter smaller and narrower.

(1) Case one

This patient had been diagnosed with Hashimoto's thyroiditis and Sjögren's syndrome simultaneously. The patient complained of a cold feeling in both her feet and toes from Raynaud's phenomenon. The treatment we chose was acupuncture at Bafeng (extra), SP-6 Sanyinjiao and SP-10 Xuehai; the herbal medicine was **Gui Zhi Cinnamomi Ramulus**, **Chi Shao Paeoniae Radix rubra**, **Hong Hua Carthami Flos**, etc. to activate the Yang, remove the Blood stasis and improve circulation in the toes. A few months later, after treatment had ended, the weather in January and February was very cold, with the temperature being around 15°F during the day. Even on days with snow or ice, the patient did not complain of a cold feeling in her toes, and she had no more colour change to pale or blue.

(2) Case two

This was a very severe case with scleroderma overlapping lupus. There was an acute flare of connective tissue disease with pulmonary hypertension and Raynaud's phenomenon. Finally, the condition developed into ischaemic necrosis of the femoral head. This was a result of using steroids for a long period of time, which decreased the microcirculation. The Chinese medical treatment was initially aimed at the scleroderma and pulmonary hypertension in order to save the patient's life. Years later, the patient's pulmonary blood pressure returned to normal and the condition went into remission. At that point, we started to treat the

Raynaud's phenomenon, the ischaemic necrosis of the femoral head and the erythema on her face. During treatment we could see the blood flow returning to her hands and fingers. The colour of her fingers changed from purple to white to pink in just a few minutes. One year later, the pain in her hip joints had gone and the erythema on her face had almost gone. The herbs **Du Huo** *Angelicae pubescentis Radix* and **Qin Jiao** *Gentianae macrophyllae Radix* dispel Wind-Dampness, and **Xi Xin** *Asari Herba* relieves pain; **Du Zhong** *Eucommiae Cortex* and **Huai Niu Xi** *Achyranthis bidentatae Radix* strengthen the back and hip joints; **Gui Zhi** *Cinnamomi Ramulus* opens the channels; **Bai Shao** *Paeoniae Radix alba*, **Tao Ren** *Persicae Semen* and **Hong Hua** *Carthami Flos* remove Blood stasis; **Shui Niu Jiao** *Bubali Cornu*, **Xuan Shen** *Scrophulariae Radix* and **Mu Dan Pi** *Moutan Cortex* nourish Yin and clear Heat that arises from autoimmune disease.

The acupuncture points chosen were KI-3 Taixi and SP-6 Sanyinjiao to nourish Liver and Kidney Yin and increase bone density; GB-29 Juliao, GB-30 Huantiao and BL-54 Zhibian to treat ischaemic necrosis of the femoral head; Baxie (extra) to treat the cold hands and Raynaud's phenomenon; and ashi points on the face to treat the erythema. The erythema got better gradually, with the dead skin sloughing off with pus.

Both of these patients had Raynaud's phenomenon due to autoimmune disease. First we had to treat the primary disease, and then treat the secondary Raynaud's phenomenon. However, it is useful to understand which is more important and needs to be solved first. In Case one, which was without immediate life risk, we could treat the primary and secondary diseases together; Case two, in which there was a grave risk to the patient's life, required us to focus on the primary disease. Once the primary disease was stable, the secondary disease became our focus and we began to treat it, but at the same time taking care of the primary disease too, by keeping it in remission.

7. Lifestyle prescriptions and health issues

Raynaud's phenomenon is caused by extreme arterial constriction, or the artery wall becomes impaired and thickens, reducing blood circulation.

- 1 The principle of treatment for Raynaud's phenomenon is based on activating the Qi and removing Blood stasis.
- 2 Activating Qi and Yang is different from replenishing Qi and warming Yang. The patient should abstain from herbal medicine that is pungent and hot in nature, which may impair Yin.
- 3 The pathology of Raynaud's phenomenon is not Qi and Yang deficiency, but Blood stasis and Qi stagnation that causes the channels to be blocked and affects the vessels' circulation. As a result, Qi and Yang cannot follow the flow of Blood in the vessels to warm the extremities, particularly the fingers and toes. The treatment should open the blockage caused by the Blood stasis so that Qi and Yang can pass easily through the vessels into the limbs.

Raynaud's phenomenon usually accompanies one or more autoimmune diseases. The process of autoimmune disease is that disordered immune cells destroy tissues and cause apoptosis. Cells, tissues and organs are visible substance belonging to Yin, but the tissues or cells have different functions. For instance, if the thyroid gland were being destroyed, this would result in reduced secretion of thyroxine and slowing down of the metabolism, perhaps resulting in lower basal body temperature. In Raynaud's phenomenon the cause is damage to the internal wall of small arteries as a result of disordered immunity, leading to blocked circulation or small artery constriction that blocks the circulation. As a result of the inflammation (redness, swelling, heat and pain), caused by Heat and Heat pathogens, which may be the result of Yin deficiency, replenishing Qi and warming Yang may trigger the primary disease to flare. Replenish Qi and warm Yang cautiously in treating Raynaud's phenomenon.

- 4 Treat the primary autoimmune disease first and Raynaud's phenomenon secondarily.
- 5 Perform physical exercises to strengthen the body's ability to resist feeling cold, keep the body warm and improve circulation.
- 6 Be sure not to rub or apply pressure to the affected part where there is pus, scabs and ulceration.
- 7 Keep warm. It is important not only to keep the extremities warm but also to avoid chilling any part of the body. In cold weather, people with Raynaud's phenomenon must pay particular attention to dressing. Several layers of loose clothing, socks, hats, and gloves or mittens are recommended. A hat is important because a great deal of body heat is lost through the scalp. Feet should be kept dry and warm. Some people find it helpful to wear mittens and socks to bed during the winter. Chemical warmers, such as small heating pouches that can be placed in pockets, mittens, boots or shoes, can give added protection during long periods outdoors.
People with Raynaud's phenomenon should also be aware that air conditioning can trigger attacks. Turning down the air conditioning or wearing a sweater may help to prevent attacks. Some people also find it helpful to use insulated drinking glasses and to put on gloves before handling frozen or refrigerated foods.
- 8 Stop smoking. The nicotine in cigarettes causes the skin temperature to drop and the blood vessels to constrict, which may lead to an attack.
- 9 Control stress. Stress and emotional upsets may trigger an attack, particularly for people who have idiopathic Raynaud's disease. Learning to recognize and avoid stressful situations may help to control the number of attacks.
- 10 Exercise. Exercising regularly can decrease the number of attacks of Raynaud's, particularly idiopathic Raynaud's disease.

1. Herrick AL. Pathogenesis of Raynaud's phenomenon. *Rheumatology* 2005; 44:587–596.
2. The *Qi Yu* of *Yu Zheng* (*Qi Yu*) refers to one of the 'Six Yu'. In this case, it generally refers to Liver Qi stagnation, which may cause emotional disorder and lead to Raynaud's phenomenon. The symptoms are anger, tenderness in the chest, dizziness and cold limbs.
3. Melancholy is used to characterize Raynaud's phenomenon in this case because it may result from Liver Qi stagnation causing depression.

Scleroderma

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Scleroderma is a diffuse connective tissue disease characterized by changes in the skin, blood vessels, skeletal muscles and internal organs. It is one type of rheumatic disease and is also called mixed connective tissue disease.

1. Western medical aetiology and pathology

Scleroderma literally means hard skin. It is a symptom of a group of diseases that involves the abnormal growth of connective tissue, which supports the skin and internal organs. In some cases, scleroderma occurs as hard, tight skin; in others, the damage goes deeper, affecting blood vessels and organs, such as the lungs, heart, liver and kidneys.

The cause of scleroderma is generally unknown and it may be the result of several factors working together. However, most researchers think the causes include autoimmunity, environmental exposure, genetics and infections.

T-cell activation plays a pivotal role in the immunopathogenesis. Lymphocyte processes are tightly controlled by molecules that activate either proliferation or apoptosis. Possibly an imbalance in apoptotic function or increasing autoreactive cells may lead to persistent autoreactive phenomena.¹

Patients with systemic sclerosis also have altered B-cell homeostasis characterized by increased numbers of native B cells and reduced memory B cells. Although memory B cells are decreased in number, they are chronically activated, possibly because of CD19 overexpression in B cells.² The immune system and inflammatory activity appears to mirror many other rheumatic disorders. In scleroderma, the disordered immune system stimulates fibroblasts to produce too much of the collagen found in lungs, skin and kidneys. In its milder forms, the effects of this build-up are limited to the skin and blood vessels. In its more serious forms, it also can interfere with the normal functioning of joints and internal organs.

Genetics may also be a predisposing reason why some people are at risk of scleroderma.

Exposure to some environmental factors may trigger the disease in people who are genetically predisposed to it. Suspected triggering factors include viral infections, certain adhesive and coating materials, and organic solvents such as vinyl chloride or trichloroethylene.

Women have a much higher risk of developing scleroderma than men. However, so far, the role of oestrogen or other female hormones has not been proven in the process of scleroderma.

When the lungs are involved, the alveoli and capillaries are damaged and destroyed, leading to pulmonary hypertension. The result is lower oxygen levels in the blood, which may lead to heart failure.

2. Diagnosis by Western medicine

Scleroderma has two main classifications: localized scleroderma that affects only certain parts of the body, and systemic sclerosis that affects the entire body. Both groups include subgroups, so the skin may show tightness, thickening and/or hardening on physical examination.

Diagnosis is made by laboratory tests and radiography:

- The erythrocyte sedimentation rate (ESR) is raised.
- Rheumatoid factor may be increased.
- Antinuclear antibody may be positive.

- Antitopoisomerase-1 or anti-Scl-70 antibodies may be positive.
- Urinalysis may be positive for protein and blood.
- Radiography may show lung fibrosis.
- Pulmonary function may be reduced and there may be evidence of pulmonary hypertension.
- A skin biopsy may also be performed.

3. Chinese medical aetiology and pathology

Scleroderma is a kind of autoimmune disease caused by sclerosis of the skin. There are two types of scleroderma: localized and systemic. Generally the process has three stages: red skin with swelling, sclerosis and atrophy. Chinese medicine calls this *Pi Bi* 皮痹, or skin hardening.

Wind-Heat or Wind-Cold can invade the body, leading to pathogenic Heat or Cold in the Lung, or Warm diseases develop and impair Yin. This can then lead to deficient Fire singeing the Blood, causing Blood stasis which blocks the channels. As a result, Qi and Blood cannot flow smoothly through the channels, so damaging the skin. These pathogenic factors can also follow the channels into certain organs and impair their function.

Wind-Cold-Dampness can also invade the body. At the start, the pathogens stay in the Lung and cause skin thickness and swelling. The Cold-Dampness directly impairs the Spleen and can cause a Spleen function disorder. This leads to Qi deficiency and loss of the Qi's function of warming the body and promoting Blood circulation in the blood vessels. If Qi deficiency prevents the Blood from flowing smoothly in the vessels, it can cause the Blood to leave the vessels and become Blood stasis. When the disease lasts for a long time, the pathogens continue to block the channels, affecting the smooth movement of Liver Qi and leading to Liver Qi stagnation. If Qi stagnates for a long time, this will transform to Fire and impair Yin. Yin deficiency and Qi stagnation can aggravate Blood stasis. Eventually, the process of the illness becomes Heat, Yin deficiency, Blood stasis and Qi deficiency.

4. General treatment principle

Pathogenic factors of the illness include Heat, Cold, Yin deficiency, Qi deficiency and Blood stasis. Heat, Cold, and Yin and Qi deficiency all cause Blood stasis or aggravate Blood stasis. Conversely, Blood stasis can aggravate the illness. No matter what the pathogenic factors are, the key pathological change is Blood stasis. Therefore, no treatment will succeed without removing Blood stasis.

DIFFERENTIATION AND TREATMENT

1. BLOOD STASIS

CLINICAL MANIFESTATIONS

The skin is abnormal and becomes thick, hypertrophic and hard. The skin surface becomes bright red, purplish red or yellowish red. The tongue is light purple with a white and thin coating, or ecchymosis. The pulse is rapid.

TREATMENT PRINCIPLE

Promote Blood circulation and remove Blood stasis.

HERBAL TREATMENT

TAO HONG SI WU TANG *variation*

Four-Substance Decoction with Safflower and Peach Pit

Tao Ren *Persicae Semen* 9 g

Hong Hua *Carthami Flos* 9 g

Sheng Di Huang *Rehmanniae Radix* 12 g

Chi Shao *Paeoniae Radix rubra* 12 g

Bai Shao *Paeoniae Radix alba* 12 g

Chuan Xiong *Chuanxiong Rhizoma* 9 g

Dan Shen *Salviae miltiorrhizae Radix* 9 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

BL-17 Geshu, SP-10 Xuehai and SP-6 Sanyinjiao.

SUPPLEMENTARY TREATMENT

If the patient has hypertension, add Xia Ku Cao *Prunellae Spica* and Ze Xie *Alismatis Rhizoma*, and needle Du-20 Baihui and front head 5 needles (extra); for tightness in the chest, add Gua Lou *Trichosanthis Fructus* and Xie Bai *Allii macrostemi Bulbus*, and needle Ren-17 Tanzhong and PE-6 Neiguan.

2. LIVER AND KIDNEY YIN DEFICIENCY WITH BLOOD STASIS**CLINICAL MANIFESTATIONS**

The skin becomes thick, sclerotic, or atrophied and thin. There is pain in the joints and lower back, tinnitus, vertigo, thirst, a dry mouth, low fever and sweats at night. There is ecchymosis on the top or bottom of the tongue, which has less coating or a small fissure. The pulse is thready and rapid.

TREATMENT PRINCIPLE

Nourish Liver and Kidney Yin, promote Blood circulation and remove Blood stasis.

HERBAL TREATMENT

ZUO GUI WAN and TAO HONG SI WU TANG *variation*

Restore the Left Kidney Pill and Four-Substance Decoction with Safflower and Peach Pit

Sheng Di Huang *Rehmanniae Radix* 12 g

Shan Zhu Yu *Corni Fructus* 12 g

Fu Ling *Poria* 9 g

Mu Dan Pi *Moutan Cortex* 9 g

Ze Xie *Alismatis Rhizoma* 9 g

Bie Jia *Trionycis Carapax* 20 g (decocted first for 30 min)

Tao Ren *Persicae Semen* 9 g

Hong Hua *Carthami Flos* 9 g

Chuan Xiong *Chuanxiong Rhizoma* 9 g

Dang Gui *Angelicae sinensis Radix* 12 g

Chi Shao *Paeoniae Radix rubra* 12 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

BL-17 Geshu, BL-18 Ganshu, BL-23 Shenshu and KI-3 Taixi.

SUPPLEMENTARY TREATMENT

If the patient has anxiety, add **Mu Dan Pi** *Moutan Cortex* and **Shan Zhi Zi** *Gardeniae Fructus*, and needle HE-7 Shenmen, Yintang (extra), and Ren-17 Tanzhong; for insomnia, add **Suan Zao Ren** *Ziziphi spinosae Semen* and **Wu Wei Zi** *Schisandrae Fructus*, and needle Du-20 Baihui, Yintang (extra) and HE-7 Shenmen.

3. SPLEEN DEFICIENCY WITH BLOOD STASIS

CLINICAL MANIFESTATIONS

The skin is sclerotic and atrophied, accompanied by fatigue, loss of appetite, loose stool, loss of hair and dizziness. The tongue is pale with teeth marks and ecchymosis on the top or bottom. The pulse is thready and deep.

TREATMENT PRINCIPLE

Strengthen Spleen and replenish the Qi, and promote circulation of Blood and remove Blood stasis.

HERBAL TREATMENT

GUI PI TANG *variation*

Restore the Spleen Decoction

Dang Shen *Codonopsis Radix* 12 g

Huang Qi *Astragali Radix* 12 g

Bai Zhu *Atractylodis macrocephalae Rhizoma* 9 g

Dang Gui *Angelicae sinensis Radix* 12 g

Fu Ling *Poria* 12 g

Mu Xiang *Aucklandiae Radix* 4 g

Ji Xue Teng *Spatholobi Caulis* 15 g

Dan Shen *Salviae miltiorrhizae Radix* 12 g

Chi Shao *Paeoniae Radix rubra* 12 g

Chuan Xiong *Chuanxiong Rhizoma* 9 g

Hong Hua, *Carthami Flos* 9 g

Tao Ren *Persicae Semen* 9 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

BL-17 Geshu, BL-20 Pishu, BL-23 Shenshu and KI-3 Taixi.

SUPPLEMENTARY TREATMENT

If the patient feels chilly, fatigued and has a pale tongue, add **Tai Zi Shen** *Pseudostellariae Radix* and **Huang Jing** *Polygonati Rhizoma*, and needle ST-36 Zusanli and front head line 3 (extra); however, if replenishing Qi and warming Yang, you must be careful not to trigger a flare of the illness.

5. Appendix

(1) Joint pain

Refer to Chapter 5: Rheumatoid arthritis.

(2) Pulmonary hypertension

1. LIVER QI STAGNATION WITH BLOOD STASIS

CLINICAL MANIFESTATIONS

Shortness of breath and difficulty breathing, distending pain in the chest, anxiety, depression and frequent sighing. The tongue is light red. The pulse is taut.

TREATMENT PRINCIPLE

Promote flow of Liver Qi, promote Blood circulation and remove Blood stasis.

HERBAL TREATMENT

GUA LOU XIE BAI BAI JIU TANG and **XUE FU ZHU YU TANG** variation

Trichosanthes Fruit, Chinese Chive and Wine Decoction, and Drive Out Stasis in the Mansion of Blood Decoction

Gua Lou *Trichosanthis Fructus* 12 g

Xie Bai *Allii macrostemi Bulbus* 12 g

Dang Gui *Angelicae sinensis Radix* 9 g

Sheng Di Huang *Rehmanniae Radix* 12 g

Tao Ren *Persicae Semen* 12 g

Hong Hua *Carthami Flos* 12 g

Chi Shao *Paeoniae Radix rubra* 12 g

Gan Cao *Glycyrrhizae Radix* 3 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

Du-20 Baihui, BL-18 Ganshu, SP-10 Xuehai and LIV-3 Taichong.

SUPPLEMENTARY TREATMENT

If the patient has depression, add **Chai Hu** *Bupleuri Radix* and **Yu Jin** *Curcumae Radix*, and needle Du-20 Baihui, Yintang (extra) and HE-7 Shenmen; if the patient has indigestion, add **Ji Nei Jin** *Gigeria galli Endothelium comeum* and **Shan Zha** *Crataegi Fructus*, and needle Ren-12 Zhongwan.

2. SPLEEN QI DEFICIENCY WITH BLOOD STASIS

CLINICAL MANIFESTATIONS

Shortness of breath and difficulty breathing, pale facial colouring, fatigue and loose stool. There may be swelling in both ankles and palpitations. The tongue is pale with teeth marks. The pulse is deep and weak.

TREATMENT PRINCIPLE

Nourish Spleen Qi and remove Blood stasis.

HERBAL TREATMENT

SHEN LING BAI ZHU SAN and TAO HONG SI WU TANG variation

Ginseng, Poria and Atractylodis Macrocephalae Powder, and Four-Substance Decoction with Safflower and Peach Pit

Dang Shen *Codonopsis Radix* 12 g

Huang Qi *Astragali Radix* 12 g

Bai Zhu *Atractylodis macrocephalae Rhizoma* 9 g

Fu Ling *Poria* 12 g

Hong Hua *Carthami Flos* 12 g

Tao Ren *Persicae Semen* 9 g

Sheng Di Huang *Rehmanniae Radix* 9 g

Chi Shao *Paeoniae Radix rubra* 12 g

Chuan Xiong *Chuanxiong Rhizoma* 9 g

Dan Shen *Salviae miltiorrhizae Radix* 12 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

BL-17 Geshu, BL-23 Pishu, ST-36 Zusanli and SP-9 Yinlingquan.

SUPPLEMENTARY TREATMENT

If a patient has diarrhoea, but no stomach pain or no burning sensation with bowel movement, and the tongue is pale and the pulse is deep and slow, add Bu Gu Zhi *Psoraleae Fructus* and Wu Wei Zi *Schisandrae Fructus*, and needle SP-4 Gongsun and ST-25 Tianshu.

3. LIVER AND KIDNEY YIN DEFICIENCY WITH BLOOD STASIS**CLINICAL MANIFESTATIONS**

Shortness of breath with difficulty breathing, chest pain, thirst and dry mouth, which may be accompanied by dry skin. The tongue is red with less coating or a fissure. The pulse is thready and rapid.

TREATMENT PRINCIPLE

Nourish Liver and Kidney Yin and remove Blood stasis.

HERBAL TREATMENT

LIU WEI DI HUANG WAN and DAN SHEN YIN variation

Six-Ingredient Pill with Rehmannia and Salvia Decoction

Sheng Di Huang *Rehmanniae Radix* 15 g

Shan Zhu Yu *Corni Fructus* 9 g

Mai Men Dong *Ophiopogonis Radix* 9 g

Wu Wei Zi *Schisandrae Fructus* 6 g

Mu Dan Pi *Moutan Cortex* 6 g
 Fu Ling *Poria* 9 g
 Dan Shen *Salviae miltiorrhizae Radix* 12 g
 San Leng *Sparganii Rhizoma* 9 g
 E Zhu *Curcumae Rhizoma* 9 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

BL-17 Geshu, BL-18 Ganshu, BL-23 Shenshu and front head line 3 (extra).

SUPPLEMENTARY TREATMENT

If the patient has already entered a chronic condition and has palpitations, insomnia and anxiety, add **Wu Wei Zi** *Schisandrae Fructus*, **Mu Dan Pi** *Moutan Cortex* and **Chai Hu** *Bupleuri Radix*, and needle Du-20 Baihui, front head 5 needles (extra) and HE-7 Shenmen; if the patient has stomach reflux, add **Huang Lian** *Coptidis Rhizoma* and **Wu Zhu Yu** *Evodiae Fructus*, and needle PE-6 Neiguan and ST-25 Tianshu.

4. STAGNATION OF HEART BLOOD

CLINICAL MANIFESTATIONS

Sharp pain in the chest, shortness of breath and palpitations. The tongue has ecchymosis on the top or bottom with a white and thin coating. The pulse is thready and uneven.

TREATMENT PRINCIPLE

Remove Blood stasis and promote Blood circulation, resolve masses.

HERBAL TREATMENT

DAN SHEN TONG LUO YIN *variation*
Salvia Decoction to Unblock the Channels
 Dan Shen *Salviae miltiorrhizae Radix* 20 g
 Chi Shao *Paeoniae Radix rubra* 12 g
 Dang Gui *Angelicae sinensis Radix* 12 g
 Ji Xue Teng *Spatholobi Caulis* 15 g
 Huai Niu Xi *Achyranthis bidentatae Radix* 9 g
 Chuan Xiong *Chuanxiong Rhizoma* 9 g
 Yu Jin *Curcumae Radix* 12 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

BL-15 Xinshu, BL-14 Jueyinshu, HE-7 Shenmen, Ren-17 Tanzhong and SP-10 Xuehai.

SUPPLEMENTARY TREATMENT

If the patient has chest pain with shortness of breath, add **Gua Lou** *Trichosanthis Fructus* and **Xie Bai** *Allii macrostemi Bulbus*, and needle Ren-22 Tiantu, Ren-17 Tanzhong and PE-6 Neiguan.

(3) Oesophageal reflux and heartburn

CLINICAL MANIFESTATIONS

Stomach reflux or a burning sensation in the stomach that sometimes moves upward through the oesophagus to the throat. The tongue is red. The pulse is taut, especially in the left guan position.

TREATMENT PRINCIPLE

Eliminate excess Liver Fire and promote Spleen Qi.

HERBAL TREATMENT

ZUO JIN WAN and XIAO BAN XIA TANG variation

Left Metal Pill and Minor Pinellia Decoction

Huang Qin *Scutellariae Radix* 3 g

Wu Zhu Yu *Evodiae Fructus* 2 g

Zhi Ban Xia *Pinelliae Rhizoma preparatum* 9 g

Chen Pi *Citri reticulatae Pericarpium* 9 g

Zhu Ru *Bambusae Caulis in taeniam* 9 g

Fu Ling *Poria* 12 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

Du-20 Baihui, Ren-15 Jiuwei, Ren-12 Zhongwan, ST-25 Tianshu and ST-34 Liangqiu.

SUPPLEMENTARY TREATMENT

Gastro-oesophageal reflux disease (GORD) is a common condition in patients with autoimmune disease and is usually associated with anxiety, insomnia and stress. For the treatment, one should choose **Mu Dan Pi** *Moutan Cortex*, **Zhi Zi** *Gardeniae Fructus*, **Chai Hu** *Bupleuri Radix* and **Bai Shao** *Paeoniae Radix alba*, and needle Du-20 Baihui and front head line 2 (extra).

(4) Ulcerations on fingertips or toes

Refer to Chapter 13: Raynaud's phenomenon.

CASE STUDIES

CASE ONE

HT was a 25-year-old woman who, on her first office visit, came in complaining of chest pain and shortness of breath that was aggravated when she went up and down the stairs. She had had the symptoms for 5 months, and deep breathing did not ameliorate them. Additionally, she had had joint pain all over her body, particularly in the small joints, with stiffness in the morning for over 3 years. She had dry and itchy skin, especially on her face and both arms, a dry mouth, thirst with a desire to drink cold water, itchy eyes, fingers that turned purple and/or white when the weather became cold, fatigue and hearing loss. She was told she might only have 3–6 months to live unless she chose to have heart and lung transplant surgery, because there was no effective treatment for her condition.

Before the patient came to the clinic, she had tried intravenous prostacyclin (Flolan) for 3 months, unsuccessfully.

Physical examination: blood pressure 115/78 mmHg, heart rate 115 beats/min, loud on P2, erythema on the face, both arms dry with peeling skin that looked like fish scales. Her joints were not deformed and her extremities had no oedema. Her tongue was red with a fissure on the surface and less coating. Her pulse was thready and rapid.

2 weeks prior to office visit: laboratory studies

Total protein: 10.3 g/dL (normal range 6.3–8.2)

Albumin: 4.2 g/dL (3.5–5.0)

Globulin: 6.1 g/dL (1.8–3.7)

Alanine aminotransferase (ALT): 65 U/L (9–52)

Aspartate aminotransferase (AST): 54 U/L (14–36)

Impression:

1. Acute flare-up of connective tissue disease with pulmonary hypertension (Liver Yin deficiency and Fire rising, Heat in the Ying and Xuefen, with Blood stasis)
2. Scleroderma with overlap of lupus
3. Liver sclerosis
4. Raynaud's phenomenon

TREATMENT PRINCIPLE

Eliminate Heat in the Ying and Xuefen, nourish Yin and remove Blood stasis.

HERBAL TREATMENT

XI JIAO DI HUANG TANG and **BAI HU TANG** variation

Rhinoceros Horn and Rehmannia Decoction, and White Tiger Decoction

Shui Niu Jiao Bubali Cornu 12 g

Sheng Di Huang Rehmanniae Radix 12 g

Chi Shao Paeoniae Radix rubra 10 g

Bai Shao Paeoniae Radix alba 10 g

Tao Ren Persicae Semen 10 g

Hong Hua Carthami Flos 10 g

Xia Ku Cao Prunellae Spica 10 g

Dang Gui Wei Angelicae sinensis Radix 10 g

Nu Zhen Zi Ligustri lucidi Fructus 10 g

Han Lian Cao Ecliptae Herba 10 g

Zi Cao Arnebiae/Lithospermi Radix 10 g

Mu Dan Pi Moutan Cortex 10 g

Tu Fu Ling Smilacis glabrae Rhizoma 20 g

Zhi Mu Anemarrhenae Rhizoma 10 g

Shi Gao Gypsum fibrosum 20 g (decocted first for 30 min)

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

Initially, the patient did not receive acupuncture.

The patient was told to have her liver enzymes checked once a month and also to have her lung function checked regularly.

4 months after first office visit

Total protein: 9.7 g/dL (6.3–8.2)
 Albumin: 4.0 g/dL (3.5–5.0)
 Globulin: 5.7 g/dL (1.8–3.7)

9 months after office visit

Total protein: 9.3 g/dL (6.3–8.2)
 Albumin: 4.3 g/dL (3.5–5.0)
 Globulin: 5.0 g/dL (1.8–3.7)
 ALT: 21 U/L (9–52)
 AST: 27 U/L (14–36)

1 year after office visit

Total protein: 8.7 g/dL (6.3–8.2)
 Albumin: 4.3 g/dL (3.5–5.0)
 Globulin: 4.4 g/dL (1.8–3.7)
 ALT: 25 U/L (9–52)
 AST: 30 U/L (14–36)
 IgG: 3140 mg/dL (694–1618)
 IgA: 612 mg/dL (68–378)
 IgM: 225 mg/dL (60–263)

1 week later: right heart catheterization and vasodilator trial: baseline pulmonary arterial pressure 66/24 mmHg (mean 38 mmHg). The patient had a central venous pressure (CVP) of 9 mmHg and a wedge pressure of 7 mmHg. Her cardiac output was 3.2 L/min. Therefore, it was determined she would not benefit at that time from therapy with a calcium channel blocker.

2 years after office visit

Antinuclear antibody (ANA) screen: positive

1 month later

ESR: 75 mm/h (0–15)

2 months later

AST: 25 U/L (0–31)
 ALT: 41 IU/L (0–31)
 ESR: 51 mm/h (0–25)
 IgG: 2460 mg/dL (690–1620)
 IgA: 498 mg/dL (70–380)
 IgM: 257 mg/dL (60–260)

3 years after office visit

Medications: hydroxychloroquine (Plaquenil) 400 mg; Flolan.

1 month later

Medications: prednisone 25 mg, Flolan and Plaquenil 200 mg.

5 months later: the patient may have had a flare-up of lupus. She had coughing with yellowish sputum, but no fever or shortness of breath. She was given prednisone 10 mg for 1 day and then 8 mg the next day.

3½ years after office visit

Transoesophageal echocardiography:

Left atrium: 33 cm (1.0–4.0)

Aorta: 2.4 cm (2.0–2.9)

Left ventricle (d): 4.4 cm (3.7–5.6)

Left ventricle (s): 2.8 cm

Septum (d): 1.1 cm (0.7–1.1)

Post. wall (d): 0.9 cm (0.6–1.1)

Left ventricular inflow, E wave: 62 cm/s

Left ventricular inflow, A wave: 49 cm/s

E/A ratio: 1.3

1 month later: the patient went to hospital where she was told she was not a candidate for a new medicine (endothelin inhibitor), but she could be weaned off her prostacyclin and switched to subcutaneous UT15. In general, she had been doing OK.

Medications: prednisone 6 mg, Plaquenil 400 mg and Flolan infusion.

5 months later: the patient skin's was better and it felt better, too. There was no worsening of her cardiopulmonary symptoms. She took the herbal medicine and had acupuncture daily. Her laboratory data were normal except for mild anaemia.

4 years after office visit

Echocardiography:

Right ventricle: size, normal; contraction, normal; free wall, normal; no masses

Left ventricular function: normal

Pulmonary: trivial pulmonary regurgitation.

3 months later: right heart catheterization; pulmonary hypertension absent.

2 days after right heart cathetrization

C3: 105 mg/dL (79–152)

C4: 17 mg/dL (12–42)

Medications: intravenous Flolan, Plaquenil 400 mg q.d., prednisone 4 mg q.d.

1 day later: the Flolan prescription was removed from the central catheter, because the cuts were infected.

5 years after office visit: her physician did not suggest that the right heart catheterization be repeated, because her clinical situation and echocardiography were normalizing well.

5 years, 10 months after office visit

Pulmonary function laboratory: forced expiratory spirometry showed a reduced forced vital capacity (FVC), suggesting a restrictive ventilatory defect. The total lung capacity was reduced, indicating a moderate restrictive ventilatory defect. The vital capacity (VC) was less than the FVC, indicating suboptimal effort. The residual volume/total lung volume (RV/TLC) ratio was increased, indicating early airway closure. The diffusing capacity was severely reduced, indicating a decreased alveolar–capillary surface area for gas exchange. The inspired volume was less than the VC, indicating that the actual diffusing capacity for carbon monoxide (D_{CO}) may have been underestimated.

Diagnosis: moderate restrictive ventilatory defect; severe gas transfer defect.

6 years after office visit

Total protein: 8.0 g/dL (6–8.2)

Albumin: 4.2 g/dL (3.5–5.3)

ESR: 28 mm/h (0–25)

The patient continued the Chinese medical treatment and was almost ready to discontinue her medication. Her skin returned to normal, her liver enzymes were normal, and pulmonary pressure was in the normal range.

CASE TWO

YS was a 26-year-old woman who had been diagnosed with scleroderma 9 months before her first office visit. She described skin pigment changes beginning in the summer 3 years ago, following sunbathing. Her skin remained dark and shiny, but she began to feel itching on her skin for several months after the sun exposure. A skin biopsy had been performed 1 year previously, and her doctor reported that the results were consistent with morphea. She had thickened skin, swollen fingers and difficulty making a fist.

Physical examination: the skin was thickening and shiny, and the patient had a little furrowing around the mouth. She had poikiloderma of the skin on the anterior chest, abdomen and thighs. She had moderate thickening of the hands bilaterally with abnormal capillary microscopy and active Raynaud's phenomenon. Her tongue was pale with teeth marks. Her pulse was thready and taut.

5 months prior to office visit: laboratory results

Antiscleroderma-70 Ab: 22 U/mL (negative <100)

ANA pattern:

SS-A: negative

SS-B: negative

Sm: negative

RNP: negative

DNA, titre: negative

C3: 100.6 mg/dL (90.0–207)

C4: 18.3 mg/dL (17.4–52.2)

C-reactive protein (CRP): <0.2 mg/dL (0–0.9)

ANA, titre: >1 : 640

Impression:

1. Diffuse systemic scleroderma (Spleen and Lung Qi deficiency with Blood stasis)
2. Raynaud's phenomenon
3. GORD

TREATMENT PRINCIPLE

Remove Blood stasis, help the flow of Qi and open the channels.

HERBAL TREATMENT

Patient declined herbs.

ACUPUNCTURE

Baxie (extra), Bafeng (extra), Du-20 Baihui, LI-11 Quchi, SP-10 Xuehai, ST-36 Zusanli and SP-6 Sanyinjiao.

The patient only received three sessions of acupuncture, after which she felt the skin on her hands and feet become looser.

CASE THREE

BE was a 33-year-old woman who, on her first office visit complained of tightness and pain in the chest and difficulty breathing for more than 1 year. Some 1.5 years ago, she felt she had shortness of breath and chest pain when she was walking down the street. These symptoms gradually worsened, so she went to her doctor and was diagnosed with primary pulmonary hypertension. She had insomnia, difficulty falling asleep, anxiety and depression. One month ago she started to take medication for emotional disorder. She had heart burn and stomach reflux; she drank two or three glasses of wine every night. She had five to six bouts of watery diarrhoea every day, but had occasionally had constipation for about 11 months. The patient reported that her pulmonary pressure was 110/70 mmHg.

Physical examination: blood pressure 128/70 mmHg; heart rate 78 beats/min. The tongue was pale and purple with teeth marks, and the sublingual veins were varicose. Her pulse was thready and the left guan was taut.

2 months prior to office visit: right heart catheterization was remarkable for severe pulmonary hypertension with near-systemic pressures.

2 weeks after office visit: laboratory reports

IgA: 162 mg/dL (81–463)

IgG: 1100 mg/dL (694–1618)

IgM: 449 mg/dL (48–271)

Impression:

1. Primary pulmonary hypertension (Liver Qi stagnation with Blood stasis)
2. Insomnia (Qi and Blood deficiency cannot nourish the Heart)
3. Anxiety
4. Depression
5. Irritable bowel syndrome (IBS) (lack of coordination between the Liver and Spleen)

Medication: amlodipine (Norvasc) 10 mg q.d., sildenafil (Revatio) 40 mg t.i.d.

TREATMENT PRINCIPLE

Smooth the Liver and relieve chest oppression, remove Blood stasis, relieve depression and anxiety, and relieve mental stress.

HERBAL TREATMENT

CHAI HU SHU GAN SAN and GUA LOU XIE BAI BAI JIU TANG variation

Bupleurum Powder to Spread the Liver, and Trichosanthes Fruit, Chinese Chive and Wine Decoction

Chai Hu *Bupleuri Radix* 10 g

Chi Shao *Paeoniae Radix rubra* 12 g

Bai Shao *Paeoniae Radix alba* 12 g

Chen Pi *Citri reticulatae Pericarpium* 6 g

Zhi Ke *Aurantii Fructus* 10 g

Fu Ling *Poria* 12 g

Huang Qin *Scutellariae Radix* 12 g

Xie Bai *Allii macrostemi Bulbus* 10 g

Qiang Gua Lou *Trichosanthis Fructus* 10 g

Fang Feng *Saposhnikoviae Radix* 12 g

Dan Shen *Salviae miltiorrhizae Radix* 6 g

Hong Hua *Carthami Flos* 10 g

Tao Ren *Persicae Semen* 6 g

Gan Cao *Glycyrrhizae Radix* 3 g

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

Du-20 Baihui, Yintang (extra), front head 5 needles (extra), Ren-17 Tanzhong, PE-6 Neiguan and LIV-3 Taichong.

8 months after office visit: the patient reported that her pulmonary pressure had reduced to 55/25 mmHg (compared with the previous measurement of 100/40 mmHg, and that before treatment of 110/70 mmHg). She received treatment for 1 year, after which the diarrhoea had gone and her emotions were under control.

3 months later: the patient reported that her blood oxygen was rising to the normal level 99% (from 91%). She continued her full-time work.

CASE FOUR

FC was a 12-year-old girl who, on her first office visit, came in complaining of fatigue, difficulty breathing for over 3 years, intolerance to heat, hands and feet intolerant to cold, stomach reflux, normal appetite, seizures averaging once a month (under medication) and finger joint pain so that she could not make a fist. Her stool and urination were normal.

Physical examination: erythematic lesions over the nose bilaterally with a dark red colour. The patient had a 'steroid face', showing that she was experiencing a side-effect of steroids: a puffy, oedematous face that made her look like she had gained weight. Her blood pressure was 116/75 mmHg, heart rate 104 beats/min with a galloping rhythm, and the lungs were clear. The skin on her entire body skin became thick, hard, shiny and inelastic. She had ankle oedema (+), her hands and fingers were swollen so that she could not make a fist, and the skin was light purple and cold on both hands. She had a light pink tongue with a thin and white coating. Her sublingual veins were not distended. Her pulse was deep, thready and rapid.

3 months prior to office visit: laboratory result

Percutaneous oxygen saturation on room air: 82%

Alkaline phosphatase (ALP): 149 U/L (normal range 39–117)

Lactate dehydrogenase (LDH): 253 U/L (120–240)

Brain natriuretic peptide (BNP): 579.1 pg/mL (0–100)

3 weeks later

BNP: 1328.4 pg/mL (0–100)

2 months prior to office visit

Electrocardiography: normal sinus rhythm with right atrial enlargement, right axis deviation and right ventricular hypertrophy.

Two-dimensional echo/Doppler study, with pulsed and continuous wave: enlarged right-sided structures with enlarged right atrium

Impression:

1. Systemic scleroderma (Yin deficiency with Blood stasis)
2. Pulmonary hypertension secondary to scleroderma
3. Myocarditis
4. Pericarditis
5. Raynaud's phenomenon
6. Epilepsy (Yin deficiency with Liver Yang rising)
7. Juvenile rheumatoid arthritis
8. Hypertension

Medication: prednisolone (Orapred) 30 mg, sildenafil 37.5 mg/mL, ranitidine (Zantac) 75 mg b.i.d., calcium carbonate 500 mg b.i.d., calcitriol 800 units q.d., bosentan 125 mg b.i.d., atenolol 12.5 mg b.i.d., levetiracetam (Keppra) and oxygen 2L per nasal cannula.

TREATMENT PRINCIPLE

Nourish Heart Yin, remove Blood stasis, clear Heat, and restore normal coordination between Yin and Yang.

HERBAL TREATMENT

TAO HONG SI WU TANG and DU HUO JI SHENG TANG variation

Four-Substance Decoction with Safflower and Peach Pit, and Angelica Pubescens and Sangjisheng Decoction

Sheng Di Huang *Rehmanniae Radix* 12 g

Dang Gui *Angelicae sinensis Radix* 10 g

Chuan Xiong *Chuanxiong Rhizoma* 10 g

Hong Hua *Carthami Flos* 10 g

Dan Shen *Salviae miltiorrhizae Radix* 10 g

Chi Shao *Paeoniae Radix rubra* 12 g

Bai Shao *Paeoniae Radix alba* 12 g

Qiang Huo *Notopterygii Rhizoma seu Radix* 6 g

Qin Jiao *Gentianae macrophyllae Radix* 10 g

Du Huo *Angelicae pubescentis Radix* 10 g

Fu Ling *Poria* 10 g

Bai Zhu *Atractylodis macrocephalae Rhizoma* 10 g

Chen Pi *Citri reticulatae Pericarpium* 10 g

Mu Dan Pi *Moutan Cortex* 6 g

Mai Men Dong *Ophiopogonis Radix* 12 g

Wu Wei Zi *Schisandrae Fructus* 10 g

Ji Xue Teng *Spatholobi Caulis* 15 g

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

Patient declined acupuncture.

1 month after office visit

BNP: 1240 pg/mL (0–100)

4 days later: the physician's report stated that her condition was better, especially her skin, with a gradual reduction of the erythematic spots and body skin becoming softer. The oedema seemed to be somewhat improved as well. However, the patient still had chest pain and shortness of breath. Physical examination showed the heart rate was 82 beats/min. Her skin looked smoother with traces of oedema only in the lower extremities.

6. Analysis of the cases

Scleroderma and related connective tissue diseases are chronic inflammatory autoimmune diseases that can damage the blood vessels of the lung, skin and other organs. Pulmonary hypertension is a common complication of the disease that can lead to heart failure and death.

(1) Yin deficiency is the basis of the pathological change in the process of the disease. It can be conceptualized in this way: disordered immunity can impair organ function and involve several organs at the same time, as in Case one in which the damaged tissues and organs included the skin, lungs, arteries, liver and heart (secondarily).

No matter which organ has been damaged, the patient will have abnormal laboratory results relating to these organs. The organs develop dysfunction as a result of cells either atrophying or becoming apoptotic. Yin deficiency is the underlying process of autoimmune disease, especially when the disease is chronic. On physical examination the patient may have a fissured tongue and a thready or rapid pulse (Fire flaring up due to Yin deficiency). These are all signs and symptoms of Yin deficiency. Therefore, it is necessary to nourish Yin, which may also have the effect of masking or recovering damaged cells, thus avoiding and reducing the immune attack.

The patient in Case one had multiple organ involvement. In order to treat such a condition, we must never stop nourishing Yin, unless some other condition occurs. Especially, when a patient has received steroid therapy, which suppresses immune attack, reduces exudation and works on antibodies, the use of Chinese medicine can recover the antigen, thereby reducing the likelihood of the antigen fragment triggering immune cells. Thus, integrative medical therapy can reduce the side-effects of steroids, shorten the flaring up phase and put patients into remission earlier.

(2) Blood stasis is a result of the disease process as well as a reason why the disease gets worse, and/or it is a cause for other new symptoms or diseases. When disordered immune cells attack organs and normal cells, causing inflammation, cell atrophy or apoptosis, they induce cell fragmentation, impair microcirculation and cause collagen to proliferate. These are all examples of Blood stasis. The pathological change conversely triggers an immune reaction, which aggravates immune cells, inducing them to circulate to local areas and cause more tissue and cell damage. This collagen fibrosis impacts and blocks artery circulation, leading to hypertension, heart failure and/or Raynaud's phenomenon.

Removing Blood stasis helps resolve the problems above. Blood stasis can cause pain and a cold feeling when it blocks the channels. Therefore, ‘when (the channel Qi) accepts warming therapy the Qi will move; and when it accepts cold therapy the Qi will stagnate’. Warming therapy uses herbs such as **Zhi Fu Zi** *Aconiti Radix lateralis preparata*, **Rou Gui** *Cinnamomi Cortex* and **Huang Qi** *Astragali Radix*, which have a function to warm the channels. However, they also stimulate the thymus to mature more T cells when there is an existing antigen in the body. First, helper T cells will develop followed by suppressor T cells. The result is that the number of antibodies increases, which impairs more antigen. Finally, the illness tends to be more severe. Chinese medicine says that when Fire is still present, we cannot replenish Qi or warm Yang. There is also Western medical evidence to support this concept: clinical research suggests that there is thymic dysfunction and hyperplasia in the early phase of scleroderma.³ Therefore, reinforcing Qi to stimulate T-cell maturation is not necessary at this time. We note that the patient tried to use **Xi Yang Shen** *Panax quinquefolius* to strengthen her immunity at one point, but that it caused her illness to flare.

(3) Eliminating Heat and Fire includes the Heat in the Weifen, Qifen, Yingfen and Xuefen. Chinese medicine believes that ‘clearing Heat can protect the Yin’. Western medical theory is that inflammation impairs local tissues and cells. Therefore, inhibiting inflammation prevents continuing cellular damage.

(4) Case one is complicated. The patient was diagnosed with scleroderma and pulmonary hypertension, which at the same time overlapped with a diagnosis of lupus, liver damage, pathological skin changes and pain in the small joints. Nonetheless, the patient used integrative therapies: Western medicine combined with Chinese medicine. The patient’s lung pressure returned to normal despite severe damage, the heart remained normal in size, and the liver enzymes remained normal. During the past 9 years of treatment (from 1997 to 2006), the patient went from being a college student to a full-time engineer. At the time of treatment, she was still using her own lungs and heart, and working for a living. The Chinese medicine focused mainly on protecting, covering and recovering damaged cells, inhibiting inflammation, and possibly removing complex from the antigen surface and degenerating collagen fibrosis. This might have compensated for the lack of effect of the Western medications. This patient had herbal medicine **Shi Gao** *Gypsum fibrosum*, **Zhi Mu** *Anemarrhenae Rhizoma*, **Xia Ku Cao** *Prunellae Spica* and **Tu Fu Ling** *Smilacis glabrae Rhizoma* to clear Heat in the Qifen, Yingfen and Xuefen, plus **Shui Niu Jiao** *Bubali Cornu* and **Mu Dan Pi** *Moutan Cortex* to clear Heat in the Qi, Ying and Xuefen; **Sheng Di Huang** *Rehmanniae Radix*, **Bai Shao** *Paeoniae Radix alba*, **Nu Zhen Zi** *Ligustri lucidi Fructus* to cool Blood and nourish Yin; **Chi Shao** *Paeoniae Radix rubra*, **Tao Ren** *Persicae Semen*, **Hong Hua** *Carthami Flos* and **Dang Gui** *Angelicae sinensis Radix* to remove Blood stasis. This base herbal formula, which was modified throughout the treatment, led to successful results for the patient.

(5) In Case two, the patient had a diagnosis only of scleroderma, but without any evidence of organ damage. The patient delayed using herbal medicine and tried acupuncture alone. Baxie (extra) and Bafeng (extra) open local channels of the hands and feet; LI-11 Quchi and SP-10 Xuehai clear Heat; SP-10 Xuehai

and SP-6 Sanyinjiao remove Blood stasis and nourish Yin; Du-20 Baihui opens the entire governing vessel; and ST-36 Zusanli replenishes Spleen Qi. The stiffness in the patient's hand and feet improved.

(6) In Case three, the patient did not respond to calcium channel-blocking medication. Laboratory results showed a higher than normal IgM level of 449 mg/dL, which shows that her condition was caused by an autoimmune reaction. The Chinese medicine treatment gave her good results as blood oxygen increased to normal level, pulmonary pressure decreased from 110/70 to 55/25 mmHg, symptoms of IBS disappeared, her emotions were under control and her sleep improved. The treatment used **Chai Hu** *Bupleuri Radix* and **Bai Shao** *Paeoniae Radix alba* to smooth the Liver Qi, plus **Qiang Gua Lou** *Trichosanthis Fructus*, **Xie Bai** *Allii macrostemi Bulbus* and **Zhi Ke** *Aurantii Fructus* to open the chest Qi; to decrease **Qiang Gua Lou** *Trichosanthis Fructus*'s function as a moist laxative and to treat the diarrhoea of the IBS, we added **Fu Ling** *Poria*, **Chen Pi** *Citri reticulatae Pericarpium* and **Fang Feng** *Saposhnikoviae Radix*. The first herb replenishes the Spleen and the other two are in the formula **TONG XIE YAO FANG**/Important Formula for Painful Diarrhoea, which treats IBS; **Huang Qin** *Scutellariae Radix* clears Liver Fire; **Dan Shen** *Salviae miltiorrhizae Radix*, **Hong Hua** *Carthami Flos* and **Tao Ren** *Persicae Semen* remove Blood stasis. Du-20 Baihui, Yintang (extra) plus front head 5 needles (extra) calm the spirit of the mind; Ren-17 Tanzhong, PE-6 Neiguan and LIV-3 Taichong move Qi in the chest.

(7) Case four was a complicated case of a young patient who had impairment of multiple organs. As the heart is necessary to maintain life, the treatment was first designed to treat the heart by nourishing Heart Yin, and the scleroderma using **Mai Men Dong** *Ophiopogonis Radix*, **Sheng Di Huang** *Rehmanniae Radix* and **Wu Wei Zi** *Schisandrae Fructus*, the ingredients of **SHENG MAI SAN**/Generate the Pulse Powder. We removed **Ren Shen** *Ginseng Radix* in order to nourish Yin, cool Blood and prevent build-up of Fire; **Qiang Huo** *Notopterygii Rhizoma seu Radix*, **Du Huo** *Angelicae pubescentis Radix*, **Qin Jiao** *Gentianae macrophyllae Radix* and **Ji Xue Teng** *Spatholobi Caulis* to open the channels for Bi syndrome; **Dang Gui** *Angelicae sinensis Radix*, **Chuan Xiong** *Chuanxiong Rhizoma*, **Hong Hua** *Carthami Flos*, **Dan Shen** *Salviae miltiorrhizae Radix* and **Chi Shao** *Paeoniae Radix rubra* plus **Mu Dan Pi** *Moutan Cortex* to remove Blood stasis and clear Heat; **Fu Ling** *Poria*, **Bai Zhu** *Atractylodis macrocephalae Rhizoma* and **Chen Pi** *Citri reticulatae Pericarpium* to rebuild Spleen function and transform Dampness to reduce oedema. The Chinese medicine treatment made a big difference in the patient's skin, which became softer and thinner with reduced oedema. Possibly of even more benefit was that the patient's BNP level declined sharply. BNP levels can help to differentiate between heart failure and other problems, such as lung disease. The BNP level was 579.1 pg/mL 3 months before her first office visit; later in that same month it had risen to 1328.4 pg/mL, clearly demonstrating a significant decline in heart function. After the patient received Chinese medical treatment for 1 month, the BNP dropped to 1240 pg/mL, providing evidence of the effectiveness of the treatment, which worked well to safeguard the heart tissue (one of the antigens).

7. Lifestyle prescriptions and health issues

- 1 It is important to cover or recover damaged cells. Apoptosis plays a central role in the disease, as it causes and aggravates the illness. Nourishing Yin reduces and limits the cellular damage and allows faster recovery.
- 2 For the fibrosis and collagens, breaking down collagenous protein and fibrosis softens the organs and arteries. This is usually done by removing Blood stasis.
- 3 It is vitally important to inhibit inflammation, which can be acute or chronic. The symptoms of acute inflammation are usually characterized by Heat in the Qifen; chronic inflammation is usually characterized by Heat in the Ying and Xuefen.
- 4 Food allergies may trigger the illness to flare again, so it is necessary to avoid allergenic foods completely as part of the treatment.
- 5 It is important to prevent infection by external pathogens that may trigger the illness to flare up.
- 6 It is important to avoid foods with a pungent flavour or that are Hot in nature.
- 7 It is beneficial to engage in proper exercise to promote overall health.

References

1. Cipriani P. Resistance to apoptosis in circulating α/β and γ/δ T lymphocytes from patients with systemic sclerosis. *Journal of Rheumatology* 2006; 33:2003–2014.
2. Fujimoto M, Sato S. B lymphocytes and systemic sclerosis. *Current Opinion in Rheumatology* 2005; 17:746–751.
3. Ferri C. Thymus alterations and systemic sclerosis. *Rheumatology (Oxford, England)* 2006; 45:72–75.

Sjögren's syndrome

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Sjögren's syndrome is a chronic autoimmune disorder in which immune cells attack and destroy the glands that produce tears and saliva so they do not function correctly. The result is dryness of the mouth and eyes. The disease can affect other glands as well, such as in the stomach, pancreas and intestines, and can cause dryness in other places, such as the nose, throat, airways and skin. The condition is also known as keratoconjunctivitis sicca.

1. Western medical aetiology and pathology

Sjögren's syndrome may be caused by a combination of genetic and environmental factors. Several different genes appear to be involved, but scientists are not certain exactly which ones are linked to the disease as different genes seem to play a role in different people. However, the possible trigger may be viral, such

as Epstein–Barr virus, or bacterial infection. The trigger stimulates the immune system to act, but some gene alters the attack by drawing lymphocytes to target organs, such as the glands of the eyes and mouth. Once CD4⁺ T cells have infiltrated glands, they produce cytokines¹ such as interleukin-2 (IL-2) and interferon- γ (IFN- γ) and drive the inflammatory response. These fighter cells die during the process, causing Sjögren's syndrome and exacerbating the damage.

When the unknown infectious agent damages the salivary and lachrymal glands, it attracts lymphocytes into the glands, which release specific autoantibodies such as rheumatoid factor (RF) and antinuclear antibodies. These antibodies are directed against proteins termed Sjögren's-associated antigens A and B (or SS-A and SS-B). They can enter the bloodstream and are measured in blood tests that can confirm a diagnosis of Sjögren's syndrome. Additional T cells enter the gland and the damage is perpetuated. The continued destruction of the gland represents an abnormal balance of the excessive action of helper T cells, which stimulate B cells to create more and more antibodies, and the deficient action of suppressor T cells, which cannot suppress the production of B cells.

Sjögren's syndrome, characterized clinically by xerostomia (dry mouth) and xerophthalmia (dry eyes), is associated with the destruction of glandular tissue and the resultant impaired secretory capacity, mainly of salivary and lacrimal glands.

2. Diagnosis by Western medicine

Once Sjögren's syndrome is suspected, a physician will request a series of blood tests, including:

- Antinuclear antibody (ANA)
- Sjögren's antibodies, called anti-SS-A (or SS-Ro) and anti-SS-B (or SS-La)
- RF (rheumatoid factor)
- Erythrocyte sedimentation rate (ESR)
- Immunoglobulins – IgA, IgM, IgG, IgE and IgD.

Ophthalmological tests include:

- Schirmer's test – measures tear production (normally more than 6 mL in 6 min)
- Rose Bengal and Lissamine Green (staining with vital dyes) – dyes are used to observe abnormal cells on the surface of the eye
- Slit-lamp examination – indicates the volume of tears by magnifying the eye and viewing it in its resting state.

Dental tests include:

- Parotid gland flow – measures the amount of saliva produced over a certain period of time
- Salivary scintigraphy – measures salivary gland function
- Sialography – a radiograph of the salivary duct system
- Lip biopsy – used to confirm lymphocytic infiltration of the minor salivary glands.

3. Chinese medical aetiology and pathology

There is no name for Sjögren's syndrome in Chinese medicine. However, according to its clinical symptoms, it can be characterized by *Xiao Ke* 消渴, diabetes, *Bi Zheng* 痹证, arthralgia syndrome, and *Xu Lao* 虚劳, consumptive disease. Sjögren's syndrome can affect multiple organs and manifests as Yin deficiency, Yin deficiency with excess Yang, and Blood stasis in the channels, collaterals and organs.

Fluid is a Yin substance. The Fluid in eyes and joints is called *Jin Ye*. The dilute and easily flowing Fluid is called Jin; the thick and less easily flowing Fluid is called Ye. They are distributed to the surface and pores of the body, and function to moisten the skin, hair, muscles, mouth, mucus, eyes, nose, articular cavities and other areas. Jin Ye pours into the internal organs, marrow, spinal cord and brain, and has the function of nourishing them. The volume of Jin and Ye is a function of pre-heaven Jing. Thus, Jin and Ye sufficiency or deficiency depends on the parents' genes.

The formed substance of organs, glands, blood, fluids, cells and visible material – all that can be seen by the eye or microscopy – belongs to Yin. The process of secreting saliva belongs to Qi or Yang. Yin and Yang should be in harmony in the body, including the Yin and Yang of every single organ, gland and cell, and their functions. There is no name for gland in Chinese medicine, but, depending on its function and location, it may belong to a specific organ's Yin. For instance, the salivary glands located in the mouth belong to the Stomach. Their function is to moisten the mouth and aid in the swallowing of food. The Liver opens on the eyes, so dry eyes are a symptom of Liver Yin deficiency. The Kidney controls Yin in the entire body. When Yin deficiency has developed over a long period of time, Kidney Yin deficiency always occurs. Fire burns the inside due to Yin deficiency. Fire burning in the body thickens the Blood and causes Blood stasis.

Yin deficiency is generally a prolonged and chronic problem associated with any number of diseases. It is due to Fire flaring out of control and damaging Yin or due to other chronic problems that drain the Yin over time, causing a negative impact on different organs in the body.

4. General treatment principle

Nourish Yin, cool the Blood and remove Blood stasis.

DIFFERENTIATION AND TREATMENT

1. DEFICIENCY OF THE LUNG AND STOMACH YIN

CLINICAL MANIFESTATIONS

Cough without sputum, dry or sore throat, thirst, dry mouth, hoarseness, difficulty swallowing and eating, tidal fever and night sweats, fatigue, constipation and stomach reflux. The tongue is red with less coating. The pulse is thready and rapid.

TREATMENT PRINCIPLE

Nourish Lung and Stomach Yin, and regulate Blood flow.

HERBAL TREATMENT

YU NU JIAN *variation*

Jade Woman Decoction

Sheng Di Huang *Rehmanniae Radix* 12 g

Shu Di Huang *Rehmanniae Radix preparata* 12 g

Zhi Mu *Gardeniae Fructus* 10 g

Huai Niu Xi *Achyranthis bidentatae Radix* 10 g

Mai Men Dong *Ophiopogonis Radix* 10 g

Sha Shen *Glehniae/Adenophorae Radix* 12 g

Shi Hu *Dendrobii Herba* 12 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

ST-6 Jiache, LU-7 Lieque, LI-11 Quchi, BL-13 Feishu, BL-21 Weishu, BL-18 Ganshu, SP-6 Sanyinjiao, KI-3 Taixi and LIV-2 Xingjian.

SUPPLEMENTARY TREATMENT

If the patient has thirst, a dry mouth, blurred vision and constant eye discomfort, add Gou Qi Zi *Lycii Fructus* and Mu Zei Cao *Equiseti hiemalis Herba*, and needle BL-1 Jingming and GB-37 Guanming; if there are recurrent mouth infections, swelling in the parotid glands, hoarseness, and difficulty swallowing and eating, add Huang Lian *Coptidis Rhizoma* and Niu Bang Zi *Arctii Fructus*, and needle ST-6 Jiache, LU-7 Lieque, Ren-23 Lianquan and LU-11 Shaoshang.

2. DEFICIENCY OF LIVER AND KIDNEY YIN**CLINICAL MANIFESTATIONS**

Dry eyes, blurred vision, night blindness, dry mouth, insomnia, dizziness, tinnitus, night sweats, amnesia, and lassitude in the loins and knees. The tongue is red with less coating. The pulse is thready and rapid.

TREATMENT PRINCIPLE

Nourish Liver and Kidney Yin, and regulate Blood flow.

HERBAL TREATMENT

QI JU DI HUANG WAN *variation*

Lycium Fruit, Chrysanthemum and Rehmannia Pill

Gou Qi Zi *Lycii Fructus* 12 g

Ye Ju Hua *Chrysanthemi indicis Flos* 12 g

Sheng Di Huang *Rehmanniae Radix* 12 g

Shan Zhu Yu *Corni Fructus* 10 g

Fu Ling *Poria* 10 g

Mu Dan Pi *Moutan Cortex* 10 g

Ze Xie *Alismatis Rhizoma* 10 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

KI-3 Taixi, SP-6 Sanyinjiao, BL-23 Shenshu and BL-18 Ganshu.

SUPPLEMENTARY TREATMENT

If the patient has anxiety or emotional disorder, add **Chai Hu** *Bupleuri Radix*, **Bai Shao** *Paeoniae Radix alba* and **Zhi Zi** *Gardeniae Fructus*, and needle LIV-2 Xingjian, Du-20 Baihui and Yintang (extra).

3. FLAMING UP OF FIRE DUE TO YIN DEFICIENCY**CLINICAL MANIFESTATIONS**

Dry mouth and eyes, dry skin, flushed face, insomnia, bitter taste in the mouth, dizziness, anxiety and constipation. The tongue is red with a yellow coating or less coating. The pulse is taut and rapid.

TREATMENT PRINCIPLE

Clear Fire, nourish Yin and regulate Blood flow.

HERBAL TREATMENT

LONG DAN XIE GAN TANG variation

Gentiana Longdancao Decoction to Drain the Liver

Long Dan Cao *Gentianae Radix* 6 g

Zhi Zi *Gardeniae Fructus* 12 g

Huang Qin *Scutellariae Radix* 12 g

Chai Hu *Bupleuri Radix* 6 g

Ze Xie *Alismatis Rhizoma* 10 g

Sheng Di Huang *Rehmanniae Radix* 12 g

Bai Shao *Paeoniae Radix alba* 12 g

Chi Shao *Paeoniae Radix rubra* 12 g

Gou Qi Zi *Lycii Fructus* 10 g

Nu Zhen Zi *Ligustri lucidi Fructus* 12 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

LIV-2 Xingjian, SP-6 Sanyinjiao, SP-10 Xuehai and Ren-4 Guanyuan.

SUPPLEMENTARY TREATMENT

If the patient complains of palpitations and insomnia, add **Huang Lian** *Coptidis Rhizoma* to clear Heart Fire, and needle HE-7 Shenmen and LI-11 Quchi; if the patient complains of tinnitus, add **Ju Hua** *Chrysanthemi Flos* and **Shan Zhu Yu** *Corni Fructus*, and needle TB-6 Zhigou and SI-19 Tinggong.

4. BLOOD STASIS WITH YIN DEFICIENCY**CLINICAL MANIFESTATIONS**

Dry mouth and eyes, stabbing pain in the joints, and rough or squamous and dry skin. The tongue is red and purple with less coating. The pulse is thready and uneven.

TREATMENT PRINCIPLE

Remove Blood stasis and nourish the Yin.

HERBAL TREATMENT

XUE FU ZHU YU TANG *variation*

Drive Out Stasis in the Mansion of Blood Decoction

Dang Gui *Angelicae sinensis Radix* 12 g

Sheng Di Huang *Rehmanniae Radix* 12 g

Tao Ren *Persicae Semen* 10 g

Hong Hua *Carthami Flos* 10 g

Chi Shao *Paeoniae Radix rubra* 12 g

Mu Dan Pi *Moutan Cortex* 6 g

Dan Shen *Salviae miltiorrhizae Radix* 10 g

The herbs above are decocted in water for oral administration.

ACUPUNCTURE

BL-17 Geshu, BL-18 Ganshu, BL-23 Shenshu and SP-6 Sanyinjiao.

SUPPLEMENTARY TREATMENT

If the patient complains of chest pain, add **Dan Shen** *Salviae miltiorrhizae Radix*, **Gua Lou** *Trichosanthis Fructus* and **Xie Bai** *Salviae miltiorrhizae Radix*, and needle Ren-17 Tanzhong and PE-6 Neiguan; if the patient complains of blurred vision, tinnitus and night sweats, add **Wu Wei Zi** *Schisandrae Fructus* and **Gou Qi Zi** *Lycii Fructus*, and needle GB-37 Guangming and KI-3 Taixi.

5. Appendix

The list of underlying conditions mentioned in various sources as possible causes of Sjögren's syndrome includes:

- 1 Rheumatoid arthritis – see Chapter 5: Rheumatoid arthritis
- 2 Lupus – see Chapter 3: Systemic lupus erythematosus.

CASE STUDIES

CASE ONE

WB was a 59-year-old woman who, on her first office visit, came in complaining of a dry mouth and eyes that had persisted for over 10 years. The patient reported that she had left eye pain and a dry sensation, and had gone for a check-up with her doctor. She had been diagnosed with sicca 10 years previously. In recent years, she felt her symptoms getting worse; they included a dry mouth with a desire to drink cold water, difficulty swallowing dry food and even speaking, a sore throat, sensitivity to many foods, dry eyes and blurry vision with the left eye getting worse, fatigue, muscle pain in the entire body, a cold feeling in all her limbs, a distended feeling in the stomach that was aggravated after eating, perspiring, hot flushes, insomnia, difficulty falling asleep and waking up easily, and frequent urination. Her stools were normal.

Past history: the patient had entered the menopause 7 years previously, and had high blood pressure that was controlled by medication.

Physical examination: blood pressure 180/90 mmHg, red face, extremely dry and cracked lips, frequent blinking, difficulty speaking and dry skin. There was no tenderness in either parotid gland. Her tongue was crimson with less coating, a fissure and sublingual varicosities. Her pulse was deep and thready, with the left guan being taut.

15 months prior to office visit: laboratory studies

C3 complement: 94 mg/dL (normal range 57–135)

C4 complement: 20 mg/dL (12–34)

ANA titre: 1:280 (< 1:40)

Anticardiolipin antibody (ACA), IgG: negative

ACA IgM: 61.0 GPL units/mL (low–medium positive)

Anti-DNA (ds) Ab Qn: negative

Anti-SS-A Ab: positive

Anti-SS-B Ab: positive

RF: 175 IU/mL

Total protein: 8.1 g/dL (6.1–8.1)

Albumin: 4.7 g/dL (3.9–5.1)

Globulin: 3.4 g/dL (2.8–3.3)

Impression:

1. Sjögren's syndrome (deficiency of Liver and Kidney Yin with Liver Fire rising and Blood stasis)
2. Fibromyalgia
3. Hypertension

TREATMENT PRINCIPLE

Nourish Liver and Kidney Yin, clear Liver Fire and remove Blood stasis.

HERBAL TREATMENT

QI JU DI HUANG WAN and **XI JIAO DI HUANG TANG** variation

Lycium Fruit, Chrysanthemum and Rehmannia Pill, and Rhinoceros Horn and Rehmannia Decoction

Sheng Di Huang *Rehmanniae Radix* 20 g

Chi Shao *Paeoniae Radix rubra* 10 g

Bai Shao *Paeoniae Radix alba* 10 g

Gou Qi Zi *Lycii Fructus* 10 g

Ye Ju Hua *Chrysanthemi indicis Flos* 10 g

Xia Ku Cao *Prunellae Spica* 10 g

Mu Dan Pi *Moutan Cortex* 6 g

Shui Niu Jiao *Bubali Cornu* 10 g

Xuan Shen *Scrophulariae Radix* 12 g

Mai Men Dong *Ophiopogonis Radix* 10 g

Sha Shen *Glehniae/Adenophorae Radix* 10 g

Tian Hua Fen *Trichosanthis Radix* 10 g

Lu Gen *Phragmitis Rhizoma* 15 g

Mu Zei Cao *Equiseti hiemalis Herba* 10 g

Hong Hua *Carthami Flos* 10 g

Tao Ren *Persicae Semen* 10 g

Wu Wei Zi *Schisandrae Fructus* 10 g

The herbs above were decocted in water for oral administration.

ACUPUNCTURE

The patient declined acupuncture.

The patient reported that her condition improved. She did not have to use her artificial tears, because her eyes were not so dry. The pain in her muscles was better, too. She had not had to visit her Western medical doctor since she had begun to take Chinese herbal medicine.

CASE TWO

RS was a 69-year-old woman who, on her first office visit, came in complaining of a dry mouth, eyes and vagina, and a sore throat with a desire to drink cold water. In the winter, her toes felt cold, numb and painful, and they changed colour to white and purple. When the colour change occurred, she would feel dizzy and headachy, and her blood pressure went up. She would also have fatigue, heartburn and insomnia, with difficulty falling asleep and waking easily. On average she only had 4 hours of sleep a night. Her appetite was fine, and her stool and urination were normal.

Physical examination: her face was red, heart rate was 80 beats/min and blood pressure was 130/70 mmHg. Her lungs were normal and she had no oedema. Her lips were dry. Her tongue was red and red/purple in the front, with deep teeth marks and a fissure in the middle.

19 months prior to office visit: laboratory results

White blood cell count (WBC): $3.9 \times 10^3/\mu\text{L}$ (4.0–10.5)

Chloride, serum: 92 mmol/L (96–109)

Aspartate aminotransferase (AST): 51 IU/L (0–40)

Alanine aminotransferase (ALT): 83 IU/L (0–40)

Anti-SS-A Ab: positive

Anti-SS-B Ab: negative

ANA: negative

Antithyroglobulin Ab: high

ACA Ab, IgA: 14 APL units/mL (0–12)

5 months prior to office visit

WBC: $3.6 \times 10^3/\mu\text{L}$ (4.2–10.0)

Red blood cell count (RBC): $3.77 \times 10^6/\mu\text{L}$ (4.2–5.4)

C3: 87.0 mg/dL (90–207)

Impression:

1. Sjögren's syndrome (Yin deficiency and Blood stasis)
2. Hashimoto's thyroiditis (Qi deficiency with Blood stasis)
3. Raynaud's phenomenon (Blood stasis)
4. Stomach reflux (Liver invading Stomach)

5. Insomnia
6. Hypertension
7. Hepatitis (autoimmune or drug toxicity induced?)

Medication: levothyroxine (Synthroid) 0.075 mg q.d., alendronate (Fosamax) 70 mg weekly, losartan (Cozaar), calcium citrate (Citracal), vitamins and Restasis (cyclosporin eye-drops).

HERBAL TREATMENT

LIU WEI DI HUANG WAN and GUI ZHI TANG variation

Six-Ingredient Pill with Rehmannia and Cinnamon Twig Decoction

Sheng Di Huang *Rehmanniae Radix* 12 g

Xuan Shen *Scrophulariae Radix* 10 g

Mai Men Dong *Ophiopogonis Radix* 10 g

He Shou Wu *Polygoni multiflori Radix preparata* 12 g

Bai Shao *Paeoniae Radix alba* 12 g

Shan Zhu Yu *Corni Fructus* 10 g

Gou Qi Zi *Lycii Fructus* 10 g

Zhi Mu *Anemarrhenae Rhizoma* 10 g

Bai Mao Gen *Imperatae Rhizoma* 12 g

Tian Hua Fen *Trichosanthis Radix* 10 g

Zhi Zi *Gardeniae Fructus* 12 g

Mu Dan Pi *Moutan Cortex* 6 g

Huang Lian *Coptidis Rhizoma* 3 g

Dan Shen *Salviae miltiorrhizae Radix* 10 g

Hong Hua *Carthami Flos* 10 g

Gui Zhi *Cinnamomi Ramulus* 10 g

The herbs above were decocted in water for oral administration.

ACUPUNCTURE

Du-20 Baihui, ST-6 Jiache, Ren-22 Tiantu, ST-9 Renying, SP-10 Xuehai, ST-36 Zusanli, SP-6 Sanyinjiao, KI-3 Taixi and Bafeng (extra).

10 days after office visit

Sodium: 125 mmol/L (140–148)

WBC: $2.8 \times 10^3/\mu\text{L}$ (4.2–10.0)

Monocytes: 10.0% (1.7–9.3)

Lymphocytes: 0.68% (1.2–3.4)

C3: 73.5 mg/dL (90–207)

C4: 19.6 mg/dL (17.4–52.3)

6 months after office visit

WBC: $4.0 \times 10^3/\mu\text{L}$ (4.2–10.0)

ALT: 50 IU/L (30–65)

AST: 29 IU/L (15–37)

C3: 92.4 mg/dL (90–207)

C4: 20.2 mg/dL (17.4–52.2)

1 year after office visit

T4: 13.4 µg/dL (4.5–10.9)

T3: 31% (22–37)

Thyroid-stimulating hormone (TSH): 1.329 µIU/mL (0.35–5.50)

As the patient participated in the treatment, her condition gradually improved. First her sleep got better. She was able to sleep for 5–6 hours instead of only 4 hours. Then her stomach reflux improved. Even when the weather became colder, the patient found that, although her toes were cold, they did not change colour.

4 months after office visit: after the patient had received treatment for 4 months, she went to her dentist for a physical examination. Her dentist told her that her condition was much better than a few months ago. Her salivary secretions were normal. As her condition was improving, the patient reported that in the past she had received Chinese herbs and acupuncture for over 2 years, but that it had made her condition worse. She used herbs such as *Xi Yang Shen Panacis quinquefolii Radix*, *Mai Men Dang Ophiopogonis Radix* and *Bai He Lili Bulbus*. She was told to continue taking the herbs for one and half years, but her symptoms kept getting worse. It is important to note that one must be careful in prescribing strong tonifying herbs in some cases, because they can have side-effects and cause harm to the patient.

The patient's liver enzymes became normal and her C3 level went up to normal range, but her thyroid became hyperactive, possibly because, although thyroid function was improving, she was still receiving her old dosage of Synthroid. Her doctor realized this and reduced it to 0.05 mg.

CASE THREE

TA was a 40-year-old woman who, on her first office visit, came in complaining of pain in the joints of her whole body, but mainly in her palms and fingers, shoulders and knees, all improved by warmth. She had also had dry eyes, dry mouth and thirst for over 3 years. Additionally, she had a red face, and rough, dry and itchy skin all over, especially on her elbows and thighs. She had a sore throat, a cold feeling in both hands and feet with no colour change in winter, headaches, dizziness, fatigue, abdominal pain and three formed bowel movements a day. Her urination was normal.

Physical examination: the lung and heart were normal. The patient had no oedema, but she did have small red spots on her elbows and thighs. Her joints were not swollen or deformed, but they were tender at the shoulder and metacarpophalangeal articulations. Her tongue was red with a fissure in the middle and teeth marks on the edges. It had a white coating, and the coating at the back was white, thick and greasy. Her pulse was thready and rapid.

The patient had a history of asthma attacks until she was 12 years old. She had twins with no history of autoimmune disorder.

13 months prior to office visit: laboratory result

Sjögren's anti-SS-A: 599 U/mL (0–99)

Complement C3, serum: 85 mg/dL (90–180)

Complement C4, serum: 18 mg/dL (9–36)

ANA, direct: 599 U/mL (0–99)

1 month prior to office visit

RA Latex Turbid: 35.7 IU/mL (0–13.9)

ANA, direct 714 U/mL (0–99)

Impression:

1. Sjögren's syndrome (Liver and Kidney Yin deficiency with Blood stasis)
2. Rheumatoid arthritis (Wind-Cold-Damp Bi syndrome)
3. Raynaud's syndrome (Blood stasis)

TREATMENT PRINCIPLE

Dredge the channels, transform Dampness and alleviate pain, remove Blood stasis and protect Yin.

HERBAL TREATMENT

DU HUO JI SHENG TANG and SHENG DI HUANG variation

Angelica Pubescens and *Sangjisheng* Decoction with *Rehmannia*

Lei Gong Teng *Tripterygii wilfordii* Radix 10 g

Ji Xue Teng *Spatholobi Caulis* 12 g

Gui Zhi *Cinnamomi Ramulus* 10 g

Chi Shao *Paeoniae Radix rubra* 12 g

Bai Shao *Paeoniae Radix alba* 12 g

Qiang Huo *Notopterygii Rhizoma seu Radix* 10 g

Du Huo *Angelicae pubescentis Radix* 10 g

Chuan Niu Xi *Cyathulae Radix* 10 g

Qin Jiao *Gentianae macrophyllae Radix* 10 g

Fang Feng *Saposhnikoviae Radix* 10 g

Sheng Di Huang *Rehmanniae Radix* 12 g

Dan Shen *Salviae miltiorrhizae Radix* 10 g

Gan Cao *Glycyrrhizae Radix* 3 g

The herbs above were decocted in water for oral administration twice daily.

ACUPUNCTURE

Du-20 Baihui, Yintang (extra), ST-6 Jiache, LI-11 Quchi, SP-10 Xuehai, Xiyan (extra), SP-6 Sanyinjiao and LIV-3 Xingjian.

13 months prior to office visit

Sjögren's anti-SS-A: 931 U/mL (0–99)

Sjögren's anti-SS-B: 65 U/mL (0–99)

Complement C3, serum: 92 mg/dL (90–180)

Complement C4, serum: 15 mg/dL (9–36)

RA Latex Turbid: 32.5 IU/mL (0–13.9)

ANA, direct: 931 U/mL (0–99)

The patient received Chinese medical treatment for 6 months, after which the joint pain improved greatly. Her dry lips and eyes were much better, and she stopped using artificial tears. Sometimes she had normal tears from her right eye.

6. Analysis of the cases

Sjögren's syndrome is an autoimmune disease that destroys glands, especially the parotid and lachrymal glands, which lose their moistening function. Therefore, patients almost always complain of a dry sensation of the eyes, lips, mouth, throat, skin and vagina. These are all symptoms of Yin deficiency. If we only nourish Yin, will this solve the problem? Or can we follow the Chinese medical theory of replenishing Qi in order to help Yin grow and to heal the illness?

(1) The patient in Case one had had a diagnosis of sicca for over 10 years. Her condition had been getting worse in recent years, before she came to the clinic. She used no medication except artificial tears and gels. Chinese herbal medicine was her only therapy. She was diagnosed with both Sjögren's syndrome and fibromyalgia (which may also be an autoimmune-related disease).

Sjögren's syndrome mirrors the Chinese medicine concept of *Xu Lao*, consumptive disease. Nourishing Yin and clearing Heat was the major treatment. **Ye Ju Hua** *Chrysanthemi indicis* Flos, **Xia Ku Cao** *Prunellae Spica*, **Mu Dan Pi** *Moutan Cortex* and **Shui Niu Jiao** *Bubali Cornu* clear Heat in the Qi, Ying and Xuefen; **Gou Qi Zi** *Lycii Fructus*, **Bai Shao** *Paeoniae Radix alba*, **Sheng Di Huang** *Rehmanniae Radix* and **Xuan Shen** *Scrophulariae Radix* nourish Yin and clear Heat; **Mai Men Dong** *Ophiopogonis Radix*, **Sha Shen** *Glehniae/Adenophorae Radix*, **Tian Hua Fen** *Trichosanthis Radix* and **Lu Gen** *Phragmitis Rhizoma* nourish Yin and reduce dry symptoms; **Mai Men Dong** *Ophiopogonis Radix* and **Wu Wei Zi** *Schisandrae Fructus* strengthen the Heart; **Mu Zei Cao** *Equiseti hiemalis Herba* benefits vision; **Hong Hua** *Carthami Flos* and **Tao Ren** *Persicae Semen* remove Blood stasis. The herbal medicine helped the patient reduce her symptoms of dryness and also reduced pain in her whole body.

(2) According to Chinese medical theory there is a relationship between Qi and Yin: replenishing Qi can help Yin grow. However, practically speaking, simply replenishing Qi can exacerbate autoimmune disorder symptoms and even lead the illness to flare up. Herbs that tonify Qi may affect T cells in the thymus gland and increase the maturation rate of both helper and suppressor T cells. When antibodies exist in the body, there is a higher ratio of mature helper T cells to suppressor T cells. This is because the antigen and antibody complex stimulate the maturation of more helper T cells, with a resultant increase in antibodies, thereby aggravating inflammation (see Figure 2.5).

In Chinese medical terms, if a patient's Heat and Fire have not yet been calmed, we cannot tonify Qi or it will trigger pathogenic Fire to flare. Therefore, treating any disease, especially autoimmune disease, regardless of whether it is in an acute or chronic phase, flaring or in remission, we must be careful about warming and replenishing. Case two provides a clear example of this. The patient had used the replenishing Qi herb **Xi Yang Shen** *Panacis quinquefolii Radix* plus **Mai Men Dong** *Ophiopogonis Radix* and **Bai He** *Lilii Bulbus* to nourish Yin. This is a very good formula for replenishing Qi and nourishing Yin. **Xi Yang Shen** *Panacis quinquefolii Radix* is not dry and warm like **Ren Shen** *Ginseng Radix*, but has a nourishing Yin function. Generally speaking, it is not a bad formula for treating symptoms of dryness. Yet it did not work in Case

two, and actually exacerbated the patient's symptoms. **Mai Men Dong** *Ophiopogonis Radix*, **He Shou Wu** *Polygoni multiflori Radix preparata* and **Bai Shao Paeoniae Radix alba** nourish Yin and Blood; **Gou Qi Zi** *Lycii Fructus* and **Bai Mao Gen** *Imperatae Rhizoma* nourish Yin, help vision and reduce feelings of thirst; **Sheng Di Huang** *Rehmanniae Radix* and **Xuan Shen** *Scrophulariae Radix* nourish Yin and clear Heat in the Ying and Xuefen; **Tian Hua Fen** *Trichosanthis Radix*, **Zhi Mu** *Anemarrhenae Rhizoma*, **Zhi Zi** *Gardeniae Fructus*, **Mu Dan Pi** *Moutan Cortex* and **Huang Lian** *Coptidis Rhizoma* clear Heat and protect Yin; **Dan Shen** *Salviae miltiorrhizae Radix* and **Hong Hua** *Carthami Flos* remove Blood stasis; plus **Gui Zhi** *Cinnamomi Ramulus* activates Yang, but does not warm it. Du-20 Baihui can reduce Liver Yang rising if needled with a reducing technique; Ren-22 Tiantu and ST-9 Renying aid in the recovery of thyroid function; SP-10 Xuehai, ST-36 Zusanli, SP-6 Sanyinjiao and KI-3 Taixi nourish Yin and Qi, and remove Blood stasis; Bafeng (extra) opens the channels; ST-6 Jiache is a point on the stomach used to address local face and mouth issues.

(3) The patient in Case three was diagnosed with Sjögren's syndrome, rheumatoid arthritis and Raynaud's phenomenon. Sjögren's syndrome was caused by Liver and Kidney Yin deficiency with Blood stasis; the rheumatoid arthritis was the result of invasion by Wind-Cold-Dampness; and the Raynaud's phenomenon was caused by Blood stasis. Therefore the treatment of Sjögren's syndrome and Raynaud's phenomenon had a common focal point: Blood stasis. However, the Sjögren's syndrome and rheumatoid arthritis except Blood stasis had no common point of focus. Nourishing Yin can worsen Dampness, but eliminating Dampness with warm, acrid herbs can further the Yin damage. Although the diseases are all the result of immune system disorders, they cause damage to different organs and lead to different symptoms; their pathological changes are also different. Compare their different and opposite pathologies; regardless of which one is treated first, it will impair the recovery of the other. So our plan for the patient in Case three was to treat the rheumatoid arthritis first and then take care of the Sjögren's syndrome. We used **Chi Shao Paeoniae Radix rubra** and **Dan Shen Salviae miltiorrhizae Radix** to remove Blood stasis, and **Bai Shao Paeoniae Radix alba** and **Sheng Di Huang Rehmanniae Radix** to nourish Yin and clear Ying and Xuefen Heat. While we were treating the rheumatoid arthritis, the Sjögren's syndrome did not get worse. These results prove that the treatment method worked well.

7. Lifestyle prescriptions and health issues

Although Chinese medicine theory does not refer to glands, according to their moistening function we can categorize them as Yin in nature and function, and they are related to the Lung, Stomach, Liver and Kidney. Therefore, nourishing the Yin of different organs can help reduce and treat symptoms. The key of the treatment is to recover the function of the destroyed gland and mask the antigen of the damaged target tissue.

- 1 Eliminating and clearing Heat can protect Yin from continuing damage. When immune cells attack glands, they cause local inflammation. Conversely, the inflammation can cause more damage to the glands. We call

this 'excess Heat and Yang impairs Yin'. Therefore, eliminating and clearing Heat can protect Yin from damage.

- 2 Removing Blood stasis helps microcirculation, accelerates the recovery of damaged structures and may reduce the chance of antibodies attacking an antigen.
- 3 On the one hand, Yin refers to the glands' function of moistening tissues; on the other hand, Yin refers to the structure of the glands.
- 4 Avoid foods that are Warm and Hot in property and pungent in nature.
- 5 Avoid foods that may cause allergic reactions.

-
1. Cytokines are powerful chemical substances secreted by cells. They include lymphokines produced by lymphocytes and monokines produced by monocytes and macrophages.

CONCLUSION

The essence of Chinese medicine is *Bian Zheng Shi Zhi* 辨证施治, which is diagnosis and treatment based on overall analysis of symptoms and signs, and the causes, nature and location of an illness, as well as the patient's physical condition according to the basic theories of Chinese medicine. Based on this, our tutors always give us earnest, personal admonitions to search for the primary cause of a disease in order to treat it correctly. We know that the conditions of patients with autoimmune disorders are always complicated. Different diseases may overlap, as different symptoms and signs. Additionally, patients may already have been prescribed medication, which can camouflage primary clinical symptoms and lead to the occurrence of new symptoms or side-effects. This is especially the case for patients who have autoimmune diseases that involve multiple organs and systems. When different tissues and organs are damaged, they can cause different symptoms and signs, depending on the tissue or organ's physiological function and location.

Chinese medical theory tells us that symptoms and signs that occur externally always result from a fundamental internal pathological change. Therefore, thousands of years of Chinese medical theory and clinical experience tell us that dynamic changes in external symptoms and signs express an exact internal pathological change. Based on these changes in external phenomena, Chinese medicine designs appropriate prescriptions and treatment.

Although the terminologies of Chinese and Western medicine differ, their intrinsic quality is the same. For instance, in Western medicine, acute inflammation involves vasodilatation, which causes local heat and redness. This is equivalent to Chinese medicine's concept of Heat symptoms and signs. Increased vascular permeability that causes local oedema and swelling is equivalent to Chinese medicine's concept of Dampness and Phlegm. Therefore, Chinese medicine identifies acute inflammation, which causes the four cardinal signs of local heat, redness, swelling and pain, as excess Yang, Heat, Dampness, and Qi stagnation or Blood stasis. In this particular case, there is no real difference between Chinese and Western medicine, except for terminology.

Therefore, we have proposed that, although Chinese and Western medicine have a different terminology, they share the same manifestations and pathologies, that is:

- 1 Chinese and Western medicine both have shared symptoms, signs and the basic pathological process of a disease. They merely call these by different names.
- 2 The Chinese medical theory of *Bian Zheng* is the process that Chinese medical doctors use to gather information on symptoms and signs to analyse primary pathological changes in response to illness and disharmony.

- 3 Chinese medicine states that *Shi Zhi*, or the delivery of treatment, must be based on the information gathered in the practice of *Bian Zheng*. This means that before one designs a treatment plan, one must fully understand a disease's pathological differentiation.
- 4 Chinese medical theory can supplement insufficient modern Western medical theory and treatment. This is especially the case with Chinese medicine's method of replenishing deficiency. For example, sildenafil (Viagra) and beta-blockers may temporarily extend the diameter of arteries to provide symptom relief, but the primary pathological change will still exist, perhaps aggravating the illness and making it worse. Steroids, which suppress the immune system, can reduce an autoimmune reaction, including exudation and inflammation, but their side-effects may make a patient more susceptible to infection from viruses and bacteria, or affect the circulation and lead to a loss of bone density, osteoporosis and aseptic necrosis of the head of the femur. Additionally, they do nothing to address antigens or the continual apoptosis caused by an autoimmune disorder. However, treating the side-effects and reducing apoptosis are specialties of Chinese medicine.
- 5 Western medical theory and laboratory measures provide useful information and accurate data for the Chinese medicine practice of *Bian Zheng*. Chinese medicine gathers information on symptoms and signs, and analyses this information to determine the pathological process. In modern times, we are able to add information provided by laboratory results to get a clearer picture of internal pathological changes, sometimes even before symptoms and signs arise. Therefore, in the modern practice of Chinese medicine, one needs also to understand Western medical diagnosis and Western laboratory data to apply the wisdom of *Bian Zheng* most effectively.

Ancient Chinese medical arts have extended far beyond the borders of China and have been disseminated throughout the world, because of their good clinical results. Although Western and Chinese medicine use different terminology, they are not in an antagonistic relationship. Instead, they are mutually reciprocal in the process of treatment, particularly in treating autoimmune diseases.

There is increasing evidence that autoimmune diseases are the result of the disordered immunity that destroys tissues and cells, and causes serial pathological processes and the presence and accumulation of apoptotic cells. Regardless of the specific autoimmune disorder or the type of hypersensitive immune reaction, the pathological process starts with an antigen and antibody reaction. The increased production of apoptotic cells, decreased phagocytic capacity, or combination of the two, determines the processes of an autoimmune disease. Nevertheless, it has been shown that tolerance can be lost due to increased amounts of apoptotic cells. Alternatively, or in conjunction, post-translational modifications occurring during the process of apoptosis of cellular antigens can bypass tolerance. Loss of tolerance induces the production of autoantibodies that will bind to their antigens whenever exposed on the cell membrane. Finally, this cascade of events will lead to the development of inflammation, which is characteristic of most autoimmune diseases.

An understanding of the processes underlying these inflammatory lesions will allow us to use Chinese medical therapy and/or Western medicine to intervene specifically in autoimmune-mediated disorders so as to reduce morbidity and mortality of patients suffering from these conditions. Our understanding has deepened in recent years, particularly with regard to studies on apoptosis and clearance of apoptotic cells, or protecting apoptotic cells during treatment and preventing autoimmune diseases from flaring up. In our clinical studies, we used Chinese herbal medicine and acupuncture to eliminate cell apoptosis in multiple ways, with consequent disturbances in the process of presentation of autoantigens to the immune system. In this way, damaged organs were recovered and positive antibodies were reduced or even became negative. Our clinical results conform to the Western medical hypothesis of anticytokine therapy,¹ but with more benefits to patients.

More and more evidence demonstrates that primary pathological changes are based on the relationship between fluid and cell, cell and cell, tissue and tissue, organ and organ, and system and system, leading to the occurrence and development of disease.² Chinese medicine mediates these disordered relationships through holistic therapy, which is why different diseases can be treated by the same method without having to focus on one specific point and solving only one problem at a time.

There is one more question that we need to study and whose trail we need to follow. If Chinese medicine solves the problem of the antigen, the fragment and cytokine will not stimulate antibodies mediated by T cells that mature in the thymus gland. If a patient's thymus gland is excised for any reason, does this mean they can never be healed? This is not the case: some patients still have very successful results even without the physical presence of a thymus gland. Why this occurs is just one more secret waiting for us to pursue.

Chinese medicine can treat a wide variety of diseases in the clinic, but it sometimes lacks scientific data to support its positive effects, so that sometimes only the patient and the practitioner are perfectly satisfied. In this book we have hypothesized that Chinese medicine, with its several thousand years of clinical experience, coupled with Western medical theory, can successfully treat autoimmune diseases, allergies, cancers and degenerative diseases, and even contribute to ameliorate the immune reaction that can occur in organ transplant. We hope you have found this book informative and invite you to join our efforts in order to best serve patients everywhere.

References

1. Skerkovich SV, Skurovich B. Anticytokine therapy – new approach to the treatment of autoimmune and cytokine-disturbance diseases. *Medical Hypotheses* 2002; 59:770–780.
2. Kuang T, Dai H. *Pathological basis of modernized TCM*. Shanghai: Publisher of Shanghai Universal Science, 1998.

GLOSSARY OF IMMUNOLOGY

Acquired immune deficiency syndrome

(AIDS): A life-threatening disease caused by a virus and characterized by breakdown of the body's immune defences.

Active immunity: Immunity produced by the body in response to stimulation by a disease-causing organism or a vaccine.

Agammaglobulinaemia: An almost total lack of immunoglobulins or antibodies.

Allergen: An antigen responsible for causing an allergy.

Allergy: An inappropriate and harmful response of the immune system to normally harmless substances.

Antibody: A soluble protein molecule produced and secreted by B cells in response to an antigen, which is capable of binding to that specific antigen.

Antibody-dependent cell-mediated cytotoxicity (ADCC): An immune response in which antibodies, by coating target cells, make them vulnerable to attack by immune cells.

Antigen: Any substance that is bound by specific antibodies or specific lymphocytes and provokes an immune system response.

Antigen-presenting cell (APC): A cell capable of generating peptides bound to MHC molecules that can be recognized by T cells.

Antigen receptor: The specific antigen-binding receptor on T or B lymphocytes.

Antinuclear antibody (ANA): An autoantibody directed against a substance in the cell's nucleus.

Apoptosis: Programmed cell death ('suicide').

Autoantibody: An antibody that reacts against a person's own tissue.

Autoimmune disease: A disease caused by a disordered immune system attacking the body's own tissues.

Autoimmunity (autoallergy): An immune response to 'self' tissues or components. Such an immune response may have pathological consequences leading to autoimmune disease.

B lymphocyte (B cell): A lymphocyte derived from the bone marrow that produces antibodies.

Basophil: A polymorphonuclear leukocyte.

Bone marrow: Soft tissue located in the cavities of the bones. The bone marrow is the source of all blood cells.

Carrier: A large immunogenic molecule or particle to which an antigenic determinant is attached, allowing the determinant to become immunogenic.

CD: 'Cluster designation' – the international nomenclature for cell surface molecules (CD number).

CD4: A T-cell signalling/co-receptor molecule involved in MHC-II adhesion.

CD8: A T-cell signalling/co-receptor molecule involved in MHC-I adhesion.

Cell-mediated cytotoxicity (CMC): Killing (lysis) of a target cell by an effector lymphocyte.

Cell-mediated immunity (CMI): Immune reaction mediated by T cells, in contrast to humoral immunity, which is antibody mediated. This is also referred to as delayed-type hypersensitivity.

Class I, II and III MHC molecules: Proteins encoded by genes in the major histocompatibility complex (MHC). Class I molecules are designated HLA-A, -B or -C. Class II molecules are designated HLA-DP, -DQ or -DR.

Clone: (n.) A group of genetically identical cells or organisms descended from a single common ancestor; (v.) to reproduce multiple identical copies.

Complement: A series of serum proteins involved in the mediation of immune reactions. The complement cascade is triggered classically by the interaction of antibody with specific antigen. Its action 'complements' the work of antibodies by destroying bacteria, producing inflammation and regulating immune reactions.

Complement cascade: A precise sequence of events usually triggered by an antigen-antibody complex, in which each component of the complement system is activated in turn.

Cytokines: Powerful chemical substances secreted by cells. Cytokines include lymphokines produced by lymphocytes and monokines produced by monocytes and macrophages.

Cytotoxic (cytolytic) T cell: A subset of T lymphocytes that can kill body cells infected by viruses or transformed by cancer.

Delayed-type hypersensitivity (DTH): A T cell-mediated reaction to antigen, which takes 24–48 hours to develop fully, and which involves release of lymphokines and recruitment of monocytes and macrophages. Also called T cell-mediated immunity.

DNA (deoxyribonucleic acid): Nucleic acid found in the cell nucleus that is the carrier of genetic information.

Enzyme: A protein produced by living cells that promotes the chemical processes of life without itself being altered.

Eosinophil: A polymorphonuclear leukocyte with large eosinophilic (i.e. red) cytoplasmic granules.

Fab: Fragment of antibody containing the antigen-binding site, generated by cleavage of the antibody with the enzyme papain, which cuts at the hinge region N-terminally to the inter-H-chain disulphide bond and generates two Fab fragments from one antibody molecule.

Fc: Fragment of antibody without antigen-binding sites, generated by cleavage with papain; the Fc fragment contains the C-terminal domains of the heavy immunoglobulin chains.

Fc receptor (FcR): A receptor on a cell surface with specific binding affinity for the Fc portion of an antibody molecule. Fc receptors are found on many types of cell.

Fungus: Member of a class of relatively primitive vegetable organisms. Fungi include mushrooms, yeasts, rusts, moulds and smuts.

Gene: A unit of genetic material (DNA) that carries the directions used by a cell to perform a specific function, such as making a particular protein.

Helper T cells: A subset of T cells that typically carry the T4 marker and are essential for turning on antibody production, activating cytotoxic T cells and initiating many other immune responses.

Heterophile antigen: A cross-reacting antigen that appears in widely ranging species such as humans and bacteria.

HLA: Human leukocyte antigen, a protein in markers of self used in histocompatibility testing. Some HLA types also correlate with particular autoimmune diseases.

Humoral immunity: Immune protection provided by soluble factors such as antibodies,

which circulate in the body's fluids or 'humours', primarily serum and lymph.

Hypersensitivity: State of reactivity to antigen that is greater than normal for the antigenic challenge; hypersensitivity is the same as allergy and denotes a deleterious outcome rather than a protective one.

Immediate-type hypersensitivity:

Hypersensitivity tissue reaction occurring within minutes after the interaction of antigen and antibody.

Immune adherence: The adherence of particulate antigen coated with C3b to tissue with cells with C3b receptors.

Immune complex: Antigen bound to antibody.

Immune modulators: Substances that control the expression of the immune response.

Immune response (*Ir*) gene: A gene controlling an immune response to a particular antigen; most genes of this type are in the MHC (major histocompatibility complex), and the term is rarely used to describe other types of *Ir* gene outside the MHC.

Immunoglobulin (Ig): A general term for all antibody molecules. Each Ig unit is made up of two heavy chains and two light chains, and has two antigen-binding sites. Immunoglobulins are also known as antibodies.

Interferon: A group of cytokines with antiviral activity, capable of enhancing and modifying the immune response.

K cell: An effector lymphocyte with Fc receptors, which allow it to bind to and kill antibody-coated target cells.

Killer T cell: A T cell with a particular immune specificity and an endogenously produced receptor for antigen, capable of specifically killing its target cell after attachment to the target cell by this receptor. Also called a cytotoxic T cell.

Leukocytes: All white blood cells.

Lymph: A transparent, slightly yellow, fluid that carries lymphocytes, bathes the body tissues and drains into the lymphatic vessels.

Lymphatic vessels: A body-wide network of channels, similar to the blood vessels, that transport lymph to the immune organs and into the bloodstream.

Lymphocyte: A small cell with virtually no cytoplasm, found in blood, in all tissue, and in lymphoid organs such as lymph nodes and the spleen. It bears antigen-specific receptors.

Lymphoid organs: The organs of the immune system, where lymphocytes develop and congregate. They include the bone marrow, thymus, lymph nodes, spleen and various other clusters of lymphoid tissue. The blood vessels and lymphatic vessels can also be considered lymphoid organs.

Lymphokines: Soluble molecules secreted by lymphocytes that have a variety of effects on lymphocytes and other cell types.

Macrophage: A large phagocytic cell of the mononuclear series found within tissues. Properties include phagocytosis and antigen presentation to T cells.

Major histocompatibility complex (MHC): A cluster of genes on chromosome 6 in humans that encode cell surface molecules; they are polymorphic and code for antigens that lead to rapid graft rejection between members of a single species with differences at these loci. Several classes of protein, such as MHC class I and II proteins, are encoded in this region. Those in humans are known as human leukocyte antigens (HLA).

Mast cell: Tissue-located cell, probably derived from basophils. Possesses receptor for Fc of IgE. Participates in 'immediate hypersensitivity' reactions.

Memory: In the immune system, memory denotes an active state of immunity to a specific antigen, such that a second encounter with that antigen leads to a larger and more rapid response.

MHC class I molecule: A molecule encoded by genes of the MHC; participates in antigen presentation to cytotoxic T (CD8⁺) cells.

MHC class II molecule: A molecule encoded by genes of the MHC; participates in antigen presentation to helper T (CD4⁺) cells.

MHC restriction: The ability of T lymphocytes to respond only when they 'see' the appropriate antigen in association with 'self' MHC class I or II proteins on the antigen-presenting cells.

Migration inhibitory factor (MIF): A lymphokine that inhibits the motility of macrophages in culture.

Molecule: The smallest amount of a specific chemical substance that can exist alone. (To break a molecule down into its constituent atoms is to change its character. A molecule of water, for instance, reverts to oxygen and hydrogen.)

Monocyte: A large circulating white blood cell, 2–10% of total white cells, phagocytic, with

an indented nucleus. Migrates to tissues, where it is known as a macrophage.

Monokines: Soluble substances secreted by monocytes and macrophages that have a variety of effects on other cells, and help direct and regulate the immune responses.

Natural killer (NK) cells: Large granule-filled lymphocytes that take on tumour cells and infected body cells. They are known as 'natural' killers because they attack without first having to recognize specific antigens.

Neutrophil: A white blood cell that is an abundant and important phagocyte.

Nucleic acids: Large, naturally occurring, molecules composed of chemical building blocks known as nucleotides. There are two kinds of nucleic acid: DNA and RNA.

Null cells: An early population of lymphocytes bearing neither T-cell nor B-cell surface markers.

Opportunistic infection: An infection in an immunosuppressed person caused by an organism that does not usually trouble people with healthy immune systems.

Organism: An individual living thing.

Passive immunization: Immunization by the administration of preformed antibody into a non-immune individual.

Phagocytes: Large white blood cells that contribute to the immune defences by ingesting microbes or other cells and foreign particles.

Plasma cells: Large antibody-producing cells that develop from B cells.

Platelets: Granule-containing cellular fragments critical for blood clotting and sealing off wounds. Platelets also contribute to the immune response.

Primary lymphoid organs: Organs in which the maturation of T and B lymphocytes takes place and antigen-specific receptors are first acquired.

Primary responses: The immune response to a first encounter with antigen. The primary response is generally small, has a long induction phase or lag period, consists primarily of IgM antibodies and generates immunological memory.

Prophylaxis: Protection.

Proteins: Organic compounds made up of amino acids. Proteins are one of the major constituents of plant and animal cells.

Rheumatoid factor: An autoantibody found in the serum of most persons who have rheumatoid arthritis.

Secondary lymphoid organs: Organs in which antigen-driven proliferation and differentiation of B and T lymphocytes takes place.

Serum: The clear liquid that separates from the blood when it is allowed to clot. This fluid retains any antibodies that were present in the whole blood.

Slow-reacting substance of anaphylaxis

(SRS-A): A group of leukotrienes released by mast cells during anaphylaxis that induces a prolonged constriction of smooth muscle. This prolonged constriction is not reversible by treatment with antihistamines.

Spleen: A lymphoid organ in the abdominal cavity that is an important centre for immune system activities.

Stem cells: Cells from which all blood cells derive. The bone marrow is rich in stem cells.

Suppression: A mechanism for producing a specific state of immunological unresponsiveness by the induction of suppressor T cells. This type of unresponsiveness is passively transferable by suppressor T cells or their soluble products.

Suppressor T cells: A subset of T cells that turn off (suppress) antibody production and specific immune responses.

Thymus: A primary lymphoid organ, high in the chest, where T lymphocytes proliferate and mature.

Tolerance: A non-aggressive state of the immune system normally associated with self-recognition.

Tonsils and adenoids: Prominent oval masses of lymphoid tissues on either side of the throat.

Toxins: Agents produced by plants and bacteria, normally very damaging to mammalian cells, that can be delivered directly to target cells by linking them to monoclonal antibodies or lymphokines.

Vaccine: A substance that contains antigenic components from an infectious organism. By stimulating an immune response (but not disease), it protects against subsequent infection by that organism.

Virus: Submicroscopic microbe that causes infectious disease. Viruses can reproduce only in living cells.

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Bu Gu Zhi Psoraleae Fructus*Wu Wei Zi* Schisandrae Fructus*Rou Dou Kou* Myristicae Semen*Wu Zhu Yu* Evodiae Fructus**SNIFF & RELIEVE 经验方**

experiential formula

Chapters 2, 5, 9

For external use only

Formula produced by All Natural Medicine Clinic,
but not yet available for purchase by
practitioners**T****TAO HONG BA ZHEN TANG 经验方**

experiential formula

Eight-Treasure Decoction with Safflower and
Peach Pit

Chapter 9

Tao Ren Persicae Semen*Hong Hua* Carthami Flos*Dang Shen* Codonopsis Radix*Bai Zhu* Atractylodis macrocephalae Rhizoma*Fu Ling* Poria*Gan Cao* Glycyrrhizae Radix*Sheng Di Huang* Rehmanniae Radix*Bai Shao* Paeoniae Radix alba*Chuan Xiong* Chuanxiong Rhizoma*Dang Gui* Angelicae sinensis Radix**TAO HONG GUI ZHI TANG 经验方**

experiential formula

Cinnamon Decoction with Safflower and
Peach Pit

Chapters 13, 14

Tao Ren Persicae Semen*Hong Hua* Carthami Flos*Gui Zhi* Cinnamomi Ramulus*Bai Shao* Paeoniae Radix alba*Gan Cao* Glycyrrhizae Radix*Sheng Jiang* Zingiberis Rhizoma recens*Da Zao* Jujubae Fructus**TAO HONG SI WU TANG 医宗金鉴**

Yi zong jin jian

Four-Substance Decoction with Safflower and
Peach Pit

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Tao Ren Persicae Semen
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Chi Shao Paeoniae Radix rubra
Shu Di Huang Rehmanniae Radix preparata

TIAN WANG BU XIN DAN 摄生秘剖

She sheng mi pou

Emperor of Heaven's Special Pill to Tonify the Heart

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Mai Men Dong Ophiopogonis Radix
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Suan Zao Ren Ziziphi spinosae Semen
Ren Shen Ginseng Radix
Xuan Shen Scrophulariae Radix
Dan Shen Salviae miltiorrhizae Radix
Fu Ling Poria
Yuan Zhi Polygalae Radix
Jie Geng Platycodi Radix

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Jing yue quan shu

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Fang Feng Saposchnikoviae Radix
Bai Zhu Atractylodis macrocephalae Rhizoma

TU FU LING TANG 经验方

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Zi Cao Arnebiae/Lithospermi Radix
Chai Hu Bupleuri Radix
Chan Tui Cicadae Periostracum
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