

## Chapter 1

# Intelligent Use of Traditional Chinese Medicine

*Ping-Chung Leung*

### 1.1 Introduction

It is true that all major hospitals in China are providing good services in traditional Chinese medicine on demand (Korn, 2001). It is also noted that 15% of hospital services in the United States are providing different forms of alternative medicine upon request (Eisenberg and Kessler, 1993). In a place like Hong Kong or Singapore where the different cultures meet, there is also an enthusiastic movement for wider recognition of the Oriental art and service (Wong *et al.*, 1993). Nevertheless, it does not mean that the current conventional stream of scientific practitioners should automatically shift towards the apparent trend of using alternative medicine, and either practise more alternative medicine themselves or refer more of their patient clients to alternative treatment. Neither does it mean that patients should give up, or tune down their expectation on modern scientific medicine and obtain a substitute from alternative medicine.

Facing the fact that there is a genuine rising respect and need for alternative medicine, both the service providers and the users, should seriously look at the course of events that has led to the present situation. They should also examine the failures of modern scientific medicine, while at the same time evaluate using modern concepts and with a practical attitude, the traditional concepts and practice of healing. The ultimate aim of this exercise is that eventually, an intelligent use of the traditional

practice of cure, can be integrated into modern scientific practice, in a consensual need to bring improved health and well-being to the majority of patients.

## 1.2 The Successes of Modern Medicine

The major successes of modern medicine occurred all within the last century, of which the most recent 20 years gave the most spectacular advances.

All these advances were based on a thorough successful exploration of the basic medical sciences which supplied detailed understanding of the structures of the human body, its functional mysteries, followed by the exploration of its abnormal structures and functions, viz. the pathological changes (Richardson, 2001). This knowledge has been widening through the years, with advancement from macroscopic to microscopic and from biochemical to molecular. The recent successful correlation between the pathological changes and the gene patterns of the biological entity implies another predictable breakthrough in which treatment of diseases is aimed at the primary cause (instead of treating the outcome pathology). Soon, effective prevention of illnesses at the genetic level will become a reality.

Such successes at the handling of disease problems were previously unheard of. It has led to optimistic speculations that human beings should live to at least 110 years of age, and that the approach to disease management will soon turn towards a preventive or “rooting out” principle.

We, medical or non-medical people, all rejoice over such tremendous advances with admiration (Lieberman *et al.*, 2002).

On a lower level, the day-to-day practice of modern medicine has also made remarkable strides. Just look at the varieties of medication focusing on more and more specific targets in an attempt to accurately correct or supplement, without producing unwanted adverse effects. And the minimally invasive surgeries which brought about less pain and more speedy recoveries. Such advances were also beyond anybody's imagination years ago, not to mention other wonders like organ transplants and technology-related sophisticated investigations.

Whether these successes were a result of day-to-day efforts, achieved step-by-step through years of blood and sweat, or the result of epoch-making innovative inventions, it has been a solid demonstration of the triumph of empirical science working on deductive principles. Identification of the accurate cause of problem naturally led to its solution. Its successful solution led to deduction of parallel approaches and solution of other problems. The history of medical advances has already demonstrated that, when the exact cause of pathology is clearly defined, the solution can be worked out, eventually. Thus, we have appropriate bactericidal agents controlling individual infections and wiping out epidemics. We have substituting agents replacing deficient exocrines and endocrines, and we also have powerful means to remove what is not wanted.

Modern technology has contributed a great deal to the process of problem identification: making the right diagnosis, which is always the first step towards treatment planning. Modern technology has also allowed for various forms of thorough management, which include different methods of treatment and drug manufacturing.

The target-orientated deductive approach has been the key to the success of modern scientific medicine. But at the same time, it has also been the source of numerous problems.

The success of target-orientated deductive medicine depends on a proper narrow focus. Specialisation is the natural outcome. Specialisation is followed by sub-specialisation with an even narrower focus. Treatment of illnesses suffered by the whole human body thus gradually turns into treatment of individual organs and sometimes even tissues. The inseparable relationship between the different organs is often overlooked. Different organs are commonly taken care of by different individual healers or team of healers, who communicate and cooperate with different degrees of enthusiasm and dedication. Holistic care involves caring for the whole human individual as a compact, integrated biological entity. Instead, it has given way to a narrowly focused, specifically targeted, technology-based, well-planned spearhead of treatment. The greatly advocated holistic care is lost, unaware to the healers. Healers are overwhelmed with the successes of the highly targeted treatments, while the less successful examples, not to mention the failures, easily escape their attention (Cheng, 2001).

Science and technology have demonstrated overwhelming successes in all directions of daily living. They have built up an immense atmosphere of satisfaction and pride so that the users feel secure and those lacking appear miserable and helpless. There exists a genuine social pressure via which people are pushed towards modern medicine and its applications. There is also the common assumption that successful outcomes are always related to science and technology.

Those who fail to taste the fruit of success usually stay silent, while those spoiled by the wonders of science dominate the stage, thus depriving others of the opportunity to express dissatisfaction.

However, given the mighty power of science, there are still failures and disappointment. There are those who are only partially cured, many who have been treated but are not fully satisfied, and some who are displeased with the multi-disciplinary care, because care and attention become shallow and segregated. Costs of multi-station consultations, apart from the inhumane aspect of specialist consultation, are likewise a genuine concern. Highly selective focusing has replaced holistic care.

The successes of modern science and technology in the field of medicine has therefore been marred as a result of the declining human care, loss of freedom on more positive choices, and the high health care costs involved.

With the thorough endorsement of human rights, it is true that physicians are giving a lot more information to their patients while treatment is being administered. However, thorough and complete discussions on all available treatment options, be they conventional or supplementary, are not absolutely ensured. After all, the Hippocrates oath recommends that the orthodox attending physician should not liase with the unorthodox. The scientific stream should ignore all other approaches that are outside of their own.

As a result, patients under modern scientific treatment usually stay with their conventional treatment. Alternative medicine will forever remain complementary.

### **1.3 Traditional Chinese Medicine**

Of the four major systems of traditional medicine, viz. Chinese, Indian, Greek (European) and Egyptian, perhaps the most sophisticated one is

the Chinese. While solitary plants or simple combinations are used in the Greek and Egyptian systems, both the Chinese and Indian systems (notably the Chinese) are fond of using formulae involving multiple herbs (Kleinman, 1975; WHO, 2000; Goldbeck-Wood *et al.*, 1996).

Although there are insufficient documentations to explain this basic difference between the East and the West, a logical deduction is that all systems start with single herbs. If animal instinct is responsible for domestic animals and household pets to start eating special grass and plants in an attempt to counteract their ailments, the intelligent animal keepers (i.e. human beings) must have also deduced the secret of natural cures, thus applying the same tactic, using the same grass or plant to counteract human ailments. At the very beginning, only one herb was used. Very soon, the Asian healers started using more than one, while their counterparts in Europe kept to their simple single herb application.

A logical explanation to this development of mixed formula was that healers wanted to enhance effects, and at the same time reduce toxicity which, theoretically, could be lowered by adding antidotic herbs. However one of the legendary figures of Chinese medicine, Oriental healer Hua-To, was well known for insisting on using very few herbs, in contrast to his contemporaries who were fond of adopting complex formulae (Hoizey and Hoizey, 1988).

Actually, the wisdom behind the formulae was a lot more sophisticated than the consideration of efficacy enhancement and detoxication. A formula was constructed for efficacy, support, safety and preparation for other directions of achievement (君, 臣, 佐, 使). The formula is created not only for the control of symptoms but also for a transition to health promotion.

While modern, scientific medicine developed according to an understanding of abnormal behaviour in the structure and function of tissues and organs, Chinese medicine developed on the basis of knowledge on the effects of herbs for the control of clinical symptoms.

Apart from the control of symptoms, the Chinese medicine regime aims at the maintenance of function of the organs and tissues that are not directly affected by the pathological mechanisms. The herbalists interpret this aspect of treatment as a measure to consolidate the fundamental vitality, while in modern terminology, this may be interpreted as stimulating the immunological ability of the individual.

### 1.3.1 *When should the modern clinician consider using Chinese medicine?*

While enjoying and applying the effective means of treatment of modern medicine, should the modern clinician also consider using Chinese medicine? He does not need to, if he can fulfill his objectives. However, if he has tried very hard to solve a problem and yet fails to do so, it is his duty to look for other alternatives, otherwise he has not fulfilled his ethical obligation to his patient.

*Are there areas where modern medicine has failed to offer adequate solutions?*

Indeed there are plenty. Deductive science works very well when the course of events, i.e. the structures involved, the functional derangements, the pathological changes, etc. are clearly known. For instance, straightforward infections can be easily cured, deficiencies can be skillfully supplemented and simple tumours effectively removed. However, when the course of events is not easily understood or when the exact pathological changes are unknown or are too complicated, an effective cure is beyond reach and even controlling symptoms can become haphazard.

Thus, allergic conditions often involve unknown agents via uncertain pathways, causing a multitude of involvements — handling and treatment become most difficult. There are anti-allergic agents and other means of controlling allergic reactions. However, it is not uncommon to find that treatment stays at a level of symptomatic control, remains transient or partial. Examples include skin diseases like atopic eczema, some other dermatitis and respiratory problems like allergic rhinitis and asthma (Kaptchuk and Eisenberg, 1998).

Viral infections involve ultra-microorganisms which do not easily expose themselves. Therefore, even identifying their pathological existence requires time. In addition, their pathological manoeuvres may involve unusual pathways, so that symptomatology becomes bizarre and complex, making identification and explanation very difficult. How viruses invade cells and how they multiply are complicated issues. While fully understanding these basic phenomena takes time, creating a means of controlling the mechanisms is even more difficult. As a result, most viral infections still do not have reliable treatment methods (He *et al.*, 2002). Some

examples are common cold, influenza, hepatitis and acquired immune deficiency syndrome (AIDS).

The next group of diseases that scientists have yet to conquer involves diseases of the auto-immune system. While odd patients develop rejection against their own proteins, their presentations are lack of uniformity and the pathological changes also demonstrate great varieties of behaviour. In spite of the extensive research input, the reward is very much outweighed by the resources put in. The helplessness and perplexity involved in the management of autoimmune conditions therefore, remain as frequent frustrations among physicians. Hence, the rheumatological conditions remain a broad group of diseases lacking in efficient control (Wiener, 1975).

Chronic problems represent either accumulation of unsolved acute problems or complicated ailments without solutions. While acute problems exhibit clear target orientations i.e. the tissues or organs involved are clearly defined, making solution possible and straightforward, the unsolved components and the multiple involvement of tissues and organs in chronic situations present the most difficult challenges to the healers. Where should they begin the treatment? Where is the priority? What are the correlations between the different pathological presentations?

Chronic painful conditions therefore persist as difficult challenges for clinicians. Diseases related to the mind have so many possible linkages and correlations — exocrinal, endocrinal, psychological, social and immunological — that not only make solution nearly impossible, but constantly lead to the appearance of fresh, new problems (Ezzo, 2000; Tulder and Cherk, 1999).

Last but not least, there are the cancers. Cancer treatment has always been designed as the elimination of cancer cells. As the methods used are not exclusive, and the target chosen is not absolutely specific, one expects the following:

- Unnecessary destruction of normal cells and tissues during the stage of cancer cell elimination, causing additional symptoms and suffering.
- Normal cells and tissues may be more extensively affected than cancer cells and tissues.
- Prolonged period of recovery and rehabilitation.

- Recurrence resulting from residual tumour cells.
- Recurrence resulting from the breakdown of defense mechanism.

Technology and pharmacological inventions have improved the results of cancer control in the past decade. However, there are still no specific means available for counteracting the adverse effects of destructive methodologies in cancer treatment.

In conclusion, conditions where modern scientific medicine have failed to provide effective solutions include the following:

Allergies — Atopic eczema, hay fever, asthma

Viral infections — Influenza, hepatitis, AIDS

Autoimmune diseases — Rheumatological conditions

Chronic problems — Pain, mental disorders

Cancers — Adverse drug effects, late stages and recurrences

Physicians and surgeons may thoroughly explain to their patients about their limitations in their attempts to offer the best treatment under those circumstances. They have the ethical duty to explore for alternative or additional means of treatment, in order to be more responsible, unless patients themselves do not care for more comprehensive treatment.

### ***1.3.2 When should the patient consider alternative medicine?***

Every modern city enjoys a good provision of modern hospitals and clinics offering effective, scientific treatment for patients. The average individual today, therefore, should be fully aware of the promises of modern medicine. They should be appreciative and thus satisfied.

*But, where are the promises?*

They occur in the following areas:

#### **(1) Emergency medicine**

When life is being threatened, emergency medicine has a lot to offer. Airway obstructions need to be cleared immediately. Cardiac arrests can be counteracted by simple means of resuscitation. Bleeding from different sources requires direct, focused haemostatic manoeuvres. Every modern hospital is proud of its ability to deal with these

life-threatening conditions and the past decades of emergency practices have accumulated excellent experience on effective procedures known to all working personnel belonging to the relevant services today. One perfect example is blood replacement which has saved millions of lives.

(2) Emergency surgery

Life-saving practices are often related with surgical procedures which bring about immediate solutions. Examples are found in haemostasis, airway maintenance, cardiac resuscitation, urine and bowel diversion, etc.

(3) Where investigations are required, either to identify the pathology or to guide the treatment

Investigations can be simple and straightforward like urine and blood tests. On the other hand, they can be technology-orientated like radiographs, scannings or using other gadgets. When investigations indicate simple pathology, it is clear that simple means, either effective pharmaceuticals or surgery, can offer the solution.

(4) Straightforward pathology

Good examples are bacterial infections and benign tumours. What can be more effective than the antibiotics that get rid of the germs responsible for a nasty bout of pneumonia or cellulites? What other methods can be more effective than the simple surgical removal of a cyst, or lipoma or a tumour-like pathology?

The average individual of today is fully aware of these basic modern medical facilities and will not hesitate to use them when the need arises. Should he or she therefore ever resort to alternatives?

While accepting modern medicine as the standard service for emergency and straightforward modalities of disease treatment, the individual should also be aware of other alternatives under the following circumstances:

- (1) Modern medicine fails to offer a cure. Such circumstance occurs when the modern physician finds difficulties satisfying the client. Thorough discussions have just been given under the previous section.

- (2) The individual becomes disappointed with modern scientific, specific treatment. The target of modern treatment so frequently aims at a narrow specific target which excludes a divergence into other possibly related areas. The attending modern practitioner does not apply the holistic approach. When the individual seeks treatment in areas outside of the specific area, he is usually referred to another specialist. The holistic care expected by the individual is thus not given. Under such circumstances, only some unscientific alternatives can be considered as a substitution.
- (3) Related or unrelated to the absence of holistic care, the individual wants more control over his/her problems. Individual freedom and personal choice are considered issues of utmost importance to the apparently helpless patient. One way of reverting to self-determination is to adopt alternative forms of treatment. Whatever the choice, it must be provided with clear instructions, explanations and persuasions for utilisation, thus earning respect and a good chance of adoption. Friends, relatives and colourful advertisements will then become influential guides in the choices. The final decision is made at the dispensary where off-the-counter shelves display promising varieties of choices.
- (4) Lastly, every individual is able to feel for his/her own state of health. The inner feeling can be weak or strong, and is expressed objectively as increase or decrease in weight, exercise tolerance, quality of sleep, duration of working hours, etc. The feeling is also expressed subjectively as loss of energy, loss of enthusiasm, emotional imbalance, failure to achieve certain personal standards or low self-esteem. Such feelings are often affected by personal observations and knowledge of disease entities. The fact that relatives or friends fall sick or similar knowledge of mortalities and morbidities naturally cause concern for one's own health. Unfortunately, apart from what is widely practiced in public health for disease prevention, modern medicine and specialists offering specific care are not putting sufficient emphasis on preventive care. It is true that lifestyle, personal habits and the need for exercise are currently widely emphasised. But the source of emphasis comes from the media, general health workers and groups, and ironically, from off-the-counter drug producers, not medical professionals.

It becomes natural, therefore, that when individuals want to do something to promote personal health, or to prevent mishappenings, they look towards alternative herbal treatment. They would try various means, including dietary or food supplements and off-the-counter offers. With a rapidly increasing ageing population, the need for health promotion and disease prevention becomes more and more important.

### **1.3.3 What does Chinese medicine offer?**

When Chinese medicine is mentioned, herbs, herbal decoctions and acupuncture come to one's mind. In fact Chinese medicine offers a special philosophy of health and disease treatment, which is just as important as the herbs and acupuncture.

Herbal healers not only believe in curing, they also put importance in disease prevention. They use a special term "treating the undiseased" (治未病) which carries a special connotation in classical or modern medical treatment concept. "Treating the undiseased" is more than a general means of disease prevention. It is a concept of supporting and boosting the unaffected organs and functional systems during a disease period, so that the diseased organs and systems are given more chances to heal. It is also a comprehensive programme catered for the individual to avoid specific diseases and to maintain good general health. Hence, the programme can be highly specialised with a specific target, or it can simply be for general health promotion. What then are the advocations? They range from personal lifestyle, eating habits, to special food or herbal supplements. The supplements are closely related to considerations of qualities of life unique to the philosophy of Chinese medicine.

In the modern health concept, quality of life refers to the individual's sense of wellness, for example, activities of daily living, sleep conditions, social activities, etc. Chinese medicine healers, in addition to the approach adopted based on conventional common sense, have their own special way of interpreting the quality of life. The human body maintains its state of internal harmony by balancing the counteracting forces of Yin and Yang. These counteracting forces are felt by the individual as being cold or hot, superficial or deep, and soft or solid.

	Cold ↔ Hot	
<b>Yin</b>	Superficial ↔ Deep	<b>Yang</b>
	Soft ↔ Solid	

It is not possible to give objective data to explain these opposing vital forces. Although modern scientists have tried to quantify them using physiological research models, they have not been successful (Hor, 2003). The Chinese people, however, with some basic explanation, thoughtful adaptation and effort, are able to understand and “feel” the opposing forces. Possibly, there exists a cultural heritage which allows for this understanding. However, with an open mind, even those foreign to the culture should be able to appreciate, albeit to different extents. It is common knowledge that when body temperature is high, the normal feeling of hotness, can, at some instance, be substituted with that of cold. Likewise, the feeling can be felt as superficial or deep, and soft or hard.

The differentiation between Yin and Yang guides the Chinese medicine healer on a detailed choice of treatment. The feeling of the opposing forces guides, to different extents, the individuals to make their own choices on disease prevention and adoption of specific programmes for avoidance of certain ailments.

From this unique philosophy of healing, the simple person in the commonplace household obtains the instructions for self-care. From a similar philosophy, the experienced healer works out his sophisticated scheme of treatment (Campion, 1993).

There are scholars inside and outside of China who deny the importance of the healing philosophy and adopt the view that the main value of Chinese medicine lies in the provision of herbal treatment and the large varieties of herbal formulae documented for specific uses.

*But how do the herbs work?*

Herbs were used for the control of symptoms in the early days during which no one cared to learn about the mode of action. As long as the effects were seen, there was little concern about how and why they came about. When basic laboratory research on herbal medicine began, pharmacological concepts were utilised and herbal effects were compared with

known pharmacological effects of synthetic drugs. A broad understanding of herbal action for symptom relief can probably be simplified into two main categories, viz. direct and indirect action.

#### *Direct actions*

Although never as specific and systematic, herbal choices are known for the control of fever, pain, inflammation and specific symptoms like vomiting, diarrhea, constipation; and even less common symptoms like bleeding, rash, pallor and shortness of breath.

In Chinese communities, proprietor drugs of Chinese medicine origin are well known and commonly used in the average household for headache, stomachache, diarrhea, vomiting and constipation. Most of the time, these give good satisfaction and have been adopted as traditional practices passed down from generation to generation. Few will question the value, and even less will worry about possible adverse side effects.

On a higher level of demand for healing, the Chinese medicine practitioner must differentiate between the different degrees of fever, inflammation or pain. Herbs which have both symptom control effects as well as anti-viral or anti-bacterial properties are available. They are used like antibiotics. Likewise, potent pain-killers like the opiates are selectively used. Anti-fungal and anti-helminthic agents are known and used to produce direct control of infestations. Sophisticated means are available to bring about bowel motion relevant to the need (WHO, 2000).

The use of herbs for direct purposes follows what appears to be pharmacological principles, and such items can be developed into pharmaceuticals. Thus, Ma-huang (麻黄), a well-known herb used in the treatment of asthma was extracted to produce ephedrine, which was widely used for bronchial asthma treatment until more sophisticated drugs with less adverse effects were invented. On a more modern front, Qing-hao was produced from a plant. It was used specifically against one type of malarial parasites (Bensky and Gamble, 1993).

Indeed pharmacognosics is a whole section within the boundaries of pharmacy which deals with plants and other natural products that can be used as prototypes for specific drugs. There are some examples

of modern day pharmaceuticals used with extreme specificity that are actually chemical products produced as a result of extensive laboratory studies on their original parent plants. That is why today's scientists continue to focus their resources on plants believed to be providing therapeutic remedies to natives in villages throughout the world, with the aim of identifying effective pharmaceutical components. In this area, French chemists have been particularly successful as have been exemplified in their manufacture of Vincristine, a powerful cytotoxic drug from a flower called periwinkle, and another equally promising drug of the same family, Taxol, from the bark of the Yew tree (National Centre for Scientific Research France, 1999).

The Chinese herbalist, apart from using herbal preparations on specific, direct needs of symptom control, also makes use of their indirect abilities. The lack of scientific knowledge about the human structure and function motivated the ancient healers to adopt a direction emphasising on a maintenance of the undiseased organs while the diseased organs struggle to heal under the influence of body defense. Body defense, with modern understanding is equivalent to immunological well-being and resistance to diseases.

A great deal of research interests on herbal medicine in the past decades have been focused on the possible immunostimulant effects of different herbs (Fairfield *et al.*, 1998).

In Europe and America, there are flower extracts and pollen preparations widely used as immunostimulants because consumers feel rejuvenated and less susceptible to ailments and diseases. In Chinese communities, mushroom extracts, Lingzhi and Yunzhi are more widely consumed after serious major diseases, during and after cancer treatment, and among the general population for promotion of good health and enhancement of ability to resist pathological invasions.

Animal studies and isolated human trials have given indications that the herbs or herbal extracts under study do provide positive effects on immunological support, and thus presumably, promote health (Leung, 2001).

There is no intention here of guiding the reader on a choice of health promotion products, therefore there is no provision of details on the

completed studies. People should realise that Chinese medicine and its uses, in spite of attempts to modernise it, has not reached the strict evidence-based stage.

## 1.4 Conclusion

The use of Chinese medicine is undergoing significant changes. There are good reasons to believe that we are drawing closer towards the evidence-based scientific demand such that one day in the near future, definite recommendations can be made.

At this present time, we are aware of five major applications. Some are obviously historical (habitual or cultural), some are moving towards science (insistently or conceptually), while others are practical. We need not adopt strong opinions for or against such practices because we are as yet totally uncertain of the direction. However, it is time for the user to know what he or she wants and to understand the limitations and problems.

*Five different types of Chinese medicine users:*

### (1) Household users

They use proprietor preparations or “grandmother’s” herbal formulae for commonplace ailments and symptoms as the first line of defense.

### (2) Seekers for herbalist care

They believe that the herbalist can do a better job for special symptoms. The previous assumption that this group must consist of elderlies and the uneducated is proven wrong in a recent survey on herbalist users. Professionals and middle-rank executives are found to be the main users. These individuals firmly believe in the freedom of choice (Studert *et al.*, 1998).

### (3) Modern users

Professionals who enjoy the fruits of science and insist on scientific pursuits. Yet they follow the advice and recommendations expressed by health scientists, odd modern practitioners and clever advertisements that upgrade proprietor drugs into quasi-scientific preparations (assumably pharmaceuticals).

#### (4) Preventive users

The concern and fear of health deterioration and pathological changes in otherwise normal and healthy individuals have driven thousands of upper-middle class people on health pursuits, using different modalities of preparations and programmes available on the market.

#### (5) Research users

Clinical scientists will feel more comfortable if they can obtain positive data from evidence-based trials on the various herbal preparations claiming efficacy. Since the World Health Organization and National Institutes of Health in the United States endorsed the approach of proving efficacy using scientific standard methodology (NIH, 2001), clinicians have been devoting more time in the search for some apparently unscientific means to solve their difficult problems. One is looking forward to the results of many ongoing clinical trials. Positive results are expected to open up many new fields of problem-solving research. The future trustworthy guidelines should come mainly from this group.

### **1.5 Limitations of Chinese Medicine Research**

The research users are having a difficult time — while they want to follow strict scientific methodologies so as to maintain the highest credibility, they have found it to be practically impossible. They rely on herbs where there is yet no way to ensure uniform quality. They very often use a combination of herbs. Not even individual herbal contents and functions are clear, and they know very little about their interactions. They observe clinical and laboratory data, and confirm the changes without knowing why and how. They make assumptions about the efficacies, but do not have any idea about the pharmacokinetics and pharmacodynamics. These are the obvious limitations.

If one insists on the clearance of these limitations before embarking on the research planning and commitment, one has to wait for decades. The only compromise therefore is to assume that the best quality of herbs are already available, that herbal interactions are uniform, and that the reasons behind the clinical and laboratory changes will be revealed sooner

or later. Likewise, assumptions should be made that the pharmacokinetics and pharmacodynamics would not affect the final choices.

The intelligent use of Chinese medicine should therefore be individualised. It is used when modern medicine fails to offer what is desired. We should not assume that Chinese medicine can substitute modern medicine. We can however recognise Chinese medicine as a separate speciality of medicine that supplements other specialties.

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