

TRADITIONAL MEDICINE

Better Science, Policy and Services for Health Development

**Proceedings of a WHO International Symposium
Awaji Island, Hyogo Prefecture, Japan
11-13 September 2000**

WHO KOBE CENTER

A new global and interdisciplinary research organization

The potential for incorporating traditional Chinese medicine into clinical practice

Ka-Kit Hui

Center for East-West Medicine

University of California, Los Angeles

United States of America

In the Western world, complementary, and alternative medicine (CAM) is in renaissance. No longer at the constant periphery of the biomedical model, CAM is being considered as an increasingly important component of health care. A new paradigm is envisioned in the future where the best of both biomedicine (also known as modern Western medicine) and the holistic medicines are blended to form a new medical model. In order to achieve this goal and allow its first step, incorporation of CAM into mainstream medicine to take place, there is a need for a systematic discussion about the value of CAM. Three main questions must be answered: (1) Why do we need a new paradigm? (2) Is CAM effective? (3) Is incorporating CAM into current health care system cost-efficient? Although it is difficult to fully answer these questions until successful integration is achieved, there is some compelling evidence that techniques and concepts derived from CAM, especially traditional Chinese medicine (TCM) should be considered for the health care paradigm of the new millennium.

Why do we need a new paradigm?

Lessons from the United States health care crisis

Although each country's health care system is unique, being influenced by cultural, political and economic factors, some of the trend seen in the United States can illustrate the general characteristics of the current medical model around the world.

For more than a decade, the United States system has been under scrutiny. Patients, Policy-makers, the medical community, health insurance companies and social commentators have been vocal about the shortcomings of the current system and need for health care reform. The reasons for their discontent are numerous and multifaceted. The United States system has been shown to be the most expensive, yet inadequate system in the developed world [1-3]. According to a recent WHO analysis, even although the United States spends the most per person on health care (about US\$4000 per person ill in 1997), in overall quality, its care ranks 37th in the world [4,5]. Despite US\$1.3 trillion worth of health care expenditures (about 14% of ODIP), the number of uninsured grew to 43 million (16% of the population) in 1998 [3]. Questions are also being raised about the invasiveness, adequacy, and safety of the current system. Suffering caused by chronic and age-related diseases is on the rise and some common diseases continue to take their toll. Still more of a person's health care money is spent in attempts to prolong life at all costs, rather than on other health care needs such as prevention, treatment of chronic, stress-related illness and improvement of quality of life. The emphasis on crisis care has

resulted in development of highly technical invasive treatments and potent drugs that raise the risk of iatrogenesis. Alarming, as many as 20-30% of patients receive contraindicated and/or unnecessary care [2]. Recent reports estimate the number of deaths due to medical errors to be between 44,000 and 98,000 Americans. An additional 106,000 deaths a year are attributed to non-error, adverse effects of medications, raising questions about the overall safety of purified, potent drugs [6].

The limitations of the biomedical model

Despite all the money spent on health care, patients, medical professionals and insurers alike are frustrated, and no one seems to be happy with the status quo [3]. The paradigm that made biomedicine so effective the past few decades is now proving insufficient. This fact stems from the philosophical framework which originated at the beginning of the 20th century and is now inadequate to meet the challenges of the present era. The ideas of Newtonian physics and Descartes' belief in separation of body and mind have influenced the current scientific approach to illness. The biomedical model emphasized objectivity and reductionism and conceptualized the human body as a machine, components of which can be separately analysed and repaired. The main role of medicine has been designated to identifying a marker of disease and then eradicating it [7]. While the current paradigm has led to stunning success in treatment of acute diseases, cancer and stroke are now the leading causes of death, and other illnesses such as arthritis or chronic pain cause much suffering. On the whole, modern Western medicine has been successful in treating the right-hand side of the following health-disease continuum

Feeling great – Wellness/Absence of disease – Minor symptoms – multiple/Chronic symptoms – Acute/Advanced disease – Terminal stage/Death

But it has been inadequate in addressing the far-left side of the spectrum – maintenance of health and promotion of wellness. Many patients have recognized the limitations of the current system and have turned to alternative medical approaches for help. In the last several years, a tremendous number of patients have visited alternative medicine practitioners or used alternative methods such as herbs on their own [8].

Integrative East-West medicine

Modern Western medicine emphasizes a reductionist approach, which focuses on the physical and objective bases of disease. In contrast, TCM, a major component of complementary medicine, carries an emphasis on wellness, individuality, self-healing, and mind-body interaction. As the strengths of TCM can be seen to compensate for the weaknesses of modern medicine, and vice versa, a new health care paradigm, called the integrative East-West paradigm is proposed.

The choice of traditional Chinese medicine

TCM is a comprehensive and inclusive system that shares most concepts of the other CAM disciplines. At the same time, it is also the most studied one due to China's

investment in TCM research and modernization. On the conceptual level, TCM complements modern Western medicine by adding holistic principles to its analytical, reductionist approach. TCM puts strong emphasis on the integrity of the human body as well as the intimate relationship between humans and their social and natural environment. There is recognition of the impact that physical, nutritional, psychosocial and genetic factors have on health and disease. TCM focuses on health maintenance and the early stages of disease with emphasis on enhancing the body's natural resistance to disease. In contrast to modern Western medicine, which focuses on structure and biochemistry, TCM includes a systems perspective that focuses on process and function over structure as well as recognition of the inherent complexity of living systems. It also stresses the importance of homeostasis, as well as a normal flow of adequate energy to maintain it [9].

Effectiveness of traditional Chinese medicine

The remarkable longevity and current popularity of TCM implies its clinical efficacy. However, to incorporate it into mainstream health care, many are looking for a systematic proof of efficacy from vigorous research studies. In the last four to five decades, China has been a pioneer in investigating TCM and has provided a wealth of research data demonstrating the efficacy of its concepts and techniques. Unfortunately, these studies often are not available in English and/or do not have sufficient research vigour. At the same time, studies conducted in the Western world frequently concentrate on investigating a single therapeutic technique outside the TCM framework [10]. Despite these limitations, reviews of TCM research yield suggestive evidence of efficacy of all the major therapeutic modalities: acupuncture, acupressure, herbal medicine, *Tai Chi* and *Qi Gong*.

In 1997, National Institutes of Health (NIH) consensus determined that, based on available studies, acupuncture should be considered effective for a number of conditions such as post-operative and chemotherapy nausea or vomiting, and post-operative dental pain. Acupuncture was also recommended as an adjunct treatment or an acceptable alternative for addiction, stroke rehabilitation, asthma, menstrual cramps, tennis elbow, carpal tunnel syndrome, low back pain, headache and pain syndromes such as fibromyalgia and myofascial pain [11]. Concurrently, basic research studies have elucidated some neurophysiological mechanisms implicated in acupuncture, such as release of endogenous opioids and stimulation of the limbic system [12-15].

Similarly, there is growing knowledge of herbs and their biological effects. Extensive research of Chinese, Korean and Kampo formulas has shown that many herbs have unique immunomodulating, cardiovascular, antiviral, anticancer and other beneficial effects. Clinical research of herbal medicine has demonstrated herbal efficacy in the areas of gastroenterology, hepatology, reproductive endocrinology, dermatology, neurology and psychiatry. In randomized controlled trials, traditional herbal preparations have been shown to be effective for hepatocellular carcinoma, eczema, vascular dementia and irritable bowel syndrome [16-18].

Other therapeutic techniques, acupressure, *Tai chi* and *Qi Gong*, are less researched, but some data are also available. Recent studies on massage therapy have shown benefits for a spectrum of conditions, such as chronic pain syndromes, chronic fatigue syndrome, fibromyalgia and others [19, 20]. *Tai Chi* exercise has been shown to improve balance in elderly subjects [21] and it may help decrease blood pressure [22]. *Qi Gong* practice may have beneficial effects in patients with asthma, diabetes and cancer [23].

Cost-effectiveness of incorporating TCM into mainstream medicine

As CAM is becoming more popular, governments, providers, and payers are asking for evidence to access whether its introduction to mainstream medicine should be supported. Even if CAM methods prove effective, questions are raised on whether they are also cost-effective. Since they are low-tech methods, they tend to be low-cost interventions that may nevertheless “get the job done”. Compared with modern Western medicine methods, those of CAM are also significantly less invasive and therefore avoid the tremendous medical and personal cost secondary to iatrogenesis.

Because of its holistic approach to health, the value of TCM extends beyond the specific treatment benefits and can positively affect the rest of a patient’s life. Through education about influence of emotional, environmental and life-style factors on health, TCM empowers patients to take better care of their health and prevent future illnesses. By resonating with patient’s wishes for more personal, natural, wellness-oriented care, the East-West medicine approach is likely to better respond to patient’s needs, improve compliance and avoid the frustration seen with the current health care system. Thus, any comprehensive assessment of the value of incorporating TCM into the conventional medical system should acknowledge the benefits of prevention, early disease recognition and the patient-based approach.

Currently, there is a paucity of studies on the cost-effectiveness of integrative East-West medicine. One relevant study, conducted in a Japanese hospital, showed that herbal medicine significantly decreased costs in the hospital[24]. The study showed that the cost of Western drugs averaged about US\$6 more per patient per day versus administration of Western drugs plus Japanese Kampo drugs. While it is unclear whether quality was maintained, the cost reduction for the 200-bed hospital equalled US\$438,000 in one year. This study illustrates the dramatic potential of integrative East-West medicine, and indicates that similar studies need to be performed.

Clinical experience

Additional evidence of integrative East-West medicine is gathered through clinical experience. In the last several years, private, public and academic clinics and research institutes have been established to integrate CAM with modern medicine. Most of these institutes and clinics explore the benefits of all forms of complementary therapies, but some have specifically focused on integrating TCM and modern Western medicine. The UCLA Center for East-West Medicine (CEWM) has been a pioneer

among other clinics and it is the first center to integrate TCM and modern Western medicine at a major academic institution in the United States [25]. The Center strives to extend several decades of effort by researchers and clinicians dedicated to the integration of TCM with Western medicine in China and other countries, such as Japan and the Republic of Korea. The establishment of CEWM represents an effort to develop, promote and offer public access to this emerging, integrative East-West medical paradigm. Founded in 1993, it has been a vital clinic, teaching, research and information center. The Center clinic serves about 5000-6000 patient visits annually, with most of patients referred by other clinicians at UCLA and similar institutions. The staff of the clinic, acupuncturists and medical doctors who have background knowledge of both modern Western medicine and TCM, work in unison at all stages of patient care.

Most patients presenting to the clinic are suffering from the following chronic pain states: degenerative joint disease, with or without spinal stenosis; refractory headaches; postherpetic neuralgia; failed back syndrome; fibromyalgia; and myofascial pain syndrome. Other non pain-related conditions frequently seen at the clinic include gastrointestinal complaints, chronic fatigue syndrome, psychological conditions (anxiety and depression), menopause, cancer care, hypertension and asthma. Most patients are referred to the Center after failing extensive Western medicine treatment (often having several surgeries or other invasive procedures). Once at the clinic, the patients receive a thorough initial evaluation that consists of: (1) an assessment of adequacy of prior conventional work-up and treatment; (2) a complete history of prior health, including work-related, psychosocial, traumatic, nutritional and other lifestyle factors; and (3) a conventional physical examination, supplemented by TCM diagnosis, including palpation of acupoints and tongue diagnosis. After the initial evaluation, a treatment plan is designed to meet each patient's individual needs. The regimen usually consists of acupuncture, acupressure, trigger point injections, self-massage, *Tai Chi* and *Qi Gong* exercises, medication adjustment, and education on nutrition and lifestyle changes. Most patients benefit from the treatment and, depending on the nature and stage of the illness, they have either complete resolution or enjoy significant improvement in their condition.

Case Discussion

Out of the many patients who have benefited from the integrative approach at the Center clinic, a few examples offer a snapshot of this approach and of its value.

Case #1 This patient is a 72-year-old Caucasian female with left hip and left lower extremity pain who was referred to the UCLA Center for East-West Medicine after failing decompressive lumbar laminectomy of L3-L5 for spinal stenosis in 1996. All of her symptoms were aggravated by physical strain such as walking and standing for even several minutes. Prior to her referral to the Center, the patient's Medicare (government insurance for the elderly) approved payment for medical treatment over 11/2 years totally approximately US\$34,000. This included six epidural steroid injections, physical therapy, medication, lumbar laminectomy, four spinal catheter implants for morphine infusion, and several neuroimaging studies. Four acupuncture treatment sessions totaling US\$160 (out of pocket) were also tried. All these interventions were not successful in

alleviating the patient's pain in the long term, and the patient continued to be disabled. In contrast, after seven treatments over three months at the Center, which included acupressure massage, trigger/acupuncture point injection and education in self-massage and exercise, the patient experienced complete relief. To achieve these results at the Center, Medicare approved payment of US\$600 for the seven treatment visits and an initial consultation. Over the past three years, the patient has continued to do well with her maintenance treatments at the Center at four to five week intervals.

Case #2 This patient is a 42-year-old Caucasian female with a history of hormonal infertility treatment, after which she developed heart palpitations, facial flushing, adrenaline burst, muscle spasms, mood swings and insomnia. These symptoms continued even after the hormonal treatment was stopped. Soon after her systemic symptoms started, the progressive muscle spasms resulted in a frozen left shoulder. Physical therapy, as well as steroid injection, further exacerbated the systemic symptoms with no relief of the shoulder discomfort. The patient underwent an extensive medical work-up for adrenal tumours, pheochromocytoma, other hormonal abnormalities, and cardiac and neurological disease. The work-up, which involved multiple specialists, proved very exhausting, provided no answers or effective treatments, and ultimately left the patient feeling lost, anxious and depressed. The patient decided to seek alternative treatment and presented to the UCLA Center for East-West Medicine. She was initially treated for a frozen shoulder which improved with trigger point injection, acupuncture, acupressure and self-massage. As the patient continued to experience systemic symptoms and her medical work-up failed to provide a specific etiology, a diagnosis of automatic dysregulation manifesting itself as the TCM 'Empty Heat' pattern was made. The treatment regimen consisted of a beta-blocker, acupuncture and acupressure. The medication was eventually tapered off after the patient's husband (a physician) was taught to do acupuncture for her at home. Overall, the patient experienced significant improvement in her systemic symptoms. As a comparison, the total cost of the conventional medical treatment was US\$68,000 (US\$2693 out of pocket) over 18 months.

Case #3 This patient is a 30-year-old Caucasian female who presented to the UCLA Center for East-West Medicine with multiple diagnosis of irritable bowel disease, chronic fatigue, chronic abdominal pain, endometriosis, migraines, gastroesophageal reflux and insomnia. Prior evaluations and treatments included a laparoscopy with cauterization of endometriosis, a second laparoscopy to lyse resulting adhesions, endoscopies for gastrointestinal symptoms, and several MRIs. These interventions did not help and the out-of-pocket medical bills, close to US\$20,000, left the patient financially bankrupt. The patient's chronic fatigue and pain intensified to a point that she was unable to keep her job as a computer graphic designer. As her abdominal pain continued, surgical hysterectomy was recommended. Discouraged by this drastic recommendation, the patient referred to the Center clinic. Initial evaluation yielded a diagnosis of liver Qi stagnation and blood stasis. This mixed pattern, common in TCM, was able to unify all the symptoms and offer non-invasive and effective treatment. It is possible that if this patient had the opinion of traditional Chinese treatment prior to her conventional medical treatments, her outcome may have been improved with a tremendous decrease in medical and personal cost.

The above three cases illustrate the potential benefits and cost implications of the integrative East-West treatment of both young and older patients. A comparison of preceding Western medical treatments and those received at the East-West medicine Clinic shows the potential of the evolving integrative paradigm to improve patients' welfare. The incorporation of traditional medicine into mainstream health care have multiple benefits that can be summarized as follows:

- increased efficacy for some conditions;
- improved early diagnosis leading to reduction of overall morbidity;
- decreased fragmentation of care;
- reduction of excessive diagnostic and treatment interventions and the cost associated with them;
- decreased iatrogenesis;
- decreased overall cost of illness for the patient, the insurers and the society;
- delivery of patient-centered, humanistic care; and
- improvement in the patient's quality of life.

Conclusions

As a long-standing component of the Asian culture, traditional medicine has had a remarkable record. Traditional Chinese medicine has proven itself to be a uniquely comprehensive system that is both effective and affordable. According to a 1993 report of the World Bank, through the concomitant use of TCM and modern Western medicine, China had been able to adequately care for 22% of the world's population with only 1% of the world's health care budget. Besides treatment methods, TCM's focus on cultivating health by maintaining homeostatic reserve and minimizing factors that lead to deregulation, encompasses all degree of prevention. Its teachings of moderation, balance and lifestyle modification in effect accomplish the goals of health promotion. As such, the TCM approach is well-positioned to complement the crisis intervention model of biomedicine. The knowledge contained in Chinese medicine's thousands of years of thinking, analysis and practice has much to offer to human welfare and, once it is dressed in modern language, this ancient treasure will be better appreciated by the world community.

As we stand at the brink of the 21st century, we must challenge ourselves to critically examine the ingrained beliefs, habits and old institutions of health care. What has worked should be kept and what has not should be discarded or improved and optimal health care that is effective, safe, accessible and affordable should become the priority of every country's health care system. This task will require the concerted efforts, ingenuity and collaborative spirit of the scientific and medical communities, policy-makers, the public and other segments of society. Some of the health care resources have to be shifted somehow from high-tech, invasive, crisis intervention to patient-oriented care, prevention, early disease recognition, and health promotion, in order to create a more balanced health care system. As the health care system continues to evolve, medical traditions other than the Western biomedical model should be recognized for their potential to heal both the current system and the human population. By keeping open but

critical minds about CAM, the leaders of health care can extend the scope of medicine from acute/crisis care to the entire health-disease spectrum. By rebalancing the focus of the health care system between treatment of disease and maintenance of health, the future paradigm will bring us closer to the achievement of the goals of medicine: (1) the prevention of disease and injury, and the promotion and maintenance of health; (2) the relief of pain and suffering caused by maladies; (3) the care and cure of those with a malady, and the care of those who cannot be cured; and (4) the avoidance of premature death and the pursuit of a peaceful death [26].

References

1. Angell M. The American health care system revisited – A new series. *New England Journal of Medicine*, 1999, 340(1): 48
2. Starfield B. Is US health really the best in the world? *Journal of the American Medical Association*, 2000, 284(4): 483-485
3. Iglehart JK. The American health care system expenditures. *New England Journal of Medicine*, 1999, 340(1): 70-76
4. Labders SJ. The world's health care, how do we rank? *American Medical News*, 2000, August 28: 5-6
5. World health report 2000. Geneva, World health Organization, 2000. Available from < <http://www.who.int/whr2001/2001/archives/2000/en/contents.htm> >
6. Kohn L *et al.* To err is human: building a safer health system. Committee on quality of health care in America. Institute of Medicine, National Academy Press, 2000.
7. Longino CF, Murphy JW. Old age challenge to the biomedical model: paradigm strain and health policy. Henricks ed. New York, Baywood Publishing Co. Inc., 1995
8. Eisenberg DM *et al.* Trends in alternative medicine use in the United States, 1990-1997 results of a follow-up national survey. *Journal of the American Medical Association*, 1998, 280(18): 1569-1575.
9. Hui KK, Yu J, Zylowska L. The progress of Chinese medicine in the USA, the way forward for Chinese medicine. Chan K, Lee H eds. Netherlands: Harwood Academic Publishers, in press.
10. Hui KK. Harmonizing traditional Chinese and modern Western medicine: a perspective from the United States. In: *Consultation Meeting on Traditional and Modern Medicine: Harmonizing the two Approaches. Beijing Nov 1999. Report: 185-189.* Manila, World Health Organization Regional Office for the Western Pacific Report, 1999.
11. NIH Consensus Conference (1998) Acupuncture. *Journal of the American Medical Association*, 1998, 280(17): 1518-1524.
12. Han JS. Acupuncture and stimulation produced analgesia. In: *Handbook of experimental pharmacology*, 1993: 105-125.
13. Hui KK *et al.* Acupuncture modulates the limbic system and subcortical gray structures of the human brain: Evidence from fMRI studies in normal subjects. *Human Brain Mapping*, 2000, 9: 13-25.

14. Avants KS *et al.* A randomized controlled trial of auricular acupuncture for cocaine dependence. *Archives of Internal Medicine*, 2000, 160: 2305-2312.
15. Cho ZH *et al.* New findings of the correlation between acupoints and corresponding brain cortices using functional MRI. *Proceedings of the National Academy of Science*, 1998, 95: 2670-2673.
16. Bendoussan A *et al.* Treatment of irritable bowel syndrome with Chinese herbal medicine: a randomized controlled trial. *Journal of the American Medical Association*, 1998, 280(18): 1585-1589.
17. Eskinazi D *et al.* *Botanical medicine: efficacy, quality assurance, and regulation.* New York: Mary Ann Liebert, Inc., 1999.
18. Report of the World Health Organization Regional Office for the Western Pacific for 1998-1999. Manila, World Health Organization Regional office for the Western Pacific, 1999, p3-38.
19. Braverman DL, Schulman RA. Massage techniques in rehabilitation medicine. *Physical Medicine and Rehabilitation Clinics of North America*, 1999, (3): 631-49.
20. Ernst E. Massage therapy for low back pain: a systematic review. *Journal of Pain and Symptom Management*, 1999, 17(1): 65-9.
21. Wolfson L *et al.* Balance and strength training in older adults: Intervention gains and Tai Chi maintenance. *Journal of the American Geriatrics Society*, 1996, 44(5): 498-506.
22. Young DR *et al.* The effects of aerobic exercise and Tai Chi on blood pressure in older people: results of a randomized trial. *Journal of the American Geriatrics Society*, 1999, 47(3): 277-284.
23. Sancier K. Medical applications of *Qi-Gong*. *Alternative Therapies*, 1996, 2(1): 40-46.
24. Kogure K. (1999) Research and practice on herbal medicine and acupuncture. In: Report of the Consultation Meeting on Traditional and Modern Medicine: Harmonizing the Two Approaches. Beijing Nov 1999. Manila, World Health Organization Regional Office for the Western Pacific, 1999, p191-198.
25. UCLA Center for East-West Medicine (2000) <http://www.cewm.med.ucla.edu/>
26. Hanson M, Callahan D eds. *The goals of medicine: the forgotten issue in health care reform.* Washington, D.C., Georgetown University Press, 1999.