Editorial

Inclusion of Integrative Medicine in Clinical Practice

Weidong Pan^a Hua Zhou^b

Departments of ^aNeurology and ^bCardiology, Shuguang Hospital Affiliated with Shanghai University of Traditional Chinese Medicine, Shanghai, PR China

Introduction

Most Western medicines are synthetic chemical products that come with side effects for patients, and therefore, our modern medical system needs to be optimized. A new concept called integrative medicine represents a more comprehensive system for understanding our body in a holistic fashion in terms of analyzing, evaluating and treating complex diseases successfully. Integrative medicine may be the combination of Western medicine and complementary/alternative medicine (CAM) [1] in the United States and Europe, and in China, it might consist of integrated traditional Chinese medicine (TCM) and Western medicine [2].

Integrative Medicine Is an Extended Classification of Medicine

Since the 18th century, most diseases have been classified according to the Western medical system. Doctors, including traditional and CAM doctors, would diagnose diseases and choose systematic treatments based on the Western medical system. However, the diagnosis and treatment of such diseases could not catch up with the reforms developing with time. The pathogenic causes of diseases cannot be explained completely using exclusively the modern Western system. Many other medical systems are used for primary health care needs, such as TCM, traditional Indian medicine, traditional Korean acupuncture, mind-body therapy, yoga, Japanese oriental medicine (Toyo Igaku) and African herbal concoctions. The Kagera region of Northwestern Tanzania and Ayurveda (India) are cultures

Hua Zhou
Department of Cardiology, Shuguang Hospital Affiliated with
Shanghai University of Traditional Chinese Medicine
185, Pu-An Road, Shanghai 200021 (PR China)
E-Mail huazhoum@gmail.com

rich in original traditional medicine use and practice [3, 4]. We need an integrative system to optimize and improve our medical systems. Given the advances in medical science and clinical practice in the 21st century, there is the need for a better integration of these different approaches [5].

Integrative Medicine Includes Integrated Diagnostic and Clinical Research Methods

There are many technological methods to revert to in modern Western medicine, but they are still limited. Tongue examinations are not important for diagnostic evidence in Western medicine; however, they play an important diagnostic role in TCM and other traditional medicines [5]. Sometimes, diseases can also be diagnosed with yoga or mind-body therapy by observing the emotions, touching the face or skin and analyzing the voices of patients. Pulse checking and ‘Differentiation of Eight Principles’ are important technical methods for diagnosis in TCM [6]. On the other hand, we also need modern technological methods to study TCM, Ayurveda, American herb treatments and Japanese oriental medicine. For example, how does mind-body therapy work in treating depression [7]? Does Taijiquan have an effect in treating fibromyalgia or Parkinson’s disease [8, 9]? How can herbs target adult neurogenesis to become a therapeutic strategy for brain repair and recovery of neurological functions [10]? Researchers also use many biochemical and pathological methods to determine the medical functions and actions of herbal therapies. Integrative medicine includes the medical systems of various clinical research areas.

Integrative Medicine Includes Evaluation Methods

There are many advanced and scientific devices and clinical scales in Western medicine to sensitively evaluate most diseases, but there are still deficiencies. Integrative medicine has included many evaluation methods such as actigraphic recordings with detrended fluctuation analysis [11], robotic endoscopic capsules with IT technology [12] and electrohysterographic measurements with ultrasound analysis [13] to increase objectivity or quantity by improving the evaluating system of Western medicine. Another integrated magnetic resonance image technology, diffusion tensor imaging, provides sensitive technology to detect the effects of acupuncture in treating cerebral infarctions [14]. Tongue and pulse checking might be sensitive signs for evaluating some chronic diseases. Inversely, we also use advanced and scientific devices to quantitatively evaluate the effects of TCM or other integrative therapies, including mind-body therapy, yoga, Ayurveda, Toyo Igaku and Taijiquan. The evaluating methods have been included properly in integrative medicine.

Integrative Medicine Therapies Are More Effective and Comprehensive

With the development of our understanding of diseases, most of Western medicine has been supported by evidence-based research through clinical trials or good clinical practice. However, it lacks holistic integration and individualization. Often, a disease is treated using a single method according to the guidelines, and doctors do not consider the possibility of differences in susceptibility among different groups. They will experience different effects and side effects. Optimal treatments and methods based on holistic properties are needed to modify and finalize the treatment administration [5].

There are more than 3,000 integrative medicine hospitals in China treating serious diseases, including many rare illnesses [2]. Integrative medicine can improve clinical effects and quality of life as well as decrease medical costs. Integrative therapy is effective in preventing the side effects of radiotherapy and chemotherapy and can also improve many concomitant symptoms of cancer by a treatment method called ‘Chinese cancer treatment mode’ [2]. Integrative therapies are more effective for chronic diseases than Western therapies [15, 16] and might prevent and cure severe acute respiratory syndromes [17]. The combination of Chinese herbal medicine and stem cell biology approaches provides great potential for post-stroke rehabilitation [10]. According to a 2006 survey, more than 20% of the hospitals in the United States are using CAM [1]. More than 70% of the German doctors with a CAM license like using acupuncture when treating patients with pain symptoms [2]. Integrative medicine has been introduced into medical insurance systems in many countries [20]. Qinghaosu (artemisinin) and pishuang (arsenic) [18, 19] have well-known uses in integrative medicine. Integrative medicine provides better medical care in terms of scientific thinking, theoretical systems, diagnostic tools and treatment technology [5].

In conclusion, integrative medicine is a means of combining any effective methods or treatments from CAM or traditional medicines and Western medicine in order to establish new, complex ways to effectively treat, diagnose or explore various complex diseases or symptoms, to avoid misdiagnoses, side effects or unilateral treatment, to improve quality of life and to prolong lives [5]. Through joint efforts, integrative medicine will be able to make greater contributions to boosting medical advances and safeguarding human health.

Acknowledgments

This study was sponsored by the National Natural Science Foundation of China (81373619) and the National High Technology Research and Development Programme of China (863 Programme, 2010AA0221396001).

References

- 1 Harris PE, Cooper KL, Relton C, Thomas KJ: Prevalence of complementary and alternative medicine (CAM) use by the general population: a systematic review and update. *Int J Clin Pract* 2012;66:924–939.
- 2 Cui YQ, Zhou B, Chen Q: Clinical practice and challenges of integrative medicine in hospitals (in Chinese). *Zhongguo Zhong Xi Yi Jie He Za Zhi* 2012;32:115–118.
- 3 Fokunang CN, Ndikum V, Tabi OY, Jiofack RB, et al: Traditional medicine: past, present and future research and development prospects and integration in the National Health System of Cameroon. *Afr J Tradit Complement Altern Med* 2011;8:284–295.
- 4 Lloret SP, Rey MV, Rascol O: Ayurveda medicine for the treatment of Parkinson’s disease. *Int J Integr Med* 2013;1:6.
- 5 Pan W, Zhou H: Integrative medicine: a paradigm shift in clinical practice. *Int J Integr Med* 2013;1:21.
- 6 O’Brien KA, Abbas E, Zhang J, Guo ZX, et al: An investigation into the reliability of Chinese medicine diagnosis according to Eight Guiding Principles and Zang-Fu Theory in Australians with hypercholesterolemia. *J Altern Complement Med* 2009;15:259–266.
- 7 Purohit MP, Wells RE, Zafonte R, Davis RB, et al: Neuropsychiatric symptoms and the use of mind-body therapies. *J Clin Psychiatry* 2013;74:520–526.
- 8 Wang C, Christopher HS, Ramel R: A randomized trial of tai chi for fibromyalgia. *N Engl J Med* 2010;363:743–754.
- 9 Li F, Harmer P, Fitzgerald K, Eckstrom E, et al: Tai chi and postural stability in patients with Parkinson’s disease. *N Engl J Med* 2012;366:511–519.
- 10 Shen J, Chen X, Chen X, Deng R: Targeting neurogenesis: a promising therapeutic strategy for post-stroke treatment with Chinese herbal medicine. *Integr Med Int* 2014; DOI: 362638.
- 11 Sun Y, Wu C, Wang J, Pan W: Quantitative evaluation of movement disorders by specified analysis according to actigraphy records. *Int J Integr Med* 2013;1:8.

- 12 Than TD, Alici G, Zhou H, Li W: A review of localization systems for robotic endoscopic capsules. *IEEE Trans Biomed Eng* 2012;59:2387–2399.
- 13 Rabotti C, de Lau H, Haazen N, Oei G, et al: Ultrasound analysis of the uterine wall movement for improved electrohysterographic measurement and modeling. *Conf Proc IEEE Eng Med Biol Soc* 2013;2013:7436–7439.
- 14 Yang S, Lu F, Pan W, Gong Z, et al: Quantitative evaluation of acupuncture improvements in patients with white matter infarction by diffusion tensor imaging. *Int J Integr Med* 2013;1:18.
- 15 Li S, Wang L, Yan X, Wang Q, et al: Salvianolic acid B attenuates rat hepatic fibrosis via downregulating angiotensin II signaling. *Evid Based Complement Alternat Med* 2012;2012:160726.
- 16 Metcalfe A, Williams J, McChesney J, Patten SB, et al: Use of complementary and alternative medicine by those with a chronic disease and the general population – results of a national population based survey. *BMC Complement Altern Med* 2010;10:58.
- 17 Li Y, Li J, Fang C: Inhibitory effects of anti-SARS traditional Chinese medicines on the UV irradiation of lambda-lysogen. *Am J Chin Med* 2006;34:147–155.
- 18 Tu Y: The discovery of artemisinin (qinghaosu) and gifts from Chinese medicine. *Nat Med* 2011;17:1217–1220.
- 19 Chen S, Zhou G, Zhang X, et al: From an old remedy to a magic bullet: molecular mechanisms underlying the therapeutic effects of arsenic in fighting leukemia. *Blood* 2011;117:6425–6437.
- 20 Keyhani S, Woodward M, Federman AD: Physician views on the use of comparative effectiveness research: a national survey. *Ann Intern Med* 2010;153:551–552.