Editorial

The Development of Integrative Medicine

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Key Words

Integrative medicine · Traditional Chinese medicine combined with Western medicine ·
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There is not a single system of medicine that can address all the health-care needs of the modern society in light of the rise of medical pluralism, and there is growing concern about adverse effects of chemical drugs and the need for more accessible care [1]. These factors have led to an increase in the utilization of services from other health-care systems in the world, such as complementary and alternative medicine (CAM) and traditional medicines. Concomitant with the limitations of Western medicine, the impact of other branches of medicine becoming more necessary and apparent, there is a call for a new type of additional medicine, namely integrative medicine (IM).

IM has developed very quickly over the past two decades. Since the 1950s, in China, IM has been defined as traditional Chinese medicine (TCM) combined with Western medicine. In other countries, IM has been used as complementary therapies or additional therapies in order to distinguish it from modern medicine [2]. IM treatment has been shown to improve physical and mental health in patients with various diseases and can benefit patients with many diseases in China and all over the world [3]. It may include traditional medicines (traditional Chinese medicine, traditional Indian medicine, Ayurveda, etc.), acupuncture and moxibustion, manipulation, tai chi chuan, yoga, meditation, mind therapy, vitamin therapy, and medicinal diets.

Recently, in the United States, CAM as one type of IM has become an independent discipline, although it still occupies a subordinate position, and it is also considered to be complementary and supplementary to modern medicine [4]. In China, it has achieved the same level and importance as Western medicine and is now eligible for reimbursement through the national medical insurance program [5]. Not only in Europe and the United States but also in China, the initial concept of IM was one of CAM or a section of medicine; thus, the concept of IM was somewhat narrow and should be termed ‘specialized IM’ (SIM). With the development

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of IM, it extended to a large concept, which contains all aspects of health-care needs including modern medicine (Western medicine) [6]. If the concept is expanded, it should be called ‘generalized IM’ (GIM) or modern IM. Even in the United States, GIM has been recommended in a large tertiary care hospital with conventional application; this illustrates that it is becoming more common in US health care [7].

In reality, there are few TCM doctors and TCM researchers in China or anywhere else in the world. Modern TCM is part of IM. Any production of a traditional medicine drug (such as a Chinese patent drug) must be verified by modern medical and technological tests before it can be placed on the market in China, Japan, Korea, or any other country. Modern techniques and medical methods are used for the detection of adverse drug reactions, the design of scientific studies and clinical trials, the definition of disease classification in modern medicine, laboratory examinations, and the assessment of validity and safety according to the modern medicine system. Except that the materials of the product come from pure TCM, the process of production and the method of application are the same as in modern medicine and modern technology. This approach has been in use since the 1950s, and in 2015 it eventually received the highest recognition when Professor Tu was successful in studying artemisinin inspired by classic TCM works combined with modern medical research [8]. This approach is not TCM but rather SIM, and artemisinin is a chemical drug. On the other hand, there are still many TCM doctors using herbs to treat many TCM diseases or Western diseases according to the TCM theory called ‘Bian Zheng Lun Zhi’ (symptomatic and dialectical therapy), a special pure traditional Chinese medicine theory which has been used for more than one thousand years [9]. Sometimes, TCM doctors seem not to need modern techniques and medical methods to adjust or modify their treatment regimen. However, once a medical problem occurs, nobody can make a scientific judgement of the causes only according to TCM pathogenic factors. The reasons for the medical problem must be detected or examined using techniques of modern medicine, such as routine blood tests, measurement of blood pressure and blood glucose, electrocardiography, electroencephalography, oxygen saturation, electrolytes, and even CT, MRI, pathologic anatomy, and other modern clinical methods. This approach should be included in the IM system. In modern society, there is no pure traditional medicine or pure TCM.

In the context of the modern medical system, pure TCM has been unable to address all medical needs and is, therefore, unsuitable for the medical environment nowadays, so it is necessary to establish the IM system. Modern Chinese medicine or CAM may combine modern medicine, including modern science and technology, with SIM and could develop modern medicine in a way that it becomes a useful medicine which serves human health. However, at present, in China, SIM is still a subspecialty of TCM (i.e., TCM contains SIM), a situation which is not suitable for the development of SIM. Improving the medical system not only depends on TCM doctors and researchers but also on bureaucrats in the Chinese Ministry of Health and other branches of the government of China [10].

The overall goal of modern IM (GIM) is not only to include all preventive and therapeutic methods to serve human health but also to develop diagnostic and evaluative methods and tools. Most subjective evaluation methods, such as the National Institutes of Health Stroke Scale (NIHSS) and the modified Rankin Scale, which are universally used to evaluate the severity of stroke and assess the therapeutic effect of a drug, may involve situations in which different doctors obtain different scores when they evaluate the same patient due to differences in their clinical experiences. It is helpful to evaluate the efficacy of a drug with an objective recording instrument, such as an actigraph [11, 12], to establish quantitative parameters from body activity recordings for neurological deficits or use advanced testing technology to assess limb blood flow, etc. These methods refer to the combination of branches of medicine in the methodology, and this approach is also called GIM [13].

GIM should not be confined to treating diseases only with modern medicine, TCM, psychotherapy, meditation exercises, health-care products, and SIM. We should also make great efforts to utilize the huge potential of CAM, traditional medicine, and modern technology to identify effective means of diagnosis, quantitative evaluation, and precision treatment of diseases. Advances in genomic technology have enabled the clinical application of these approaches, for example, in precision medicine, where a large-scale analysis of DNA and RNA of cancer genes from small amounts of archival tissue is now possible [14]; this is another aspect of GIM. We are looking forward to finding effective methods and/or treatments to cure refractory diseases such as Parkinson's disease, Alzheimer's disease, and amyotrophic lateral sclerosis through the development of GIM.

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Disclosure Statement

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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