Building a Platform for East-West Communication in Stroke Research: Report of the Third International Stroke Summit, Wuhan, China, November 1–3, 2007

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As the most populous country, China has the biggest number of stroke victims in the world. With the aging of population and westernizing of lifestyle in recent years, the incidence and prevalence of stroke are increasing, while the onset ages of stroke are decreasing in China. According to recent epidemiological studies, stroke has become the leading cause of death in many parts of the country [1]. The socioeconomic cost of stroke has been climbing at an unprecedented speed in recent years, and there is no evidence that this trend will change in the near future.

In contrast to the persistently growing number of patients, research on stroke in China lags behind that in western countries. As a result, prevention and management of stroke in China are far from satisfactory. The control ratio of modifiable risk factors for stroke is low. Patients treated with thrombolysis and in well-organized stroke units are very few compared to the huge patient population. Mortality, morbidity and recurrence of stroke are unacceptably high [2, 3]. Data concerning stroke epidemiology are extremely rare. Guidelines for stroke prevention and management in Chinese people were established, to a considerable degree, using the epidemiological, etiological and clinical profiles of western populations [4]. However, previous studies on stroke incidence, recurrence and risk factors discovered significant variances across countries at different stages of socioeconomic development and of different ethnic populations [5]. These variances emphasize the need for population-specific strategies on account of risk factors for stroke occurrence and recurrence. The higher morbidity, mortality and recurrence of stroke in China further increases the need for stroke research to establish population-specific strategies for stroke prevention and management. Thus, establishing a platform for communication on stroke research between scholars from developing and developed countries is of vital importance for improving stroke prevention and management in countries like China.

Many Chinese doctors are familiar with and have experiences in treating stroke with Traditional Chinese Medicine (TCM), such as herb medicines, acupuncture, massage and moxibustion. Although TCM has been performed in China in stroke prevention and treatment for more than 3,000 years, the efficacy and safety of these strategies need to be measured by the standards of evidence-based medicine. To accomplish this, Chinese doctors must possess the knowledge of evidence-based medicine, such as how to launch a randomized controlled trial. An east-west communication platform will provide such cognitive and methodological knowledge for Chinese doctors.

To improve stroke management and prevention in China and other developing countries, the International Stroke Society (ISS), now merged with the World Stroke Federation (WSF) into the World Stroke Organization (WSO), initiated a sequential conference, the International Stroke Summit, in China in 2004.

The First International Stroke Summit was held in Beijing, China, in September 2004, which was co-chaired by Julien Bogousslavsky, Xinfeng Liu and Yongjun Wang [6]. The Beijing meeting called together more than 2,000 researchers and doctors from China and many other countries. The Second International Stroke Summit was held in Nanjing, China, in August 2006, which was co-chaired by Geoffrey Donnan and Xinfeng Liu [7]. The Nanjing meeting convened more than 1,000 clinicians and researchers from China and other countries.

The Third International Stroke Summit was held in Wuhan, China, on November 1–3, 2007. This meeting was organized by the Jinling Hospital, Nanjing University School of Medicine, Wuhan First Hospital and Wuhan Medical Association. A total of 650 doctors and researchers attended, and 50 scholars from different countries reported their studies during the 3-day meeting. As in the previous meetings, the motif of narrowing the gap between developing and developed countries in stroke management was

also present in this meeting. Several topics, such as acute thrombolysis after cerebral infarction, endovascular treatment for atherosclerotic stenosis, stroke rehabilitation, acupuncture and herb medicine in stroke treatment, garnered much attention.

The Third International Stroke Summit was co-chaired by Dr. Markku Kaste, Professor of Neurology, University of Helsinki, Finland, and Dr. Xinfeng Liu, Chair of Jinling Hospital, Nanjing University, China. As the Vice President of the WSO, Prof. Markku Kaste opened the meeting with a keynote address in which he summarized the existing knowledge in stroke management and prevention. He introduced the foundation and development of the WSO and emphasized the purposes and targets of this organization. He said that merging the ISS and WSF into the WSO in 2006 made stroke organizations stronger so that they can speak with one voice in the world. He also introduced the recent programs launched by the WSO and encouraged academic organizations as well as individuals engaged in stroke management and research to join the WSO.

Michael Chopp from the Henry Ford Hospital and Health Sciences Center, Detroit, Mich., USA, reported his research concerning the stem cell in treating cerebral ischemia in animal models. He also discussed the progress and prospective of neural rehabilitation after stroke. His research team is now testing the value of sildenafil citrate (Viagra®) in reducing neural impairment after focal cerebral ischemia in animals, and they have got some positive results. Xinfeng Liu introduced the status of endovascular treatment for intracranial artery stenosis in China. He mentioned the unique status of carotid angioplasty and stenting in China and other developing countries. Due to the shortage of skilled neurosurgeons and low-grade acceptance of carotid endarterectomy, surgical treatment of carotid stenosis is unavailable in most Chinese hospitals. There are only 200 cases of carotid endarterectomy performed per year in China compared with 200,000 cases in the USA, which has a much smaller population.

Therefore, most Chinese patients with carotid stenosis had been treated with medications of undetermined efficacy or left completely untreated. Liu said that the emergence of endovascular techniques would provide Chinese patients with an alternative treatment of carotid stenosis. A control trial is now ongoing in China comparing carotid angioplasty and stenting and the best medical treatment in patients with severe symptomatic and asymptomatic carotid stenosis. Lokesh Bathala introduced the burden of stroke in India. As in China, stroke generates a huge socioeconomic problem in India.

TCM was another hot topic during the meeting. Huang from China reported the results of a controlled randomized clinical trial, which evaluated the efficacy of integrated herb medicines in treating acute ischemic stroke. Their results indicated that herb medicines can improve the NIHSS score 21 days after stroke onset. Neural growth factor has long been proven to be efficient in treating cerebral ischemia in animals. However, this treatment was held back in clinical application because neural growth factor cannot freely cross the blood brain barrier, leading to adverse effects. Liu et al. reported that electrical acupuncture can facilitate the entrance of neural growth factor in the central nervous system after being delivered intranasally. The 30 selected abstracts submitted to the meeting have been published in *Cerebrovascular Diseases* [8].

Many participants said they gained new ideas for further improving their stroke services and stroke research, which will be for the benefit of their patients. In the closing ceremony, the organizers of the summit announced that the next meeting, the Fourth International Stroke Summit, will be held on July 23–25, 2008, in Nanjing, China. They encouraged researchers and clinicians around the world to join the next meeting and continue their contribution to the communication between east and west.

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