

The 8th Annual ISNVD Newsletter

Editors: Dr. Meiyun Wang and Dr. E Mark Haacke

This year we were fortunate enough to have Dr. Meiyun Wang of Henan Provincial People's Hospital agree to host the 8th Annual Meeting of the ISNVD in Zhengzhou, China from May 31th- June 2th, 2018. The meeting was a great success and had support from many companies in China. During the three days of the meeting, more than 40 well-known radiologists and neurologists gave presentations during the meeting with more than 300 attendees from around the world actively participating. The speakers were able to give their presentations in both Chinese and English as simultaneous interpretation was provided through special headsets. This ensured easy understanding of the speeches and a fluent exchange of information throughout the meeting. The meeting was formally hosted by Henan Provincial People's Hospital, which is one of the largest hospitals in China with a history of more than 114 years, in Zhengzhou, Henan, China. Experts and scholars from all over the world gathered in this historical city to promote scientific research and clinical applications and guidelines for neurovascular and related diseases.

Becoming a Member

If you are interested in becoming an ISNVD member or know of someone who may be interested, please go to our website at www.isnvd.org for more information or e-mail info@isnvd.org.



Presidium and speakers

OPENING CEREMONY

A brilliant laser show opened the 8th Annual Meeting of the ISNVD Opening ceremony with more than 300 attendees present. This was followed by a video of the history and culture of Henan Province, the Henan Provincial People's Hospital and the ISNVD. The Opening Ceremony was chaired by Dr. Meiyun Wang, Executive President of ISNVD 2018 Annual Meeting and Board of Trustees Member of the International Society for Magnetic Resonance (ISMRM) from Henan Provincial People's Hospital. Dr. Wang gave a speech to welcome all the guests from around the world. Other distinguished guests also gave welcoming speeches including: Dr. Jianqin Gu, Chinese President of the ISNVD 2018 Annual Meeting and President of Henan Provincial People's Hospital, spoke about the hospital's development and endeavor in improving the diagnostic level of neurovascular diseases; Dr. Dai, Honorary Vice-President of the ISNVD 2018 Annual Meeting and Past Vice-President of the Chinese Medical Association from Beijing Tian Tan Hospital, Capital Medical University; Dr. Wei Huang, Vice-President and Inspector of the Health and Family Planning Commission of Henan Province; Dr. Longde Wang, Honorary President of the ISNVD 2018 Annual Meeting and President of the Chinese Preventive Medicine Association from Stroke Prevention and Control Project Committee, National Health Commission; Prof. Lawrence L. Wald, Foreign President of the ISNVD 2018 Annual Meeting and President-Elect of ISMRM; Prof. Xiaoliang Zhang, Foreign President of the ISNVD 2018 Annual Meeting and President of the Overseas Chinese Society for Magnetic Resonance in Medicine (OCSMRM), and Prof. E. Mark Haacke, Foreign President of the ISNVD 2018 Annual Meeting and President of ISNVD; Dr. Fengmin Shao, the Secretary of the Party Committee of Henan Provincial People's Hospital; Dr. Peichun Sun, the Vice President of Henan Provincial People's Hospital..



Dr. Meiyun Wang



Dr. Jianqin Gu

'Neurovascular Perspectives' is the newsletter of the International Society for Neurovascular Disease (ISNVD)



Dr. Jianping Dai



Dr. Longde Wang



Dr. Wei Huang



Prof. Lawrence L. Wald



Prof. Xiaoliang Zhang



Prof. E. Mark Haacke



Dr. Jianqin Gu presented the 2018 ISNVD Gold Medal to Dr. Robert Zivadinov.



Dr. Fengmin Shao and other speakers at the opening ceremony.

SCIENTIFIC SESSIONS

Session 1 was titled "State-of-the-art advancement of neurovascular disease in China." Profs. Jingliang Cheng and Dapeng Shi chaired this session. There were 5 Chinese leading experts in the field of neurovascular disease sharing their latest research results and giving their perspective on this subject. First and foremost, Dr. Longde Wang gave a lecture entitled "Exploration on the prevention and control of stroke in China". He elaborated the major challenges, preliminary achievements and future plans in stroke prevention in China. This was followed by a speech on "Imaging techniques of cerebral ischemia" by Dr. Jianping Dai. He said new therapies of recanalization of cerebral ischemia may improve patient outcome and that early diagnosis by imaging is significant for choosing suitable treatment. He noted that precision medicine requires the combination of P4 medicine, integrating imaging, artificial intelligence (AI) and molecular medicine but that despite the opportunities in this era of precision medicine, challenges remain. Then Prof. Sui ren Wan, Chairman of the Steering Committee of Biomedical Engineering Education, Ministry of Education, People's Republic of China, Prof. Meiyun Wang, the Executive President of ISNVD 2018, and Prof. Xiaoyuan Feng who is the Past President of the Chinese Society of Radiology from Huashan Hospital, Fudan University, each delivered their lectures.



Dr. Longde Wang

(On the right: Dr. Jianping Dai)



'Neurovascular Perspectives' is the newsletter of the International Society for Neurovascular Disease (ISNVD)



(On the left: Prof. Suiren Wan)



(On the right: Dr. Xiaoyuan Feng)

(Below: Dr. Meiyun Wang)



In **session 2**, “Societal views and novel methods in neurovascular disease” was discussed and chaired by Prof. Xiaoliang Zhang. At first, Prof. E. Mark Haacke introduced the ISNVD history and motivation for its formation as well as details of the highlights of the first seven meetings. Afterwards, Prof. Lawrence L. Wald gave the second keynote speech in titled “MRI unchained; removing hardware constraints to make faster, portable and motion tolerant images.” From the insight of biomedical imaging and bioengineering, Prof. Wald gave an excellent talk on several advanced

technologies, mainly about MR image reconstruction (based on modeling the structure of interest rather than using the Fourier Transform), the portable brain MRI, accelerated imaging and removing motion artifacts. He said, “If you can measure a systematic error, you can fix the systematic error”. Many in the audience were excited about this new technology and its future potential implications in the field of medical imaging. The last speaker in this session was Prof. Xiaoliang Zhang who gave a talk on “New techniques for catheter imaging devices in interventional neurovascular MRI” to illustrate the new tools for tracking endovascular catheters using MRI.

'Neurovascular Perspectives' is the newsletter of the International Society for Neurovascular Disease (ISNVD)

Session 3 was titled “*Advancement and transformation of brain imaging*”, chaired by Prof. E. Mark Haacke, Aldo Bruno and Hongyu An. Prof. Haacke opened up the session by giving a talk called “Evaluating neurodegenerative disease with STAGE and neurovascular aspects of Parkinson’s Disease with quantitative flow imaging.” He said “STAGE imaging provides for a rapid data acquisition of the entire brain in less than 5 minutes providing multiple sources of contrast. STAGE can help provide the radiology community with a standard imaging protocol for neurodegenerative diseases in general and Parkinson’s disease specifically”. Then Prof. Bernd Hamm, the Foreign President of the ISNVD 2018 Annual Meeting and the Director of the Chairpersons of the European Society of Radiology (ESR) Board, gave a brief introduction to the ESR and emphasized the situation of China’s involvement in the ESR. All of these indicated that researchers and doctors in radiology from China play an increasing role in ESR. Prof. Jie Tian, Director of CAS Key Laboratory of Molecular Imaging and the President of Biophysical Society of China on Molecular Imaging, Prof. Yin Cao and Prof. Hongyu An gave their talks.



Prof. Bernd Hamm



Prof. Yin Cao



Prof. Jie Tian

In session 4, "Venous abnormalities" were discussed. Prof. Paolo Zamboni, the past president and co-founders of the ISNVD, talked about "Eagle jugular syndrome." He said that the jugular variant of the Eagle syndrome is a distinct clinical entity respect both classic and carotid variants, and it seems a factor which potentially increases the susceptibility to subarachnoid hemorrhage (SAH). Prof. Bruno's talk was called "Venous lesions in patients with Meniere's Disease (MD): Results of a multicentric Italian study and guidelines for an international project." His research found that the prevalence of chronic cerebrospinal venous insufficiency (CCSVI) in Meniere's disease is high and PTA has a significant curative effect on MD. He believed that the venous stasis of the head and neck veins may be considered a further etiopathogenetic mechanism which adds to many other already known mechanisms that still define MD as a multifactorial disease. Next, a talk on "New insights into the pathophysiology of Idiopathic Intracranial Hypertension: A multi-fluid dynamic PCC-MRI analysis" was given by Dr. Nivedita. Agarwal.



Prof. Aldo Bruno

"Extracranial Venous Disease" was the focus of **session 5** that was chaired by Drs. Robert Zivadinov and Yan Bai. Prof. Paolo Zamboni started this session with another talk "New release from the Brave Dreams trial." He believed CCSVI contributed to a better understanding of the function and role of the extracranial venous system. He then suggested: "Rather than rejecting this accumulated new knowledge, we should use it more appropriately for future endeavors." Prof. Robert Zivadinov discussed the role of cardiovascular (CV) comorbidities in the pathogenesis of neurological disorders. He pointed out that CV comorbidities are associated with higher susceptibility of neurodegenerative disorders and disease progression, there is a stronger link between CSA of neck vessels and CV risk factors, and that the heart-brain axis should be better investigated in diseases such as MS, AD and PD. Prof. Salvatore JA Sclafani, the past president of ISNVD, ended with a speech called "Carotid arterial trauma and minimally invasive treatments". He believed that treating carotid injury surgically is hard and dangerous and endovascular options are essential for survival.



Prof. Paolo Zamboni

The topic of **session 6** was “*Microvascular disease*” chaired by Dr. Hugues Chabriat, Dr. Yulin Ge and Mr. Sean Sethi. Prof. Hugues Chabriat shared the results of his research on the relationship between MR imaging features and the pathologic basis, physiopathologic and genetic changes of CADASIL. His research results help to develop a deeper understanding of this disease from different aspects. In addition, Drs. Ying Han and Xuening Zhang from China respectively gave keynote speeches in this session.



Prof. Hugues Chabriat

Session 7 was called "Abnormal CNS hemodynamics and quantifying flow." Prof. Danny JJ Wang from talked about "Perfusion MRI: The battle between contrast DSC vs. non-contrast ASL." Prof. Yulin Ge discussed "Brain oxygen metabolism and hemodynamic impairment in Multiple Sclerosis." His research with TRUST MRI may further support increased venous blood O₂ level (Y_v) or decreased CMRO₂ in MS. And the research with CVR imaging in MS with hypercapnia pCASL perfusion (CBF) MRI found CVR deficit in brain networks of MS. He believed that both oxygen delivery and oxygen uptake impairment can lead to chronic hypoxic condition and raised prospects of new methods of treatment on MS. Other speakers in session 5 were Mr. Sean Sethi and Dr. Shanshan Lu.



Prof. Danny JJ Wang

Session 8 focused on "The glymphatic system" and was chaired by Profs. Eleuterio F. Toro and Jiani Hu. Prof. Jiani Hu spoke on "The interaction between the vascular and glymphatic systems." Prof. Eleuterio F. Toro delivered a talk titled "Modeling flow in the head and neck". He had reviewed the work of Warnert et al. and assessed Warnert's hypothesis by using a state of the art global mathematical model for human circulation. He found that congenital anatomical variants (VHA and iCoW) do not exhibit alterations in cerebral blood flow. And he believed that their results were preliminary and established the foundation of further study on identifying underlying mechanisms of arterial hypertension. Dr. Jie Li, talked about "Delayed macromolecular transport at the neurovascular unit in hydrocephalus." His studies have shown that excess macromolecules in the ventricles are sufficient to cause hydrocephalus. He said these macromolecules are transported in both normal and hydrocephalic states from the ventricles via the paravascular pathways (glymphatic pathways) and eliminated into the vascular system (serum). The final speaker in this session was Dr. Yongsheng Chen, who discussed the role of STAGE and MICRO imaging in evaluating the vasculature of the brain.



Prof. Jiani Hu

Session 9 was on Saturday afternoon and it was called "Stroke and vulnerable plaque." It was chaired by Drs. Yang Qi and Shaocheng Zhu both from China. Prof. Fuhua Yan gave the first talk in this session and focused on "MR quantitative determination and clinical application of brain iron deposition." The world-famous neurosurgeon Dr. Juha Hernesniemi briefly expounded on "Imaging diagnosis of internal carotid artery stenosis." Other speakers in this session were Drs. Xinqing Jiang, Qi Yang and Yong Zhang.



Prof. Fuhua Yan

'Neurovascular Perspectives' is the newsletter of the International Society for Neurovascular Disease (ISNVD)

Session 10 had a more clinical bent called "Treatment of stroke." was chaired by Drs. Yu Luo and Hongna Tan. Dr. Tianxiao Li, Co-President of the ISNVD 2018 Annual Meeting and the Vice-Director of the Chinese Society of Interventional Radiology from Henan Provincial People's Hospital, delivered a speech titled "Research on the recirculation of intracranial artery occlusion at non-acute stage". Other speakers included in this session were Drs. Qiang Fang, Sheng Guan, Yu Luo and Liangfu Zhu.



Prof. Qiang Fang



Prof. Jianping Dai and Prof. Haacke chatting after the meeting

THE CLOSING CEREMONY

At 5 p.m. in June 2nd, 2018, Prof. Meiyun Wang chaired the Closing Ceremony. On behalf of the Conference Organizing Committee, she said "It's hard to say goodbye", and expressed thanks to all the specialists, scholars and attendees from around the world gathered in Zhengzhou for supporting this conference.



Prof. Meiyun Wang and Prof. E. Mark Haacke

Thank you!

Finally, we thank all our sponsors for their strong support without which this meeting would not have been possible. These include: SIEMENS HEALTHINEERS, PHILIPS, UNITED IMAGING, GENERAL ELECTRICS, CHINDEX, BAYER, BRACCO, DING WEI HEALTHCARE, JUSHA, HENGRUI, BKS, KANGCHEN, CARESTREAM, and YANGTZE RIVER. And a special thanks to Xiaoyue Ma, Liheng Wu, Tengfei Zhou, Yan Bai and all the volunteers who did a superb job welcoming people and supporting the infrastructure of the event throughout its three days. Looking forward to seeing many of you again next year.



Annual Meeting Presidents and the volunteers at the Closing Ceremony