

## Joon-Uhn Choi: the 2005–2006 ISPN President

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### Ambition and dreams

Dr. Joong-Uhn Choi was born on 28 December 1943 in Hongchun City of Kangwondo Province, which is a rural area about 200 km from Seoul, Korea. After the aftermath of the Korean War (1950–1953), the economic condition of the country was quite miserable. During his primary, middle, and high school years, Dr. Choi saw many people suffering from illness or injuries. As a result, he developed the ambition to be a good doctor to help such poor people in need. Fortunately, among high competition, he was accepted to study at the Yonsei University College of Medicine. As a medical student, he became much interested in different fields of Neuroscience such as neuroanatomy,

neurology, and neurosurgery, excelling in each of these fields. After graduation from medical school, he entered the neurosurgical residency program at Severance Hospital, which was an unpopular field at that time. After completing his residency training in 1974, Dr. Choi served his mandatory military service for a period of 3 years. After completing his military service, Dr. Choi was appointed as an instructor at the Yonsei University College of Medicine in 1977. He took great strides to achieve his dream of becoming a specialized neurosurgeon.

### The first hospital and the development of neurosurgery in Korea

Severance Hospital originated from Kwanghewon, which was founded by an American missionary, Dr. Horace Allen in 1885 as Korea's first western-style hospital (Fig. 1). Kwanghewon changed its name to Jejungwon shortly after and eventually became Severance Hospital several years later. Severance Medical College merged with Yonhee University in 1957 to become Yonsei University. The first spinal operation in Korea was performed by Prof. Yong-Sul Lee and Dr. Ludlow of the Department of Surgery in the 1920s. In addition, the first craniotomy was performed by Prof. Ki-sup Lee, a general surgeon, at Severance Hospital in 1943. Then, in 1957, Prof. Tae-Jun Moon began neurosurgical practice as Chief of Neurosurgery at the Department of Surgery.

A separate Neurosurgery Department was established in 1961 by its founding Chairman, Prof. Tae-Jun Moon, and was the first of its kind in Korea. Prof. Moon completed his residency training at Thomas Jefferson University (Philadelphia, USA). He then left Yonsei University and Severance Hospital in 1966 to serve in Congress and later

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**Fig. 1** Kwanghewon (forerunner of Severance Hospital), the first hospital in Korea (1885)

became the Minister of Health and Welfare, as well as the President of the Korean Medical Association and World Medical Association.

Prof. Hun-Jae Lee succeeded Prof. Moon as the second Department Chair in 1966 and played major role in promoting and building up the Department's training program (Fig. 2). Prof. Lee did his residency at the University of Michigan (Ann Arbor, USA). He then served on the faculty at Soodo Medical College (forerunner of Korea University) and returned to Yonsei University again. Prof. Hun-Jae Lee, Dr. Hwan-Young Chung, Dr. Yoon-Sun Hahn, Dr. Kyu Chang Lee, and Dr. Sang-Sup Chung were faculty members during Dr. Joong-Uhn Choi's residency.

Dr. Yoon-Sun Hahn was the first neurosurgeon to specialize in pediatric neurosurgery in Korea. After completing his residency at Children's Memorial Hospital in Chicago under the supervision of Dr. Antony Raimondi, he established the pediatric neurosurgery specialty in Korea in 1976. After completing his military service, Dr. Joong-Uhn Choi returned to Severance Hospital to join Dr. Hahn's team in 1977.

Then, Dr. Choi had served as the Chief of Neurosurgery at Severance Hospital from 1994 to 2003.

The successive Chairs of Neurosurgery at the Yonsei University College of Medicine are as follows: 1981–1988: Prof. Kyu-Chang Lee (vascular neurosurgeon), 1988–1994: Prof. Sang-Sup Chung (functional neurosurgeon), 1994–2001: Prof. Young-Soo Kim, (spinal neurosurgeon), and Prof. Joong-Uhn Choi since 2001.

Pediatric neurosurgery at Severance Hospital had developed gradually through the efforts of Prof. Choi after Prof. Hahn left Korea in 1978. Then, in 1994, Dr. Dong-Seok Kim joined Prof. Choi's team. Together, they perform over 450 operations annually.

Finally, Severance Children's Hospital opened its doors in May 2006 after long-term preparation.

## Influence of great teachers

Dr. Joong-Uhn Choi was taught by Professor Hun-Jae Lee, one of Korea's neurosurgical pioneers. Professor Lee had performed procedures for pediatric brain tumors, vascular malformation, and shunt operations for hydrocephalus in the late 1960s.

Dr. Choi had the chance to do a postdoctoral fellowship at National Hospital for Nervous Disease (Queen Square, London, UK) from 1979 to 1981. He studied neurology and general neurosurgery under the supervision of Professor Gilliatt and Professor Symon. Then, Professor Kyu-Chang Lee, Department Chair in 1981, encouraged Dr. Choi to specialize in pediatric neurosurgery and pursue another fellowship abroad. Dr. Choi was accepted to do his second fellowship at the Hospital for Sick Children (Toronto, Canada) in 1984. Dr. Choi's teachers were the 3Hs (Dr. Hendrik, Dr. Hoffman, and Dr. Humphreys). Dr. Harold Hoffman visited Dr. Choi's Hospital twice after his training. He still misses very much the late Dr. Hoffman as his greatest mentor (Fig. 3).

During his fellowship in Toronto, his wife and three children had spent a great time with him there. Their first daughter, Yoo-Jean, was 12 years old, second daughter, Yoo-Kyung, was 10 years old, and son, Jay-Yong, was 6 months at this time. Time flew by so fast. Yoo-Jean became a dermatologist and was married to Dr. Hyun-Soo Chung, faculty of Emergency Medicine at Yongdong Severance Hospital. Yoo-Kyung has worked as a teacher at the Korean Language Institute of Yonsei University and was married to Dr. Seung-Kuk Baek, an ENT faculty member at Korea University Hospital. Dr. Choi's son, Jay-Yong, is currently a student at the Yonsei University College of Dentistry. They have been well known as Yonsei University family.



**Fig. 2** Dr. Choi and Professor Hun-Jae Lee (his neurosurgery teacher and father-in-law) in 1977



**Fig. 3** Dr. Choi with Dr. Harold Hoffman (his pediatric neurosurgery mentor) in 1985

### Clinical and research work

Dr. Joong-Uhn Choi (Fig. 4) began performing the lumbo-peritoneal shunt (L-P shunt) procedure for communication hydrocephalus in the early 1980s and introduced his techniques to Korea with great success and acceptance at various meetings and in textbooks. Although oncologists were not very interested in chemotherapy for the treatment of brain tumors in Korea at that time, he nevertheless began pioneering the administration of chemotherapy for germ cell tumors and other malignant brain tumors in 1984. After Dr. Choi published his successful results, oncologists became more interested in applying chemotherapy for brain tumors.

Dr. Choi had brought an order-made subdural grid from Toronto in 1985 and started EcoG and Cortical mapping, which was in its primitive stages for epilepsy surgery in Korea. Now, epilepsy surgery is quite popular at many institutes throughout Korea. Dr. Choi began endoscopic surgery in 1989, which was the first in Korea. Also, he used pediatric endoscopy techniques that were borrowed from urology.

Dr. Choi and Dr. Dong-Seok Kim have performed over 500 endoscopic surgeries thus far. They published the textbook, *Atlas of Practical Neuroendoscopy* in 1997. He has also performed endoscopic disconnection for intractable gelastic seizure in hypothalamic hamartoma with great success. In addition, Dr. Choi has been interested in the surgical treatment of Moyamoya disease and has developed a new surgical technique known as “modified EDAS with inner dural stripping.” His team performs this procedure over 70 times annually with excellent results. He also introduced selective dorsal rhizotomy for spastic diplegia in cerebral palsy in 1990. Dr. T.S. Park at St. Louis Children’s Hospital helped him to initiate this operation.

Dr. Joong-Uhn Choi has conducted various researches on vasospasm in feline basilar artery models with the help of Prof. Kyu Chang Lee and has published a series of papers on this topic. He has also followed studies on experimental

hydrocephalus and has verified the pathology of periventricular lucency on imaging study in hydrocephalus.

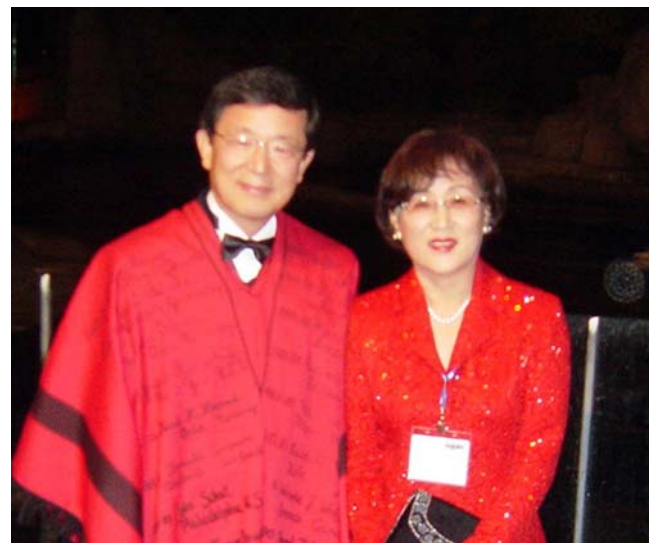
### Activities in academic societies in Korea

Dr. Choi was a founding member of the Korean Society of Pediatric Neurosurgery (KSPN) in 1987. He played a major role in promoting KSPN as secretary general for 5 years and was appointed as president of the Society in 1992. He has worked actively as a member of the Executive Board of the Korean Neurosurgical Society (KNS) since 1998. In addition, he has served as Secretary General, Chairman of the Residency Review and Education Committee, and finally was appointed as President of KNS in 2004.

He also was a founding member of the Korean Epilepsy Society (KES) in 1998 and the Korean Society for Pediatric Neuro-Oncology (KSPNO) in 2002. He served as Vice President of KES and Chairman of its Epilepsy Surgery Committee from 1998 to 2003. During his Presidency of KSPNO between 2004 and 2006, he received a research grant to study “Korean Multicenter Trials for Pediatric Malignant Brain Tumor Treatment.” This study is ongoing and will be continued for 9 years to develop a KSPNO protocol.

### ISPN and International societies

Dr. Choi began attending annual meetings of ISPN in 1985 (Mexico City). At the time, he was pursuing his clinical fellowship at Hospital for Sick Children in Toronto, Canada.



**Fig. 4** Professor Joong-Uhn Choi, 33rd ISPN President, and his wife, Eun-Young Lee

He became an active member of ISPN in 1986, attending and presenting papers at each meeting since. The 19th Annual meeting of ISPN was held in Seoul in 1991. The meeting was very successful, with great effort put in by the organizing committee which included Prof. Joon-Ki Kang as President and Prof. Choi as Secretary General. Dr. Choi has been an Executive Board Member of ISPN since 1993 and has served as Chair of various ISPN Committees which include Membership, Ways and Means, Scientific Programs, Nominations, and others. Finally, Dr. Choi was appointed as the President of ISPN, serving from 2005–2006. In his inauguration address in the Vancouver meeting in 2005, he stated that “this is the most honorable moment in my life.”

Dr. Choi was also nominated as a member of the Pediatric Committee of WFNS since 1993 and served on

the Editorial Board of *Child's Nervous System* since 1998, which is the official journal of ISPN. He was also founding member of the International Study Group for Neuroendoscopy (ISGNE). Recently, he has been actively involved as a teacher in the International Postgraduate Course in Pediatric Neurosurgery. He has also taken part in the Asia Pacific Advanced Course in Pediatric Neurosurgery (APACPN) in 2005 at Kobe and at Seoul in 2006, the ESPN course at Siofok, Hungary in 2006, and the ISPN course at Shanghai in 2006.

I wish him continued good health and hope that he continues to contribute to the field of pediatric neurosurgery in the future, with this inquisitive and open mind and with the elegant attitude that has always distinguished his relationships with the colleagues and younger fellows.