

# The role of young neurosurgeons in the development of neurosurgery

The early development of neurosurgery was through the pioneering efforts of a few dedicated young neurosurgeons. In this editorial, I would like to outline the careers of three neurosurgeons, whose achievements during the early years of their careers had a major influence in the development of the speciality of neurosurgery.

Sir Victor Horsley was appointed the first neurosurgeon at the National Hospital for Neurology and Neurosurgery, Queen Square, London, in 1886, at the young age of 29 years. He qualified as a medical doctor at the University College Hospital (UCH), London, in 1881. He was able to establish his mark in the development of neurosurgery, by introducing bone wax and, through a collaboration with Robert Henry Clarke, the stereotactic frame. He was appointed Professor of Surgery at UCH in 1902. He conducted laboratory research and published articles on the thyroid and pituitary glands, and innervations of the larynx. His landmark contribution, at a relatively young age, was that of the stereotactic frame. The National Hospital for Neurology and Neurosurgery, Queen Square, London, has maintained that tradition of clinical work and research in the neurosurgical training of young neurosurgeons that I myself, have benefited from during my period there as a research registrar, during the period 1984 – 1988. Dr. Harvey Cushing made his groundbreaking achievements in neurosurgery, while in his thirties, at the Johns Hopkins as an 'associate' in surgery to Dr. William Halsted. He established the Hunterian Laboratory, where he was able to conduct research on the pituitary gland and publish his first monograph on pituitary diseases in 1912. He established the Society of Clinical Surgery, in 1903, a forum for young

surgeons in the world to meet and watch each other operate — a tradition that still remains and is very akin to the World Federation of Neurosurgical Societies' Young Neurosurgeons Forum. At the time he left Hopkins for Peter Bent Brigham Hospital, Harvard, in 1913, he was already an international neurosurgeon and the acknowledged founder of organized neurosurgery as a specialty. Dr. Walter Dandy, who succeeded Harvey Cushing at Johns Hopkins, was another young achiever. He utilized the Hunterian Laboratory established by Cushing, to conduct experiments on the circulation of cerebrospinal fluid (CSF), and together with Kenneth Blackfurn, a pediatric registrar, contributed to our understanding of the circulation of CSF and hydrocephalus. He later made other significant contributions such as the introduction of encephalography and ventriculography. The young neurosurgeons of today will continue to play a major role in the development of neurosurgery, by building on the foundations laid down by the early pioneers, benefiting from the mentorship and skill-acquisition from the masters, laboratory research, and the translation of research findings into clinical practice. It is in the latter, as shown from the history of the pioneers, where the modern young neurosurgeons are more likely to leave a mark in the development of neurosurgery.



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Access this article online	
Quick Response Code:	Website: <a href="http://www.asianjns.org">www.asianjns.org</a>
	DOI: 10.4103/1793-5482.95686

**How to cite this article:** Mwang'ombe NM. The role of young neurosurgeons in the development of neurosurgery. Asian J Neurosurg 2012;7:1.