Obituary

Dr. Wilder Penfield (26. 1. 1891—5. 4. 1976)

Close scientific association with neurosurgery and having known Dr. Wilder Penfield personally enables me to illuminate and honour his scientific merits and academic achievements. Penfield like Cushing, Horsley, and Dandy was one of the classical pioneers in brain surgery together with Otfrid Foerster in Germany and has been instrumental in shaping the future of their speciality—surgery of the nervous system.
In the obituary of Sir Hugh Cairns (1896–1952)* I emphasized the fact that most neurosurgical pioneers, apart from Foerster, have entered their new field via general surgery or other surgical divisions. This is also evident in the case of Penfield but a decisive step in Penfield’s scientific development was his stay in the laboratory of Ramon y Cajal in Madrid after the 1. World War. By collaborating with Cajal and his disciples Penfield’s deep interest in neurocytology originated. This work led to the creation of a neurocytological laboratory in the Presbyterian Hospital in 1924.

Penfield thus became an expert and a world authority in the field of neuroglia research and was the first to study the reactions of the Golgi apparatus of neurons following traumatic injury.

On the other hand Penfield had also basic knowledge of neurophysiology and applied stimulation methods to the conscious human brain producing much of fundamental value for the understanding of epilepsy, a clinical field in which he achieved international reputation.

In 1928 he left his country, the United States, in order to become a brain surgeon in Montreal (Canada) and became Professor of neurology and neurosurgery at McGill University in 1933.

A highlight in his career is the creation of “The Neurological Institute” in Montreal, whose Director he was from 1934–1960 and which is now directed by Dr. Feindel while the chair of neurosurgery is occupied by Theodore Rasmussen. The Montreal Neurological Institute was planned by Penfield as a clinically orientated research institution with laboratories concentrating on problems originating from clinical observations or from ideas of the neurological and neurosurgical staff. This necessitated research minded clinicians and basic researchers capable of understanding the need for solving clinical problems. To understand the concepts and the spirit of the foundation members of the Institute, it is worth while to consult the Foundation Volume of the Institute published by the Oxford University Press 1936, containing the memorable Foundation Lectures of Gordon Holmes, Harold Cushing and Wilder Penfield. The prevailing creative spirit, the multitude of clinical and scientific co-workers quickly secured the Institute world fame, which up to now had more than 350 co-workers from all over the world and resulted in more than 1,000 publications in the field of brain research demonstrating the vigour of the Institute.

An outstanding contribution to medicine has been Penfield’s surgical treatment of focal epilepsy not responding to medication. Analysing cortical epilepsy Penfield used extensively electrical ex-