

STEREOTACTIC AND FUNCTIONAL NEUROSURGERY:

A CONTEMPORARY DEFINITION by MEMBERS of the WSSFN and the ESSFN

I - INTRODUCTION:

- Stereotactic surgery dates back to 1908, one century ago, when Sir Victor Horsley and Robert Clarke introduced their new apparatus to insert a probe or needle under accurate control into subcortical structures in an experimental animal model
- The definition of Stereotactic and Functional Neurosurgery was debated formally for the first time, in 1973 during the first meeting of the World Society for Stereotactic and Functional Neurosurgery (Philip L. Gildenberg)
- Since this period, general neurosurgery has made great progress influenced by new technical developments (minimal-invasive surgery, image-guided surgery, neuronavigation, radiosurgery, frameless brain biopsy, etc)
- On the other hand, many particular topics remained within the frame of the special field of stereotactic and functional neurosurgery (for example movement disorders surgery, pain surgery, CNS drug-infusion, cell therapy, etc).
- Within this context an appropriate contemporary definition of Stereotactic and Functional Neurosurgery is sought for. The following definition is a synthesis and a consensus after discussion among a group of experts.

II – A CONTEMPORARY DEFINITION:

(synthesis of propositions from A. Lozano, M. Hariz, P. L. Gildenberg, J. K. Krauss, S. Blond, G. Broggi and Y. Lazorthes)

«Stereotactic and Functional Neurosurgery is a branch of neurosurgery that utilizes dedicated structural and functional neuroimaging to identify and target discrete areas of the brain and to perform specific interventions (for example ablation, neurostimulation, neuromodulation, neurotransplantation, and others) using dedicated instruments and machinery in order to relieve a variety of symptoms of neurological and other disorders and to improve function of both the structurally normal and abnormal nervous system».