Letter to the Editor

To the Editor

Re: Management of Parkinson's Disease: A Review of Current and New Therapies. Tilak Mendis, Oksana Suchowersky, Anthony Lang, Serge Gauthier. Can J Neurol Sci 1999;26:89-103

In their review article, Mendis et al restate the opinion of Laitinen that, whereas the initial pallidal lesions were antero-dorsal, present more effective lesions are targeted in the ventro-postero-lateral part of the thalamus.[1]

Stereotactic surgery in the pallidum was first done in our department at Hôpital Notre-Dame in 1954.[2,3] We designed a stereotactic apparatus with target screens which, for the first time, could be fixed to the patient's head under local anaesthesia, and it was later used in other centers (Duke, Winston-Salem).[4] Lesion making was done with a blunt fine-wire leucotome in successive segments after using stimulation to detect the optic tract. Like many centers at that time, we produced a large lesion, 1.2 cm in diameter, and it most probably covered all of GP1 including the postero-ventro-medial segment, as evident in the post-mortem photograph in the article by Bertand.[3]

After Rolf Hassler's detailed description of the thalamus, there was a mass exodus in 1960 from the pallidum to ventro-lateral thalamus in practically all centers doing stereotactic surgery for Parkinson's disease. We identified a target at the thalamo-subthalamic border where mere passage of a 1mm stimulating electrode would arrest tremor, probably because of a great concentration of pallido-thalamic fibers at that point.[5,6] The results were superior not only for tremor but also for rigidity and the consensus was that there was greater improvement of fine movements from thalamic lesions, especially that micro-electrode recording added an element of precision to stereotactic surgery.[7] This was discussed extensively at the Symposia on Parkinson's disease held every four years, particularly at the Third Symposium in Edinburgh in 1969.[5] To my knowledge few, if any, neurosurgeons reverted to the pallidum as a target before thalamotomy was discontinued with the advent of L-Dopa.

These considerations may be of lesser importance now that stimulation of the sub-thalamic nucleus is used increasingly, but it would seem that the relative benefits of thalamic and pallidal lesions should be reassessed.

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References:

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