

Book reviews

A three-dimensional image of the cerebral blood vessels for use in stereotactic neurosurgery.

by Paul Suetens.

Dissertation, University of Leuven, 1983.

The author presents the mathematical outlines of a new method of stereotactic surgery. In the commonly used teleradiographic technic according to Bancaud and Tailarach, the electrode is always introduced parallel to the X-ray beam. This is not in every case the safest trajectory. Several mathematical models are investigated by the author in which true 3-dimensional images are obtained and the C.T.- and angiographic data are integrated. No safer method was found except one, based on stereoscopy.

The author has developed a method in which combined images are produced by means of digitization and computerization of data obtained in stereoangiograms and transformation of C.T.-data into the stereotactic space. These images have 3-dimensional properties in

human stereoscopic vision. Consequently the electrode can be introduced along any trajectory judged safe. An example of tumorbiopsy performed according to this method is presented. Several problems are encountered, for example C.T.-scanning provides digital information whereas angiography provides analogue data. The main merits of this work are certainly based on its mathematical methodology. Several problems of practical importance are not discussed.

It remains unproven whether this method provides enough advantages compared with the classical method to justify application on a wider scale.

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Familial strio-pallido-dentate calcinosis. Some clinical and etiological aspects.

by M.G. Smits

Thesis, March 1984, University of Nijmegen, The Netherlands.

pp. 153, figs and tables. Pressa Trajectina Utrecht.

This thesis presents up-to-date available information relating to strio-pallidodentate calcinosis (S.P.D.C.). The symptomatology and etiology of familial calcifications in the strio-pallido-dentate system were studied in two patients with autosomal dominant idiopathic hypoparathyroidism, in three siblings with

autosomal recessive idiopathic S.P.D.C., and in three siblings with Cockayne's syndrome. The finding of a possible cerebral-PTH-responsive adenyl cyclase complex is of main interest. However, the role allotted to this complex in the etiology of autosomal recessive idiopathic S.P.D.C. seems still speculative. It is not clear what the author precisely means by the statement that S.P.D.C. is a sign of cerebral dysfunction. No correlation could be made between clinical neurological, or neuromorphological findings and the extent and location of