Book Reviews


With this book about a subject which up till now has been neglected in the field of cerebral angiography, the authors have made an important contribution to the neuroradiological literature. In order to distinguish between normal and pathological conditions of the midbrain, exact knowledge of the anatomy of the smaller arteries, such as the posterior thalamo-perforating arteries, the posterior medial and lateral choroidal arteries and the posterior pericallosal artery, as well as of the veins in this region is most important. These small vessels require a perfect angiographic technique, and often one also needs to apply subtraction techniques. In many cases both carotid and vertebral angiography have to be performed in order to get a clear picture.

In the first section the authors survey the current literature on the arterial and venous circulation of the mesencephalon. The second section, containing plenty of excellent illustrations, brilliantly deals with the normal X-ray anatomy of the midbrain. The last section presents a description of pathologies of the midbrain, i.e. mainly tumours of the pineal body, the thalamus, the cerebral peduncles and the splenium, as well as vascular pathologies of these regions.

The careful study of this clearly written book is very stimulating and can be recommended to neuroradiologists, neurologists and neurosurgeons.

P. HUTEN, Bern


In 44 single presentations newer experiences with stereotactic operations are described; these reports were given as lectures at the 4th Symposium of the International Society for Research in Stereoecephallopathy held in New York in 1969. The main interest in operations for extrapyramidal motor disturbances no longer centers on parkinsonism, since this affliction is now being treated with varying success through the use of medication (L-dopa). Different reports agree that hyperkinesias are influenced more effectively with small coagulations in target points of the sub-thalamus rather than with larger ones in the thalamus or even the pallidum. In muscular hypertonia more and more operations were in the cerebellum, at which site evidently spastic conditions could be influenced.

Stereotactic operations for pain are still done with reserve. Nevertheless, the results improved since the target point was transferred from the specific pathways of pain to the slowly conducting nonspecific pathways. Affrent information, which reaches such thalamic points as the centrum medianum or the lamella medullaris interna becomes emotionally integrated in these structures. Therefore, it is not astonishing that in different psychic disturbances, such as compulsion neurosis or aggressive hyperactive conditions, the same thalamic areas were eliminated with partial

318

Book Reviews

success. Similar behavior problems could also be corrected by amygdalotomies. Especially successful were operations on these patients in whom an epileptic component of the disturbances existed. After bilateral elimination of the amygdala no disturbances of the memory nor Kliiver-Bucy syndromes were observed. These amygdalotomies, as well as bilateral Forel-h-tomies, stopped grand mal fits in a satisfactory percentage of cases. They were not, however, effective in psychomotor or myoclonic epilepsies.

The symposium included, in addition to clinical operative reports, communica
tions on technical and methodical innovations as well as apparatus. The reviewer does not feel that decisive changes in the over-all accepted stereotactic operative procedures will result from these latter communications.

A. LEVY, Basle


The volume which is written in German, describes the technique of microelectrophoresis and results obtained with this method. The microelectrophoretic application of drugs by means of multibarrel glass microcapillaries to single nerve cells has provided useful results for the identification of neurotransmitters.

With this technique it is possible to apply small quantities of ionic compounds directly into the environment of individual neurons, to bypass the blood-brain barrier and to localize the exact site of action of administered drugs. Electrophoretic application of microassemblies of electrodes for extracellular drug application, results have been obtained of the action of drugs on the postsynaptic membrane. The author who is himself working with the technique of microelectrophoresis, describes the physico-chemical principles and also gives detailed practical instructions of this method.

In a second part, results obtained with this method and critical evaluation of studies with suspected neurotransmitters and neuromodulators (amino acids, biogenic amines, cholinergic drugs, hormones) are described. The metabolism of these substances and the criteria for identification of transmitters are also discussed. In a third part, Dr. STERNER has tabulated the published material related to the subject since the introduction of the technique in 1958 by CURTIS and ECCLES. Although the technique of microelectrophoresis is a useful tool for studying drug actions on single neurons and for identifying transmitter substances, it has to be combined with other methods such as biochemical, histochemical and morphological techniques to obtain further information on the basic mechanisms of synaptic transmission.

The book is a useful guide for the beginner who is interested to learn the technique but it is also of great help for advanced research workers especially for information of the literature in this field.

H. L. HAAK, Basel


The book is built up logically, it is well documented with rich and impressive il

319

the authors surveyed the relevant literature of pediatric neurosurgery. They also collected thorough personal experience in several European and North American clinics. From this wealth of material results a well-founded opinion on the most differing cerebral neoplasms in childhood.

The first part deals with various statistic reflections on infantile and juvenile brain tumors. This is followed by a comprehensive analysis of the causes, the clinical and radiological symptoms as well as the therapeutic possibilities in cases of raised intracranial pressure.

Supratentorial tumors are discussed in the second part. In an excellently illustrated section these growths are classified histologically. Further paragraphs explain the different tumors of the specific regions. In the third section the author supplies results of modern angio-technique but it is also of great help for advanced research workers especially for information of the literature in this field.


This extremely well presented book is based primarily on the experience with 700 intracranial tumors in infants at the neurosurgical clinic in Vienna. In addition

Book Reviews

Further Section

and differential diagnosis it also presents valuable assistance to any neurologically
interested pediatrician.  

A. LEVY, Basel