Book reviews

This well-produced book is the result of a happy partnership between two authorities on cerebrovascular disease, Professor Loeb of the University of Genoa and Dr. Meyer of Wayne University, Detroit.

After a description of the embryology, anatomy, and physiology of the hindbrain circulation the authors attack the old eponymous terminology of hindbrain lesions and suggest simpler descriptions of segmental syndromes, based on clinical experience and necropsy studies. They point out which lesions are common and which are rare, which are usually produced by infarction and which by haemorrhage or tumour, and they show how difficult it is to correlate the brain lesion with the underlying vascular abnormality.

The chapter on cerebrovascular insufficiency is less satisfactory owing to confusing terminology. Single episodes occurring at long intervals are defined as transient ischaemic attacks and frequently recurring episodes as intermittent ischaemic attacks. Many would reverse these definitions. On page 137 both of these types are considered an important warning of strokes but are said to have different prognostic implications on page 155.

The authors rightly point out that the former are more usual in the carotid distribution and the latter in the vertebrobasilar. The pathogenesis of infarction is well described and the authors sensibly observe that intracerebral arterial disease and thrombosis is the major cause, although extracranial disease is often present and is accepted as aetiological in cerebrovascular insufficiency.

An excellent chapter on hindbrain haemorrhage is followed by an account of arteriographic techniques and two short chapters on treatment. Perhaps the number of indications for surgery in vertebrobasilar disease is a little surprising, but the authors point out that these must await the test of time.

Although a first class reference, the book is not one to read straight through. The style is somewhat repetitive and factual and the habit of quoting all the authors' names in the text of any reference, even to the single anecdotal type of case, becomes irritating when the reader finds 41 names in 12 lines of text (p. 177). The uneven writing is exemplified by the fact that all medical and surgical treatment is dealt with in 16 pages out of 307, whereas the references occupy 38.

These imperfections are small compared with the value of this book which describes fully the vast amount of work which these distinguished authors have done on vascular disorders of the hindbrain, and it will undoubtedly take its place as the most complete account of circulatory disorders of the hindbrain.

A. BARHAM CARTER

This book contains a verbatim account of the fourth Princeton Conference on Cerebral Vascular Diseases held in January 1964 with Dr. Clark Milliken as chairman. The Princeton conference has been held about every three years since 1954 and has become famous for its clear expositions and stimulating discussions of advances in pathophysiology, investigation, and treatment, collecting as it does most of the American and a few European authorities on this subject. The fourth conference concentrated on occlusive cerebrovascular disease with studies of cerebral blood flow, techniques and complications of angiography, effects of hyperbaric oxygen on cerebral hypoxia, and the pathogenesis of arterial degeneration. In addition there was a special study of the 'subclavian steal' syndrome, a review of current therapeutic agents used for cerebral ischaemia and infarction, and a speculative survey of factors influencing thrombosis.

Each study was introduced by two or three formal papers followed by a commentary and free discussion. This produced many lively, stimulating and constructive exchanges as the reviewer knows from previous conferences, but these tend in print to be repetitive and reminiscent so that more drastic pruning of the discussion would be desirable.

The standard is well up to the earlier conferences, and the technical advances in American research, supported by generous financial grants, must make European colleagues envious. Subtraction techniques in angiography, the use of electrical output flow transducers and of diffusible radioactive indicators such as Krypton40 for measuring regional cerebral blood flow suggest that American doctors are wisely bringing in non-medical experts from the field of engineering, physics, and electromagnetics to help raise their standards of scientific investigation.

It is interesting to observe some changes of enthusiasm. Fibrinolysin therapy seems to have been dangerous and of little value; anticoagulants were useful in transient cerebral ischaemia and progressing stroke but except in one centre were abandoned after completed stroke. Surgeons seem to be hesitating a little, as the surgical risk for death or worsening was 17-5% and the follow-up has been too short to judge the results, although in one group of 154 patients only one-third were relieved of all symptoms and one fifth improved—not very encouraging.

One of the most interesting studies was of the use of hyperbaric oxygen for cerebral anoxia using 2 atmospheres above normal oxygen tension. It was noted that caution is needed in treating cerebral hypoxia by this method as oxygen at this tension is poison to cells and
produces cerebral vasoconstriction. The clinical results so far seem disappointing, although the possible value of combining this method with hypothermia was stressed by some surgeons.

This book is a great credit to our American colleagues and should be read by anyone interested in this type of research or in the treatment of cerebrovascular disease.

A. BARHAM CARTER


This diagnostic atlas of tumours involving the central nervous system contains over 160 illustrations based on the examination of 1,368 specimens between the years 1953 and 1962. Black and white is used exclusively and this often enables a higher degree of clarity to be reached than is possible with colour at comparable cost. However, some of the pictures are rather drab, and a few, especially in the sections on ependymomas and medulloblastomas, are not sufficiently sharp. One feels that more use could have been made of inserts to give a wider range of magnification as some pictures are unnecessarily large.

The classification of tumours used holds few surprises for Anglo-Saxon neuropathologists and in the main follows the well-known work of Zulch. Under 'spongioblastoma' there are several examples which in the United Kingdom would probably be labelled differently. The variable histology of the less typical forms of oligodendroglia is well illustrated. There are helpful tables of differential diagnosis in the text and a thorough reference list.

W. H. MCMENEMEY


Mr. Durham Smith has produced an attractive and readable account of modern knowledge of a common and serious congenital malformation which is currently arousing a good deal of interest and research.

Inevitably, some will think that he goes too far in his recommendations for what Ellison Nash has called the 'salvage' of these unfortunate children. Others will regard him as much too conservative. But his suggestions for when to operate and when to leave alone, and the priority as between repair of the spine and control of hydrocephalus are given in a balanced and humane way. Some have their own views on this matter and will adhere to them regardless; but those who follow Mr. Durham Smith will do little harm and much good.

There are a few points to criticize. A third of the text is devoted to observations on the function of the urinary bladder in congenital spinal palsy—Mr. Durham Smith's special interest—which is perhaps excessive; it is doubtful whether drainage of the sac of a myelomeningocele into the peritoneal cavity often (if ever) controls hydrocephalus for long; although the practical classification of degrees of paraplegia is admirable, the detailed neurological examination of spina bifida babies can yield more information than Mr. Durham Smith indicates. Perhaps more important, the social and psychological implications of survival with severe disability could be explored in greater depth in a book the title of which speaks of 'total care'. But these minor faults detract little from the value of a carefully written, well produced and illustrated monograph. Neurologists, neurosurgeons, and neuropathologists, as well as those interested in paediatric medicine and surgery, will all find much to stimulate their interest—and almost certainly at least one aspect of a difficult problem which they had not previously considered.


This book contains papers given at a meeting of the Society for Research into Hydrocephalus and Spina Bifida in 1965 at Groningen and provides a good survey of recent problems in surgical treatment by shunt procedures. A survey by Laurence showed that 16% of cases of spina bifida cystica and encephalocoele survive without surgery. In Rickham and Mawdsley's Liverpool series of infants with early operation (within 24 hours of birth), at least 56% survived.

In 31 necropsied cases with ventriculo-atrial shunts, Erdohazi, Eckstein, and Crome found evidence of pulmonary embolization in no fewer than 17 instances and suggest that pulmonary hypertension may prove to be a late complication of this method of treatment.

The volume includes interesting post-mortem angiographic studies by Emery and Levick of the displacement of the basilar and posterior inferior cerebellar arteries into the Arnold-Chiari deformity and also a valuable embryological study of this condition by van Hoytema and van den Berg.

R. M. NORMAN


This is the sixth annual issue of this excellent series, in which neurophysiologists from all over the world, many of them people of international repute, have written general accounts of their own recent investigations. The printed articles are the substance of special lectures originally delivered to young scientists at the Sorbonne. They are compact, interesting and readable, and their authors, and the public, certainly owe a great deal to the editorial care of Professor Laget and Madame Monnier. Neurologists who wish to know how neurophysiologists choose subjects for investigation, and how they set about their work, could do worse than become regular subscribers to Actualités Neurophysiologiques.

Volume VI covers a wide range of topics, including (among others) ultrastructure of axon membranes, metabolism of nervous tissue, blood-brain barrier, properties of single brain cells, organization of neural circuits in spinal cord and thalamus, special senses (vision and taste), nature of the E.E.G., selective arousal from sleep, and, for good measure, a neurologist's view of the brain-mind problem in terms of 'coding' and a neurophysiologist's commentary on it.