gical features are discussed together with some of the radiological findings, the clinical correlates, EEG and neuroradiological investigations (but no EMI scan), diagnostic criteria and prognosis. Very little is mentioned about therapeutic approaches or long term sequelae of surgery.

The review of the literature though fairly extensive has a number of obvious omissions but covers 10 fully printed pages. The personal contribution consists of only 16 cases between 29 and 75 years of age, and some of them were operated upon. The illustrations, both of the histological findings and of some of the arteriograms, are satisfactory. The index is limited to a list of the chapters and their subdivisions.

It is difficult to assess for whom this book was written, as the discussion of the literature is primarily aimed at the interested medical student rather than at the specialist. However, on the whole, the information is fairly well digested and does not give the impression of consulting just a telephone directory.

G. PAMPIGLIONE

CEREBRAL ANGIOMAS: ADVANCES IN DIAGNOSIS AND THERAPY By H. W. Pia, J. R. W. Gleave, E. Grote, J. Zierski. (Pp. 285; illustrated; DM58; US \$23.80.) Springer: Berlin. 1975.

The problem posed by intracranial arteriovenous malformations of various kinds is an important one and often presents a difficult therapeutic decision. This monograph consists of the papers given at a symposium held in Giessen in January, 1974. It includes the up-to-date opinions of a representative selection of acknowledged experts.

The treatment of the subject is comprehensive. The chapters on clinical presentation and natural history are complemented by some down-to-earth considerations of treatment in those difficult cases which are not obviously inoperable, but in which surgical treatment carries considerable risks to function. These problems are dealt with in a humane and indeed sensible way. Surgical treatment includes modern techniques of microsurgery, cryosurgery, and the application of stereotaxic techniques. There are full accounts of the latest angiographic methods and of techniques for artificial embolization. An interesting chapter on the long-term features of radiotherapy demonstrates the value it has had in a number of cases but could not, of course, suggest prognostic indicators for this treatment.

The views expressed at this conference should be carefully considered by surgeons and physicians responsible for the care of patients suffering subarachnoid haemorrhage.

JOHN HANKINSON

BLOOD FLOW AND METABOLISM IN THE BRAIN Edited by A. M. Harper, W. B. Jennett, J. D. Miller, and J. O. Rowan. (Pp. 15.10; illustrated; £10.) Churchill Livingstone: Edinburgh. 1975.

It is hard to believe that it was not all that long ago since cerebrovascular disease was a completely neglected field. The 150 papers included in this symposium (these being only half of those submitted) is a measure of the tremendous upsurge of interest and activity that has taken place. The symposium did not follow a particular theme but ranged widely over blood flow and metabolism. However, current excitement over the new understanding of break-through in autoregulation as the mechanism underlying hypertensive encephalopathy is reflected in papers on this subject. Another pre-occupation is with the neural control of cerebral blood vessels. At the 5th International Symposium in Rome in 1971 a prize was offered for the best explanation of the role of neural control; the papers in this, the 7th, symposium indicate that the search for a satisfactory explanation continues.

The editors are to be congratulated on the swift appearance of the volume (publication was less than six months after the symposium), for in a rapidly growing field delay means that the publication is outdated by the time it appears. JOHN MARSHALL

IMPACT AND INJURY By E. S. Gurdjian. (Pp. 370; illustrated; \$33.75.) Thomas: Springfield, Ill. 1975. This book brings together work done at Wayne State University from 1955 to 1972 on mechanical aspects of head trauma, as a collaborative effort between neurosurgeons and engineers. Most of the observers are experts and an unusual feature is the number which are based on studies on human cadavers, to which forces were applied and results measured. There is a great deal of information about the way in which different tissues react to stress, in particular about how fracture lines travel in the skull according to variables such as the site of the blow. The practical application of all this information is not immediately obvious, except that seat belts and crash helmets are important, and car design could be improved to reduce hazards to occupants. But that is already well known, if too often ignored. The relationship of physical forces to pathological lesions in the brain is not explored in depth. In any event there is increasing evidence that secondary pathophysiological events which occur after the initial impact are very important in determining the outcome after head injury. Moreover, these are much more readily influenced than is the impact injury. One must conclude that while all knowledge is interesting and some of it is useful, some details are more useful than others.

BRYAN JENNETT