other authors where a large number of references must be given.
This book should certainly be in every medical library and can be enthusiastically recommended to workers in the field of hereditary disorders.

RICHARD L. HEWER

This book is built around clinical and pathological observations on 30 cases of intracranial venous thrombosis including neonatal, infantile, and adult cases. Since the series contains examples of most conditions causing or associated with such thromboses, the result is a reasonably comprehensive survey of the subject. There is no mention of oral contraceptives and cerebral thrombosis. There is a chapter on the embryology of the intracranial veins which is an abridged version of the paper by Padget (1957), and a useful chapter on the normal anatomy of the venous drainage of the human brain.

SABINA J. STRICH

This is an important addition to literature on the treatment of head injuries and may be recommended to every Accident Service. Every page is consolidated by the author's wide experience and his advice is thoughtfully and clearly presented. The over-dogmatic comment is refreshingly rare, but retrograde amnesia is not 'diagnostic of cerebral concussion' (p. 5) and injury to the optic chiasma is not usually associated with a fracture line crossing the region of the sella turcica (p. 140).

W. RITCHIE RUSSELL

This little pocket book is an excellent, straightforward, and well-illustrated guide to all varieties of local anaesthesia. Many will find it most useful.

The author has based this small monograph on a personal series of 42 cases of carotid-cavernous fistula and an extensive acquaintance with the literature. He deals with the incidence and aetiology, favouring an aneurysmal origin in many cases, and gives an excellent account of the relevant anatomy. Chapters on the clinical picture, diagnosis, and investigations are all good. His account of treatment is also convincing, and he favours proximal and distal ligation of carotid vessels together with proximal muscle embolization. Many surgeons will favour muscle packing from the distal end as being easier and more certain.
The methods he describes for ascertaining the safety of carotid occlusion are even now probably outdated, and will be replaced by more sophisticated techniques involving blood flow measurement and gas uptake in the brain.

These minor criticisms apart, the book is an excellent one and contains all that a neurosurgeon would want to know about this subject. It should certainly be on the shelves of every neurosurgeon and should be read by all those having to deal with trauma or cerebral vascular conditions.

BRODIE HUGHES

This book has been written to commemorate the 25th anniversary of Otfrid Foerster's death. In addition to the biographical data it gives extracts of some of the most important publications of the monumental work of this great pioneer in neurology and neurosurgery.

Foerster's concept of neurology was to establish the close relationship between morphology and physiology for the localization of function of various parts of the peripheral as well as central nervous system, and in this he was greatly influenced by Duchenne de Boulogne, Dejerine, and, in particular, Hughlings Jackson and Sherrington. His physiological approach to neurology was the decisive factor for his therapeutic actions, whether they were concerned with physical medicine or surgical treatment of pain, spasticity, or epilepsy.

Foerster realized from early on the important influence of the afferent pathways on spasticity, which, in recent years, has been in the foreground of neuro-physiological research, and consequently he introduced the posterior rhizotomy (1908) for the treatment of spasticity in cerebral palsy. However, he always stressed that this operation could be successful only if it is followed by systematic exercises under visual guidance. He also employed this operation for the treatment of gastrointestinal crises in tabes dorsalis, and later, in 1912, independently of Spiller and Martin of the U.S.A., he introduced cordotomy for the surgical treatment of intractable pain. During the first world war he became neurological consultant to the German Sixth Army Corps and in this capacity he gained vast experience in the surgical and post-operative treatment of peripheral nerve injuries, an experience which, it is true to say, has not been surpassed by any publication on this subject ever since. After that war, Foerster's main work was concerned with the analysis and surgical treatment of focal epilepsy. The result of this work was a detailed localization of cortical functions in men similar to that found by O. Vogt and I. Brodmann in animals.

The Wenseel Hancke Krankenhaus in Breslau became a Mecca to many neurologists and neurophysiologists among them Wilder Penfield who became particularly interested in the localization problems of epilepsy.

Foerster has summarized his monumental work in large
volumes of the Handbuch der Neurologie of which he was a co-editor of the psychiatrist O. Bumke. The author is to be congratulated on the way in which he has presented this book.

LUDWIG GUTTMANN

BRAIN TISSUE ELECTROLYTES By A. Van Harreveld. (Pp. xii + 171; 24 figures. 27s. 6d.) Butterworth: London. 1966.

This little book in the publisher's Molecular Biology and Medicine Series makes a timely appearance when, with the increasing clinical recognition of cerebral swelling and cerebral oedema, it becomes imperative to seek more exact definitions of these conditions and to understand the transport of water and electrolytes in the central nervous system. Present controversy centres around the presence or absence of an extracellular space in the brain. Electron microscopy study seemed to confirm chemical investigation that there was no significant space, but if this is so a sophisticated explanation is required for the results of impedance studies which would suggest an appreciable extracellular space.

In a brilliantly written and lucid text the author takes the reader successively through the chemical, physical, histochemical, and electron microscopy investigations in this field, providing a critical review of the present work. Towards the end Professor Van Harreveld comes to the recent work in his own laboratories. By adopting a rapid freezing technique followed by substitution fixation at low temperature, he has suggested that electron microscopy would, in fact, demonstrate an extracellular space and that the fixation methods previously employed could invalidate conclusions on the existence of this space. Further, if the chemical constitution of the extracellular space resembles cerebrospinal fluid rather than a plasma ultrafiltrate—which it probably does—then much of the apparent discrepancy between chemical and physical approaches to this subject can be resolved.

In a rapidly changing field, this book is a good demonstration of how a scientist and clinician may communicate. It should be welcomed and read by everyone interested in cerebral metabolism.

WALPOLE LEWIN


This monograph contains the abstracts of papers presented at the International Neurochemical Conference held at Oxford in 1965. In view of the striking progress that has been made in recent years in our knowledge of the biochemistry of the genetic mechanism, the decision to centre this conference around genetic and developmental aspects of the nervous system was a wise one, and many of the papers that were presented, and the discussions that ensued, were of very real interest. As a publication, however, the monograph has a limited appeal, containing, as it does, only the brief abstracts of the communications, many of which contain no references and are in some cases little more than announcements that 'the following data will be discussed', but no discussion is included. For workers in this field certain of these abstracts will be of use, but it is not a publication that can be recommended for general reading.


The use of attenuated live poliovirus vaccine has been accepted by most countries as the most practical procedure for mass immunization against poliomyelitis viruses. The fear that severe affection of the nervous system, by either the vaccine virus or more neurotropic variants of them produced in the gut of men, would occur has fortunately not been substantiated, although paralysis or encephalitis has occurred occasionally in children and adults in whom it has not been possible to decide that the disease could not have been caused by such vaccine derivatives. The papers in this Symposium provide reassurance that the manufacturers of these vaccines, biological control laboratories in various countries, and independent research workers have continued to study the problem of neurovirulence of these vaccines and to search for viruses that will carry even less risk than those now in use, particularly Type 3, without diminution in their protective effect. These technical papers were presented in 1965, at which time there was evidently still lack of agreement on certain details, such as the species of monkey most suitable for determining the neurovirulence of the viruses, the route by which they should be inoculated, and the standard method of assessment and comparison of results in different laboratories in different countries. No doubt some of these differences have been resolved by now and the work described here and the methods evolved will be a useful guide for tests on vaccines made from other neurovirulent viruses, such as Japanese B.

F. O. MACCALLUM


The contributors to this symposium are almost exclusively physiologists and electron microscopists interested in sensory physiology. They were engaged in an interchange of information and ideas among themselves; this they did in a highly technical language with much resort to mathematical symbols, so that one ignorant of this field is likely to remain largely so, despite an arduous reading. The discussion covered the structure of sensory receptors (with good illustrations) and something of their biophysics; the way in which single and groups of receptors respond to varying degrees of stimulation was also considered. Man's place in the animal kingdom was acknowledged by a section on his manner of discriminating quantitative differences in stimulation.