subgroup. The occurrence of antibodies to JC virus in most normal adults suggests that disease occurs only when a normally harmless viral infection is somehow reactivated. This situation has similarities with some herpes virus and retrovirus infections, and viral reactivation is currently a crucial question.

This book is divided into three sections concerning the virology, epidemiology, and neurological diseases associated with JC and BK viruses. Although each section contains much recent and specialised information there are several chapters giving overviews of various areas. Consequently this book avoids being simply a collection of papers, but stands on its own as an excellent account of current thinking on PML. It should be of interest to graduate students and research workers in many fields, including molecular biology, immunology, virology and neurology.

One area of particular interest is the rapid progress being made at the molecular genetic level in identifying possible regulatory sequences in the genome, and the analysis of sequence variation *in vivo* and *in vitro*. Another important area is analysis of the oligodendrocyte lesions which are characteristic of PML by the use of antibodies to defined myelin proteins. In view of the possible connection between viral infections and multiple sclerosis and Guillain-Barre Syndrome, it is especially interesting to study a situation where demyelinating virus really is at work.

WA TAYLOR

Neuromuscular Diseases. Edited by Georges Serratrice, Didier Cros, Claude Desnuelle, Jean-Louis Gastaut, Jean-Francois Pellissier, Jean Pouget, Alain Schiano. (Pp. 630; \$118.00.) New York: Raven Press, 1983.

This book contains contributions from the fifth International Congress on Neuromuscular Diseases held in Marseilles in September, 1982. There are in excess of two hundred authors for the hundred or so brief chapters and, not surprisingly, quality is somewhat uneven. Nevertheless, a high proportion of the world's acknowledged authorities have contributed a chapter, although the peripheral nerve seems to be somewhat under-represented.

The first part is divided into sections dealing with genetic expression in skeletal muscle, prevention of Duchenne dystrophy, fuels in normal and diseased muscle, metabolic congenital myopathies, the

biochemistry of Duchenne dystrophy, mechanisms of muscle cell necrosis/regeneration and a section on membranes in muscle disease. The second part is devoted to the biochemistry and cell membrane functions of peripheral nerves, repair and regeneration and the assessment of sensory function; this part finishes with a, slightly out of place, five chapter section on motor neuron disease. Subsequently, there is a series of chapters on the neuromuscular junction, acetylcholinesterase and myasthenia gravis, and finally a major section on therapy and rehabilitation. In this latter section there are some particularly interesting contributions on the management of scoliosis in neuromuscular disease, the therapeutic trial and the effects of exercise.

This book is relatively up-to-date and the references are extensive. The interested reader can briefly survey current growth areas, especially in the sphere of diseases of muscle and the neuromuscular junction. It is not in any sense a text book of neuromuscular disease, however. The presentation and reproduction of illustrations are of high quality and the index adequate. This is a good book for the specialist library.

CM WILES

Neurology 4: Peripheral Nerve Disorders. Edited by Arthur K Asbury and RW Gilliat. (Pp 339; £25.00.) Sevenoaks: Butterworths, 1984.

Subtitled "A practical approach" this book certainly represents a more manageable size and reasonable price than some larger volumes on the same subject. It opens with an algorithm for diagnosis of peripheral neuropathy which is complex and yet not complex enough to cover all the options, as the rest of the book reveals. Individual chapters by leading authorities provide clear accounts of individual subjects such as diabetic, toxic and genetically determined neuropathies. The opportunity is taken to review the neuropathies associated with paraproteinaemias, a recently recognised group which is beginning to teach us important lessons about myelin and axonal antigens. The most interesting group so far has been those patients with an IgM_k paraprotein and a demyelinating neuropathy. The IgM_k paraprotein of many of these patients represents antibody probably directed against a recently recognised myelin protein, myelin associated glycoprotein, which may be important in axon Schwann cell interactions. Since this book was written Latov and colleagues, who

have been at the forefront of this work, have also demonstrated the specificity of another IgM_k monoclonal for an axonal antigen, chondroitin sulphate C, in axonal neuropathy. The possibility exists that the neuropathies associated with paraproteins represent a family of neuropathies caused by antibodies to several different antigens. These antigens may turn out to be of interest in neurobiology. A Japanese account of a related syndrome of skin hyperpigmentation, oedema, polyneuropathy and plasma cell dyscrasia, added almost as an appendix, represents the most detailed review available of this curious condition. One hopes that the identification of a relevant antigen may elucidate the link between this bizarre collection of symptoms. Accounts of neuropathy encountered in India and Africa deal all too briefly with leprosy, although acknowledging that this represents the commonest form of peripheral neuropathy in both continents. This is because patients with leprosy are treated in special centres and rarely by neurologists. This is another symptom of the general rule whereby conditions which become treatable with the advance of medicine, like meningitis and subacute combined degeneration of the spinal cord, are stolen from the neurologists by internal medicine and other specialists. It is encouraging to see, therefore, that this book gives space to the management of patients with acute generalised paralysis not ignoring nursing, physiotherapy and respiratory care. Every medical library, and many student and practising neurologists will want to have this clearly illustrated volume on their shelves.

RAC HUGHES

CNS Metastases: Neurosurgery in the Aged. (Advances in Neurosurgery Vol. 12). Edited by W Piotrowski, M Brock and M Klinger. (Pp 380; \$30.30.) Heidelberg: Springer-Verlag, 1983.

This volume produced by Springer-Verlag is in essence the proceedings of the 34th Annual Meeting of the German Neuro-Surgical Society held in Mannheim in 1983. There are 56 contributions, some of them 600 words or less; 33 appear to have been invited to speak on a topic, the rest are "free". The subjects range from surgical management of metastatic brain tumours through the symptoms and signs suggestive of an intracranial metastasis to radiotherapy and chemotherapy for the problem. There are also quite a few articles

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on spinal extra-dural metastases and their management. This collection suffers from lack of direction in terms of subject matter; there is no editorial selection of good from poor and little in the way of organisation of the papers into subject matter. Any discussion that did take place is not published. Almost 80% of the reports contain information already available in literature and many of them contribute no more than that which is obtained in any undergraduate textbook of neurology, pathology or oncology. Some authors have not contributed anything original, merely reviewed some papers. The case for chemotherapy, radiotherapy, indications and methods of spinal column fixation are all poorly presented and to the uninitiated provide a very one-sided view of the management of the condition, for example spinal column fixation using Meurig-Williams clamps would not be accepted in many spinal surgical centres as an adequate means of vertebral columns immobilisation. One paper on chemohormonal therapy for breast cancer metastases in 13 patients reported 12 months' remission in comparison to 7 months using a different therapeutic regimen. Studies like this get oncology a bad name.

Attached to the end of the series on intracranial metastases are various reports from other German workers on experimental studies and cerebral blood volume, control of intercranial pressure, the effects of profound hypotension on cerebral pressure, the effects of profound hypotension on cerebral energy metabolism and studies in pituitary hypothalamic axis.

Reviewed as a report of the annual German meeting, this collage will be of interest to the members who attended the meeting. As a contribution to the understanding of the condition, it cannot be recommended.

ALAN CROCKARD

Craniosynostosis Edited by Guido Galli. (Pp 280: \$132. Prepub.) Florida: CRC Press Inc, 1983.

During the last two years, four books devoted to this subject have landed on my desk. For such a subject this constitutes a spate. Craniosynostosis has interested many neurosurgeons, especially in the paediatric field, for a long time. Publication of these books seems more likely to reflect the accumulation of experience and hence a more authoritative approach rather than a sudden revival of interest. This volume is

unique, however, in having as its editor a nuclear medicine physician. The reasons for this are well explained in the introduction but make me wonder whether this precedent is a warning for the things to come in neurosurgery.

An encyclopaedic approach is attempted and to a large extent succeeds. Thus radiology of the skull is described extensively with numerous diagrams and radiographs. Pathology, classification, diagnosis and bone scanning all have chapters of their own bringing together a wealth of information previously widely scattered in journals. Very little, however, of the information will influence the practical neurosurgeon's management. For example, no fewer than 58 syndromes are described in which craniosynostosis plays a part together with over a dozen further conditions associated with craniosynostosis. It is remarkable that the editor and his team have managed without a geneticist among them.

The longest chapter, understandably, is the one on surgical management of craniosynostosis. Summaries of the larger published series are aided by a further selection of excellent photographs. The tyro by this time, however, will be satiated with information particularly when he is provided with a wide variety of operations from which to choose. Fortunately, for each variety of the condition a section called *Authors' Experience* describes what is actually done in Rome—that is, at the Catholic University.

After this book little more is needed except for paediatric neurosurgeons to publish their methods and results, but only after their experience has become sufficiently great.

KENNETH TILL

Cerebrospinal Fluid Pulse Pressure and Craniospinal Dynamics. A Theoretical, Clinical and Experimental Study. By Cees JJ Avezaat and John HM Van Eijndhoven. (Pp 339; Dfl 90.00.) The Hague: A Jongbloed en Zoon, 1984.

This is written as a combined thesis by two Dutch scientists one of whom is a neurosurgeon and the other an engineer. The volume-pressure relationship (VPR) and cerebrospinal fluid pulse pressure (CSFPP) are difficult subjects to make interesting. While the book has not been written for a wide commercial audience its clear and well presented arguments together with plenty of diagrams and

graphical displays more than compensate for this.

The authors' ideas are introduced against a background review of the relevant literature and as is the case with work involving VPR and CSFPP there are many mathematical equations and derivations used to express the hypotheses. The benefits of co-ordinating this work between an engineer and a surgeon are obvious here, but without an understanding of the mathematics involved these have to be accepted at face value. Two notable points here are the inclusion of a constant term into the experimental description of the VPR and quantification of the change in cerebral blood volume at each heart beat.

The middle chapters describe well conceived and original experimental work generally based on the relationship between the VPR and CSFPP under different pathophysiological circumstances including brain compression, hypercapnia, hypotension and hypertension. Chapter 8 tidily concludes the first part of the book with a general discussion that always tries to retain clinical relevance within its perspective.

The last two chapters are concerned with CSF dynamics and consist of a detailed mathematical derivation of the authors' theoretical model followed by animal experiments which verify it. Chapter 9 is the most difficult chapter in the book as it is comprised almost solely of mathematical equations. I felt this whole section represented a change in direction away from the main theme of VPR and CSFPP although, as the authors point out, CSF absorption and formation are related to pressure volume dynamics.

This is work of high quality and is an important contribution to the study of pressure-volume dynamics. Clear scientific argument and good presentation make its reading a rewarding experience. Criticism about methods and results may come from other workers in the field, but that is only to be expected. This book should be read by all neurosurgeons involved in ICP research.

RA JOHNSTON

Introduction to Clinical Neuroscience. By Sir John Walton. (Pp 246; £8.75.) Eastbourne: Bailliere Tindall, 1983.

I became slightly bewildered when I started to read the first chapter of this book. The account of the fundamental unit of nervous activity, the excitation and propagation of neuronal action potentials, was not quite