

# BOOK REVIEWS

**5-Hydroxytryptamine Mechanisms in Primary Headache.** (Series: Frontiers in Headache Research, Vol. 2) Edited by J OLESEN and P R SAXENA. (Pp 362; Price \$119.00). 1992. New York, Raven Press. ISBN 0-88167-927-5.

The role of 5-Hydroxytryptamine (5HT, Serotonin) in biochemistry, physiology, pharmacology and its involvement in migraine are discussed in this book. It is a collection of papers given at a meeting in Copenhagen in 1991 on 5-Hydroxytryptamine mechanisms in primary headaches and it gives the views of many experts in the field. It is the second in a proposed series of books entitled Frontiers in Headache research.

The book starts with a review of the historical aspects of 5HT and goes on to give a classification. According to Professor Saxena there are four main receptor types 5HT-1 like, 5HT-2, 5HT-3 and 5HT-4 with several subtypes. Dr Humphrey in a later chapter considers that there are three main groups, 5HT-1, 5HT-2 and 5HT-3. He discusses whether 5HT-4 should be classified with 5HT-1 receptors. There still seems some doubt about the classification and Dr Humphrey goes on to say that clarification will undoubtedly come from a comprehensive study of drug action, molecular biology and transduction mechanisms.

The last two parts discuss the involvement of 5HT in migraine and sumatriptan in the treatment of acute migraine attacks. In the discussion summary Professor Welch expressed the view that there may be a good chance of dihydroergotamine competing with sumatriptan for effectiveness and that there was a need for a comparative trial of dihydroergotamine and subcutaneous sumatriptan.

This is a book containing the views of experts on 5HT and consists of a number of short papers some of which present opposing views as would be expected in a scientific meeting. It does not give a clear picture of the present position and is therefore a book for the expert rather than for the general reader.

MARCIA WILKINSON

**Spinal Cord Dysfunction Vol II Intervention and Treatment.** Edited by LS ILLIS. (Pp 225; Price £35.00). 1992. Oxford University Press ISBN 0-19-261787-7

This is the second in a three-part series dealing with the spinal cord. There are 15 contributors from the UK, USA, Canada and the Netherlands. The first volume dealt with assessment and with the pathological reactions of the spinal cord to injury. This volume deals with intervention and treatment. The book is divided into three sections (12 chapters) covering the acute phase, specific problems, and behavioural

therapy. Most of the chapters are well and extensively referenced, and most have a summary.

The evidence for and against early decompression of the spinal cord after injury is discussed by Masri and Meerkotter. The authors conclude that there is no evidence of proven benefit for surgical intervention in most cases. However, there have been no large multicentre trials with independent assessments. To some extent, the issue remains unresolved. Dr. Wise Young points out that neurones are exquisitely sensitive to calcium ions, but have to live in a sea containing calcium ions that threaten to invade and destroy them with the slightest injury. Spinal blood flow is discussed by Robert Hansebout and the possible benefits of steroids and local cooling of the spinal cord are reviewed.

The second section covers spasticity (Illis, Sedgwick & Benfield), cardiovascular abnormalities (Mathias, Frankel & Cole), the bladder (Fellows), pain (Illis & Beric) and sexual function (Gardner & Rainsbury). Pressure sores are not discussed. It is clear that the management of bladder dysfunction has improved considerably. There is evidence of a reduced risk of death from renal failure. Intermittent catheterisation can be used satisfactorily in the majority of cord injury patients. The section on sexual dysfunction is particularly useful and there is a discussion of the various treatments.

The last section—"Behavioural Therapy" contains 2 chapters. The first is a critique of current ideas of motor control and learning by Theo Mulder. This is followed by a short chapter by Illis on some aspects of rehabilitation.

This volume does not pretend to be comprehensive. However, it contains an enormous amount of information that is not readily available elsewhere. The volume is particularly valuable for its discussion of theories of spinal cord damage and recovery. Indeed, it is clear that the spinal cord is an excellent model for studying the mechanisms of recovery in the damaged nervous system. The book is also valuable for its practical advice on many different topics. It should be read and re-read by Neurologists and all those who look after patients with spinal cord disorders.

R LANGTON HEWER

**Vestibular and Brain Stem Control of Eye, Head and Body Movements.** Edited by HORISHI SHIMAZU and YOSHIKAZU SHINODA. (Pp 466; Price: SFr. 330./DM 395.-/£143.50/US\$ 264.00). 1992 Basel, Karger ISBN 3-8055-5548-2.

Some books inform, others illuminate. This one does the former in enormous and comprehensive detail. It will be a valuable compilation of current experimental results for anyone working in the field. There are 37 detailed chapters dealing with neuroanatomy, neural activity patterns during saccades, gaze and head movements. These were written as an "outgrowth" of a symposium of the Barany Society held in May 1990. The papers are up to date for that time. The visual and vestibular interactions in the cerebellum are dealt with; indeed it was the rapid development in understand-

ing cerebellar circuitry in the late sixties which spurred much of the modern work on control of eye movements.

For the most part the chapters follow the conventional methodological pattern of lesion, stimulation and recording neural activity. Eye movements are a major output from the vestibular system and are precisely measurable; therefore powerful mathematical techniques used in control system engineering can be used to model the system. The technologies employed are conventional but a paper on compensatory gaze nystagmus in the Running Monkey promised some technical ingenuity, and so it proved.

The book is beautifully produced and printed on 466 glossy pages with clear figures, a few in colour. Unfortunately there is no index other than authors' page number. The use of abbreviations is really challenging: one heading reads "Input to vertical MLBNs in FFH from OPNs". The good detective will discover Median Lead Burst Neurons, Forel's Field H and Omnipause Neurons. Only the true cognoscenti will know what all three are. It is a pity that the editors did not get their authors to make the chapters more accessible to the more general reader.

Is there anything for the clinician? No. The nearest to the clinic is the final chapter on stabilization strategies in the absence of vestibular function. There is no help for the neurologist dealing with dizzy turns nor for the ENT surgeon nor audiologist. Now that clinical neurophysiology has defined vestibular reflexes and sub-systems in detail, the next task is to determine how they interact and influence one another. A particularly interesting group of papers is that on eye movements and higher brain function. This includes a review of vestibular perception and the plasticity of the vestibulo-optic reflex.

At this price and with its specialized subject matter this book will be appropriate only for those deeply involved in vestibular physiology. For them it will be essential reading. One is left with a clear impression of the value of single neuron recording methods and also of their limitations. By the end of the book one wonders "what next?" No doubt more single neuron and micro-anatomical details remain to be determined, but research must take new directions and there is a need for an interpretation of some of these results into clinical situations.

EM SEDGWICK

**Diseases of the Spinal Cord.** Edited by E CRITCHLEY and A EISEN. (Pp 453; Price: DM 236,00). 1992. Heidelberg, Springer-Verlag ISBN 3-540-19684-6.

There is a good deal of information packed into this short book which will be of interest to clinical neurologists, neurosurgeons and doctors involved in neurological rehabilitation. It is a multi-author work comprising contributions from 22 authors. Most of the chapters are clearly written and concise in approach and each carries an extensive list of relevant references. There is a useful and concise chapter on Functional Neuroanatomy but I was disappointed that the subsequent short chapter on Spasticity did not contain much detail about its clinical management, which is however covered relatively briefly in the final chapter on