and one control (0.9%) had a positive result on immunoblot assay (NS between groups). Positive controls and positive patients with multiple sclerosis were not related.

How our patients have been contaminated is uncertain. They had normal liver tests. They had not received blood transfusions, they were not intravenous drug users, or healthcare workers, and they did not have tattoos. Thus we could not determine if the suspected period of contamination by the virus followed or preceded the onset of multiple sclerosis.

In conclusion, the prevalence of anti HCV antibodies is not higher in our population of patients with multiple sclerosis than in our controls or in the general population in France³ (0.8% v 0.29% in blood donors and 0.87% in organ donors), and our results do not support a role for hepatitis C virus in the pathogenesis of multiple sclerosis.

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MATTERS ARISING

Epidemiology of schizophrenia

Cannon and Jones are to be congratulated for their thorough and scholarly review on the epidemiology of schizophrenia.¹ However, they do not do justice to the literature on immigrant groups and in particular that concerning "British Asians"—that is, migrants to Britain from the Indian subcontinent and their descendants.

They quote one study² in support of their assertion that an increased incidence of schizophrenia has been reported from this group. However, this study is concentrated in one particular district of London; British Asians have settled in many districts of London and in most provincial cities, now constitute about half of all ethnic minorities (1.5 million people in the 1991 census), and represent a multiplicity of cultures, languages, and countries of origin. The quoted study concerns only one small fraction of this population and involves only a very few Asian cases. It has been the subject of a considerable body of criticism in subsequent issues of the *BMJ*.

Given the heterogeneity of this population and the limitations of much of the research,

firm conclusions on the subject are some way off. But a review of schizophrenia in British Asians concludes that studies carried out soon after the migration showed an excess, whereas more recent surveys have indicated a rate close to or below that of the rest of the population. The early excess can probably be put down to faulty diagnosis, given the absence of effective transcultural training for British psychiatrists in the decade or so after the first migrations (personal observations). This situation should be viewed in the context of better mental health generally for this group.³

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NOTICE

Announcement from the British Neuropsychiatry Association

The Winter meeting of The British Neuropsychiatry Association will be held on 17 January 1997 at the London Zoo.

Topic: "memory"

Morning sessions: theoretical/experimental aspects of memory

Afternoon session: clinical controversies of memory

For further details of this meeting please contact: Suzanne Miller, 44 Roan Street, London SE10 9JT. Telephone: 0181 858 2699, Fax: 0181 853 4416, e-mail 100023.2012@compuserve.com

For details of membership of the BNPA which is open to medical practitioners in psychiatry, neurology and related clinical neurosciences, please contact: Dr Jonathan Bird, Secretary BNPA, Burden Neurological Hospital, Stoke Lane, Stapleton, Bristol, BS16 1QT. Telephone 01179 701212 ext 2925/2929.

BOOK REVIEWS

All titles reviewed here are available from the BMJ Bookshop, PO Box 295, London WC1H 9TE. Prices include postage in the United Kingdom and for members of the British Forces Overseas, but overseas customers should add £2 per item for postage and packing. Payment can be made by cheque in sterling drawn on a United Kingdom bank, or by credit card (Mastercard, Visa or American Express) stating card number, expiry date, and your full name.

Giant Intracranial Aneurysms. Edited by ISSAM A AWAD and DANIEL L BARROW. (Pp 299; price \$95.00.) 1995. Published by The American Association of Neurological Surgeons, Illinois. ISBN 1-879284-22-7.

During the early period of my training in neurosurgery, it was the received view that giant aneurysms infrequently bled and that their problems, if any, were due to their mass compressive effects rather than to haemorrhagic or haemodynamic effects. That this view held sway for so long is perhaps because these lesions are rare and an appreciation of their epidemiology and natural history can only be determined by the aggregation of information from many different sources. However, it has gradually become clear that these lesions are much more sinister than our earlier complacent view had led us to believe. They have a significant risk of haemorrhage, have serious compressive neurological sequelae, and may also present with thromboembolic complications. Most patients do not survive for more than a few years, usually dying from either haemorrhage or brain ischaemia. Similarly because of their relative infrequency, it is often difficult for individual surgeons to develop the necessary expertise in dealing with these formidable lesions. The neurosurgeon with an "average" general neurosurgical practice may thus be presented with considerable problems in deciding the best management options. In the initial flurry of enthusiasm which greeted the beginnings of endovascular treatment it was felt that this may perhaps represent the best answer for these lesions, but the results have on the whole been disappointing and in many cases it has not proved possible to deal with them by indirect means. Surgical repair remains an important part of the armamentarium. This volume sets down in considerable detail the current "best practice" for the management of giant intracranial aneurysms. For British readers the "inspirational dedication" may be rather hard to take but the individual papers contained within the volume are useful and are usually clearly illustrated with angiograms, MRI, and diagrammatic representations. The book represents a useful addition to the volumes already produced by the American Association of Neurological Surgeons. The AANS publications committee are to be congratulated on the generally high standard of presentation, illustration, and content of their publications. The book is highly recommended to those who have an interest in intracranial vascular disease.

DAVID HARDY

Magnetic Resonance of Myelin, Myelination, and Myelin Disorders. 2nd Edition. Edited by MS VAN DER KNAAP and J VALK. (Pp 558; price DM398.00.) 1995. Published by Springer-Verlag, Heidelberg. ISBN 3-540-59277-6.

Magnetic Resonance of Myelin, Myelination, and Myelin Disorders is a really useful book. In this second edition, van der Knaap and Valk have collated information on all the central nervous system disorders which affect myelin; so, this is definitely not just a book on multiple sclerosis. The 64 main chapters (some no more than a couple of paragraphs) describe individual conditions, syndromes and groups of white matter disorders.

ders. Each covers the clinical neurology, investigations, pathology, pathogenesis, and (where there is some) the treatment before depicting the imaging characteristics.

The magnetic resonance images and computerised tomography are of exceptional quality but this is more than just a picture book or a manual for radiologists. The illustrations have such impact that the topography and tissue selectivity of all the conditions under discussion are immediately apparent. Many of the disorders described by van der Knaap and Valk are rare; some present in childhood and others typically affect adults. Lack of familiarity is all the more reason for wanting to have this book to hand, used either as a source of information on provisional diagnoses made in the clinic, or to match bizarre imaging appearances to their possible clinical substrates.

The penultimate chapter is structured as a radiology conference of difficult cases. The opening four chapters deal with the biology of glia and myelination and classifications of white matter disease together with a fabulous series of magnetic resonance images depicting normal myelination in development. Since demyelinating disease is common, and the neurological conditions treated here are often rare, it is good to have so much material concisely presented and beautifully illustrated in one text.

ALASTAIR COMPSTON

The Neurological Side of Neuropsychology. By RICHARD E CYTOWIC. (Pp 529; price £46.50.) 1996. Published by The MIT Press, London. ISBN 0-262-03231-7.

Dr Cytowic provides us with a book in three parts. The second part is a pleasing attempt to characterise the nature of clinical assessment and provides the target audience of junior doctors and neurologically inclined psychologists with a useful first reference. Part 3 deals with specific neuropsychological topics and provides a *pot pourri* of signs, symptoms and syndromes which will again, I suspect, appeal to the audience for whom it was written. I found both sections useful, having often craved a basic text that could provide quick reference to areas of neurology that are unfamiliar to me. Some issues are dealt with a little too briefly, dyscalculia for example receives scant attention and is not discussed in terms of those deficits that might lead to calculation difficulties (visuospatial difficulty, aphasia, anarithmetria, etc.). However, comprehensive coverage in a single volume is clearly a tall order and the author gives us clear signposts to more detailed resources. Dr Cytowic's book is clearly not just a text designed to provide these resources, as the inclusion of a first part entitled "Conceptualisation" betrays, a section that covers, often controversially, a number of contemporary issues in neuroscience.

For example, Dr Cytowic is plainly unsympathetic to the notion that brain function is in any sense usefully analogous to computer function. His objections to the computational metaphor are "mechanical and moral". Unfortunately, the book never addresses the issues in sufficient detail for the reader to evaluate these objections. Dr Cytowic clearly enjoys pointing out the Emperor's lack of clothes and asks to be allowed a little hyperbole. Nowhere in the book is this more evident than in his attack

on "the traditional, linear and hierarchical" model of brain function. He is, of course, correct to suppose that current conceptualisations of brain function are likely to prove inadequate and he raises the importance of a number of additional perspectives. Amongst these are considerable food for thought—for example, the primacy of emotions, microgenesis, volume transmission, but what is absent is any discussion of the merits of the contrary view.

Whilst direct, experimental support for notions such as volume transmission is fairly scant, Dr Cytowic does us a service by making a robust case for their importance and uses his book as an opportunity to raise a number of interesting and provocative ideas. This is a book I enjoyed and one that will be of appeal to the audience at whom it is targeted, an audience that should guard against being overly influenced by the authors' views.

JOHN HARRISON

Pharmacological Management of Chronic Psychiatric Disorders. Baillière's Clinical Psychiatry. Edited by R J ANCILL and M H LADER. (Pp 707; price £30.00.) 1995. Published by Baillière Tindall, London. ISBN 0-7020-1984-4.

The idea that the pharmacological treatment of the chronic mental disorders is conceptually separable from that of the acute states is, as this volume shows, interesting and defensible. But it is also ambiguous for the clinician soon realises that "chronicity" may refer both to a feature of the disease ("refractoriness" to treatment) and to long-term maintenance treatment and side effects thereof. Both interpretations are of clinical importance and neurobiologically linked. Contributors to this issue write on the latter.

The results are impressive. Schizophrenia and neuroleptics (old and new) are dealt with in separate papers, followed by mood disorders, chronic anxiety, obsessive compulsive disorder, insomnia, Alzheimer's, and "dysfunctional behaviour" in dementia, epilepsy and mental retardation. There is enough in each chapter from the basic sciences to make the clinical understand why one ought to be careful, and yet adequate guidelines have been included to teach one how to do the job.

According to individual subject and preference, the reader is bound to find gaps. The ones difficult to justify (unless not inclusion is the editors' way of saying that such disorders should not be treated with long term pharmacology) are personality disorders, eating disorders, post-traumatic stress disorder (although a future issue will be dedicated to the last), conditions of chronic comorbidity; the latter amongst which the clinician may want to include the psychiatric complications of a number of neurological diseases (of which the excellent paper on "dysfunctional behaviour" in epilepsy is an example). Other gaps difficult to justify include where, how, and by whom is long-term pharmacology to be delivered and how can this interact with pharmacokinetics and ethical and medico-legal aspects of such treatments.

But such gaps can always be made good in the future, and should not be allowed to overshadow what is already in hand. This volume is informative, practical, and an essential read for all those involved in the care of the long-term mentally ill.

GERMAN BERRIOS

Intraoperative Neuroprotection. By RUSSELL J ANDREWS. (Pp 535; price £120.00.) 1996. Published by Waverly Europe Ltd, London. ISBN 0-683-00228-7.

This book seeks to bring together information on the basic mechanisms involved in neuronal injury, along with a description of techniques that have been used in the operating room to limit such injury in clinical practice. The breadth of information provided is large; 26 chapters by 43 authors are organised into four sections. The first of these addresses the problem of intraoperative nervous system injury, including basic mechanisms of neuronal injury, the second anaesthetic neuroprotection, the third intraoperative monitoring, and the last surgical issues of relevance to the topic.

Several chapters stand out as excellent summaries of the topic they address, but some are marred by an arbitrary choice of topics chosen for discussion and by omissions and factual errors. The chapter on anaesthetic agents for neuroprotection covers volatile agents in some detail, but omits mention of the effects of volatile agents on evoked potential. The chapter on non-anaesthetic neuroprotective agents is useful, but the suggestion that sodium nitroprusside may increase peripheral resistance is clearly misleading. The chapter on hypothermia provides an excellent account of the use of deep and mild hypothermia for neurosurgical procedures at a single centre in the context of the available literature on the subject. It is disappointing however, that the authors devote little or no space to hypothermic cardiopulmonary bypass, which is arguably the most common use of hypothermia for possible neuroprotection. The chapter on positioning addresses the issues of fiberoptic intubation and the sitting position clearly and in some detail, but says little about the bulk of neurosurgical procedures, which involves the anterior cranial fossa, and issues of local anaesthetic toxicity during topical anaesthesia for awake intubation are ignored.

The chapters on intraoperative neuroprotection monitoring are generally useful, and cover general EEG monitoring, with separate sections on electrophysiological monitoring for cranial, spinal, and peripheral nerve surgery. Further chapters on evoked potential monitoring and cortical stimulation mapping complete a comprehensive coverage of electrophysiological monitoring. I thought that the chapter on functional magnetic resonance imaging was a useful introduction to the topic, but was disappointed to find little clinical data, specially in the area of preoperative localisation for epilepsy surgery. These issues were better covered in the chapter on magnetic source localisation. Chapters on transcranial Doppler and microvascular Doppler, intraoperative angiography, intraoperative ultrasound, laser Doppler flowmetry, and thermal diffusion cerebral blood flow measurement were useful starting points for further reading, but the relative naive reader would find it hard to distinguish between established and potential clinical indications for the last two techniques, which are still in an investigational stage. The emerging area of intraoperative image guided operative localisation is covered well in the context of two chapters on spinal and cranial surgery.

Surgical intraoperative neuroprotection is covered in five chapters. The chapter on brain retraction is excellent, and probably