the others, was normal percentages of type I fibres, rather than the very high levels (90% or more seen in the other families).

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- Heytens L, Martin JJ, Van de Kelft E, Bossaert LL. In-vitro contracture tests in patients with various neuromuscular diseases. *Br J Anaesth* 1992;68:72-5.
- Brownell AKW. Malignant hyperthermia: relationship to other diseases. *Br J Anaesth* 1988;60:303-8.
- European Malignant Hyperthermia Group. A protocol for the investigation of malignant hyperpyrexia (MH) susceptibility. *Br J Anaesth* 1984;56:1267-9.
- Ellis FR, Halsall PJ, Christian AS. Clinical presentation of suspected malignant hyperthermia in 402 probands. *Anesthesia* 1990;45:38-41.
- Larach MG. Should we use muscle biopsy to diagnose malignant hyperthermia susceptibility? *Anaesthesiology* 1993;79:1-4.

MATTERS ARISING

Multiple sclerosis in the north Cambridgeshire districts of East Anglia

The north Cambridge survey is a welcome addition to the United Kingdom series of prevalence studies.¹ We agree that a multi-centre prevalence study would add to the epidemiological knowledge of multiple sclerosis. However, we cannot agree with the inclusion of "suspect cases" in their prevalence figures. As we have pointed out in a previous paper, the measurement of multiple sclerosis can be distorted by using ill defined criteria for measuring the disease.² We contend that the Poser criteria alone (which do not contain a suspect category) should be used in measuring the prevalence of multiple sclerosis. For this reason, we used only the Poser criteria in our survey of west Sussex, and deliberately did not include a suspect category.² As Poser himself says, "for the purposes of prevalence studies only the categories of clinically definite and clinically probable should be used; possible multiple sclerosis should never be included."³

Our concern is that a "suspect" category, which seemed to have been defined differently in the south Wales,⁴ Cambridge, and Southampton surveys,⁵ can lead to confusion in interpreting and comparing prevalence figures. This is because there are no clear criteria of what constitute so called "suspect" cases, and workers are free to use their own criteria. As Robertson says, the inclusion of a suspect category "introduces noise, and generally obfuscates the overall picture."⁴ We agree with this, and argue that

any cases that do not fall into the Poser criteria should be excluded from prevalence figures. To do so would introduce some clarity into what we are striving to measure. In our view, future prevalence surveys should use the Poser criteria and not include "suspect" cases.

The Cambridge team suggest that the very presence of a latitudinal gradient within the United Kingdom has only recently been questioned.¹ It is, in fact, a decade ago that Williams and McKernan made the comment "we find no convincing evidence of a latitudinal effect in the United Kingdom".⁷ A mortality study of multiple sclerosis in the United Kingdom found no gradient south of the Scottish border and discussed the possibility that the high, but diminishing, Scottish rates were artefactual.⁸ The most serious challenge to the latitudinal hypothesis appeared in a letter in the *BMJ* in which a convincing argument was presented to show that the hypothesis was inconsistent with United Kingdom data.⁹

So the challenge to Limburg's hypothesis is not recent.¹⁰ What is recent is that most researchers in the field are at last coming to realise the weakness of the data on which the hypothesis was based.

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- Robertson N, Deans J, Fraser M, Compston D. Multiple sclerosis in the north Cambridgeshire districts of East Anglia. *J Neurol Neurosurg Psychiatry* 1995;59:71-6.
- Rice-Oxley M, Williams ES, Rees JE. A prevalence survey of multiple sclerosis in Sussex. *J Neurol Neurosurg Psychiatry* 1995;58:27-30.
- Poser CM. The epidemiology of multiple sclerosis. *Ann Neurol* 1994;36(suppl 2):S180-93.
- Swingler RJ, Compston DAS. The prevalence of multiple sclerosis in south east Wales. *J Neurol Neurosurg Psychiatry* 1988;51:1520-4.
- Roberts MHW, Martin JP, McLellan DL, McIntosh-Michaelis SA, Spackman AJ. The prevalence of multiple sclerosis in the Southampton and South West Hampshire Health Authority. *J Neurol Neurosurg Psychiatry* 1991;54:55-9.
- Robertson N, Compston D. Surveying multiple sclerosis in the United Kingdom. *J Neurol Neurosurg Psychiatry* 1995;58:2-6.
- Williams ES, McKernan RO. Prevalence of multiple sclerosis in a south London borough. *BMJ* 1986;293:237-9.
- Williams ES, Jones DR, McKernan RO. Mortality rates from multiple sclerosis: geographical and temporal variations revisited. *J Neurol Neurosurg Psychiatry* 1991;54:104-9.
- Williams ES, McKernan RO. Multiple sclerosis: nature or nurture (letter). *BMJ* 1991;302:846-7.
- Limburg CC. The geographic distribution of multiple sclerosis and its estimated prevalence in the United States. *Proceedings of the Association for Research into Nervous and Mental Disease* 1950;28:15-24.

NOTICE

Announcement from the British Neuro-psychiatry Association: 1996 summer meeting

The 1996 Summer meeting will be held on 14-16 July at Robinson College,

Cambridge. It will include topics on neuro-development, language, and the presentation of short scientific papers and single case videos by members. The Association's AGM will be held on 16 July.

For further details of these meetings please contact: Sue Garratt, Administrative Assistant, BNPA, 17 Clocktower Mews, London N1 7BB. Telephone/Fax: 0171 226 5949.

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 or Sue Garratt at the address given above.

CORRECTION

H M L Jansen, J van der Naalt, A H Van Zomeren, A M J Paans, L Veenma-van der Duin, J M Hew, J Pruim, J M Minderhoud, J Korff

Cobalt-55 positron emission tomography in traumatic brain injury: a pilot study. *J Neurol Neurosurg Psychiatry* 1996;60:221-4.

In the table, p223, CT localisation of patient B is Left frontal

NA [no abnormalities]

The first sentence, left hand column p223, should read—Both Co-PET and CT showed abnormalities that were not in accordance with EEG findings

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.

Treatment of Cerebral Palsy and Motor Delay. By SOPHIE LEVITT. (Pp 341; price £19.99). Published by Blackwell Science. 1995. ISBN 0-632-03878-X.

The third edition of Sophie Levitt's excellent book will be of interest and indeed is essential reading for anyone involved in the management of the cerebral palsies, including parents. A major theme throughout the book is the importance of collaboration with parents and the detailed section on practical procedures is written with parents as well as therapists in mind. Forwards to the second

and third editions by Mary Sheridan and Brian Neville make clear the prominence that this text should have for all developmental therapists.

In the initial chapters the complex problems of the varied motor disorders described as cerebral palsy are defined and the variety of treatment approaches that currently exist are reviewed. Research evidence, the limited theoretical grounds for the different approaches and the author's wide clinical experience lead to the development of an eclectic model which is the basis of Sophie Levitt's approach.

Since the first two editions of this book were published there has been an increase in the eclectic viewpoint in the treatment of children with motor delay and cerebral palsy. The third edition is updated and revised taking into account recent research and experience with this approach. There are also two new chapters which develop the learning principles involved in developing motor function considering how to integrate treatment, training and learning in the development of children with motor problems.

The author emphasises the need for a comprehensive assessment which takes account of the child's level of visual, auditory and language development, his intelligence and personality. It is made clear that this assessment should grow out of a collaboration with the child and his parents.

The long chapter 7 on treatment procedures describes in detail physical management techniques drawing on the author's broad clinical and theoretical experience. The text is clear and the problem solving approach is easy to use for the experienced clinician. Detailed description of the development of reflex reactions and normal developmental milestones are illustrated with delightful line drawings and photographs. The closing chapters deal with the practical issues of the use of motor function in the child's daily life, the problems of deformity and therapeutic group work.

This book is not only immensely readable; it provides a sound knowledge base for anyone working with children with cerebral palsy.

ALISON SALT

Textbook of Child Neurology, Fifth Edition. By JOHN H MENKES. (Pp 1013; price £88.00). Published by Williams and Wilkins, London 1995. ISBN 0-683-05920-3.

John Menkes described kinky hair syndrome and maple syrup urine disease, entities which are memorable enough to make him famous. This book is a tour de force written largely by the man himself and succinctly covering the whole of neurology with a paediatric emphasis. Menkes is an experienced and thoughtful physician who brings wisdom and historical perspective to his writing. Like Raymond Adams or Jean Aicardi, there is obviously nothing he has not seen.

Menkes' father practiced medicine in the foothills of the Austrian alps at the turn of the century. He had studied with the pathologist who necropsied Ludwig Van Beethoven and he remained ever sceptical that bacteria could cause disease. Perhaps it is John Menkes' intimate appreciation of how fast things have moved, coupled with his recent European origins that bring such depth and range to this book.

He does not restrict himself to the modern American literature, but quotes widely in geographical and historical terms. In comparing epileptic and non-epileptic convulsions Menkes turns to Gowers for an account. Similarly, Sydenham's chorea is defined in full by its original author with a fascinating recommendation for treatment: "Take of Black-cherry-water one Ounce, of Langius's Epiliptick-water three Drachms, of old Venice-Treacle one Scruple, of Liquid Laudanum eight Drops: make a draught"

Menkes is erudite, interesting and up to date. He gives good sensible clinical advice and avoids excessive recourse to technology and tests. He writes well and although he makes extensive use of the literature, he cuts through the detail, and provides us with clear conclusions. A comprehensive bibliography is available at the end of each chapter. The book is in one volume, but everything is there that any normal neurologist is likely to need, and it is well organised, extensively cross-referenced and well set out. It might have benefited from conversion tables so that Europeans could more easily interpret the American units, and in places a more symptom-based approach might have made it easier to look up those difficult cases when we are seeking a diagnosis. But these are minor criticisms.

REBECCA AYLWARD

Motor Activity and Movement Disorders. Edited by PAUL R SANBERG, KLAUS-PETER OSSENKOPP and MARTIN KAVALLIERS. (Pp 370; price \$99.50). Published by Humana Press, New Jersey 1995. ISBN 0-896-03327-9.

This book sets out to review the experimental approaches to the assessment of motor activities primarily in rats and how this has been applied to certain neuropsychiatric conditions such as Tourette's syndrome and schizophrenia. It is therefore a book that will primarily be of interest to experimental psychologists rather than neurologists or psychiatrists as only the last two chapters are concerned with human studies.

Each chapter sets out to combine theory with practical details and goes on to discuss some relevant experimental studies. This is an admirable approach and indeed succeeds in some places—for example, the chapter by Schwarting *et al* on automated video-image analysis of behavioural asymmetries. However, despite the attractive format, the chapters in practice often fail to achieve the right balance for a number of reasons. In the first instance the chapter topics are too specialist, for example chapter 1 is entitled "Long-term habituation of θ -related activity components of albino rats in the Lât maze". Furthermore in this chapter there are difficulties with the presentation of experimental data, in that the graphs are poorly labelled in contrast to chapter 3 where the text and graphs are too widely separated to be of complementary value.

Apart from the chapter topics being too specialised, the discussion in each chapter is limited and relies too much on the authors' own work, presumably as a result of the specialist chapter topics. Whilst this can be useful, especially from a practical point of view, it leads inevitably to unbalanced accounts with reference often to unpublished work. For example, in the chapter by Bracha and Gilger on measuring spontaneous turning

behaviours in children and adults, there are at least 10 references to the authors' own work of which three are unpublished. This is frustrating as a critical evaluation of the data is difficult when conclusions based on unpublished work are made. Furthermore this eclectic use of some studies data is further complicated by the extrapolations that have been put upon these studies—for example, Gallup and Rager discuss the relevance of experimentally induced tonic immobility to the legal position of rape victims! It would have been more useful if the authors of each chapter had concentrated on the mechanism underlying the motor behaviour being discussed. For example, in the chapter on circling behaviour of rats there is little discussion on the mechanisms underlying this behavioural effect. In particular there is no consideration given to the importance of striatal integrity and cortical afferent inputs in the mediation of spontaneous and drug induced rotation. Indeed this lack of discussion on mechanism of effect is equally true for the chapter on sex differences in rodent spontaneous activity levels by Mead *et al*.

There are, however, some fascinating chapters in this book—for example, the chapter by Mistlberger on circadian locomotor activity. In addition the book presents behavioural paradigms that may be useful in areas of experimental neuroscience where the current techniques of study are limited, such as neural transplantation where drug induced rotation dominates as the test of choice. In this respect the use of thigmotactic scanning as discussed by Schwarting *et al* may be of value as may techniques employing computer recognition systems for spontaneous behaviour.

Overall this book provides some useful information on the complexities of a range of tests that are used to study motor behaviour, primarily in rats. However, the book often fails to provide enough technical detail to be useful, whilst the eclectic choice of topics and the limited discussion undertaken in each chapter greatly limits its appeal. It is therefore a book that is hard to recommend to anyone other than the dedicated student of experimental psychology.

ROGER BARKER

Epilepsy: 100 Elementary Principles. Third Edition. Edited by WILLIAM H. THEODORE AND ROGER J. PORTER. (Pp 211; price £35.00.) 1995. London: WB Saunders Company Ltd. ISBN 0-7020-1813-9.

This is the third edition of a popular and useful book. It is emphatically not a textbook on epilepsy, but a collection of 100 guiding principles—almost aphorisms—which lie at the heart of the successful clinical management of epilepsy. This is an altogether unusual approach, yet it works well. The topics are dealt with with lightness and elegance, and the result is impressionistic almost a watercolour sketch; but the information is generally concise and apposite. The 100 principles are divided into 18 sections, starting with "Approach to the patient"—the first aphorism being "The brain is just another body organ" (Woody Allen please note) and the second "Assume that every patient with epilepsy wants to get well" (Dostoevski please note). The next sections are perhaps more conventionally organised into a variety of aspects of diagnosis and therapy, the last few concerned with