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References

- 1 Zuber M, Sebald M, Bathien N, *et al.* Botulinum antibodies in dystonic patients treated with type A botulinum toxin: frequency and significance. *Neurology* 1993;**43**:1715–18.
- 2 Dressler D, Bigalke H. Antibody-induced failure of botulinum toxin type B therapy in de novo patients. *Eur Neurol* 2004;**52**:132–5.
- 3 Jankovic J, Vuong KD, Ahsan J. Comparison of efficacy and immunogenicity of original versus current botulinum toxin in cervical dystonia. *Neurology* 2003;**60**:1186–8.
- 4 Dressler D. New formulation of BOTOX®: complete antibody-induced therapy failure in hemifacial spasm. *J Neurol* 2004;**251**:360.
- 5 Consky ES, Basinski A, Belle L, *et al.* The Toronto Western Spasmodic Torticollis Rating Scale (TWSTRS): assessment of validity and inter-rater reliability. *Neurology* 1990;**40**(Suppl 1):445.
- 6 Dressler D. Botulinum toxin therapy failure: causes, evaluation procedures and management strategies. *Eur J Neurol* 1997;**4**(Suppl 2):S67–S70.
- 7 Goeschel H, Wohlfahrt K, Frevert J, *et al.* Botulinum A toxin: Neutralizing and nonneutralizing antibodies - therapeutic consequences. *Exp Neurol* 1997;**147**:96–102.
- 8 Dressler D, Dimberger G. Botulinum toxin therapy: risk factors for therapy failure. *Mov Disord* 2000;**15**(Suppl 2):51.
- 9 Dressler D. Complete secondary botulinum toxin therapy failure in blepharospasm. *J Neurol* 2000;**247**:809–10.

BOOK REVIEWS**From basic pain mechanisms to headache**

Edited by Jes Olesen, Troels S Jensen. Published by Oxford University Press, Oxford, 2006, £85.00 (hardback), pp 261. ISBN 978-0-19-856981-7

We cannot doubt that headache is painful, but in many hospitals and university centres, there seems to be remarkably little academic or even clinical interchange between neurologists seeing patients with headache syndromes and anaesthetists running pain clinics, let alone with the basic scientists working in the field. The approaches needed seem to be different; in particular, patients with headache require a doctor to provide a diagnosis, whereas the diagnosis in patients attending pain clinics is usually well established. However, in both cases, the treatments offered are empirical and owe little to our understanding of the pathophysiology of neuropathic pain.

In the latest book in his series based on the annual research seminars in Copenhagen,

Professor Jes Olesen, assisted by Dr Troels Jensen, has attempted to bridge this gap by seeking contributions from experts in experimental pain, as well as from experts in the clinical assessment, diagnosis and management of specific headache and other pain syndromes.

From my clinical perspective, some of the early chapters written by basic scientists seem to plunge very deep, very quickly, exemplifying the persistent gulf between the disciplines. Perhaps the most valuable parts of the book are those on specific pain syndromes, particularly trigeminal neuralgia, the allodynia accompanying migraine, and the new, particularly helpful concept of morphine-induced pain by the facilitation of brain stem modulating pathways, which may go some way to explain the chronic headache so often seen in regular users of codeine. It is a sign of the difficulty, for example, that the various contributors cannot decide whether migraine should be classified with the inflammatory neuropathic syndromes or not.

This book is a brave attempt at a particularly challenging goal—it is perhaps inevitable that the different backgrounds of the contributors are reflected in the approaches they adopt in their chapters. I believe this text will be of value to both neurologists and pain experts, although a lot more research work is needed before clinical treatment ceases to be empirical and becomes fully grounded in the basic science of pain modulation.

R Peatfield

Amyotrophic lateral sclerosis, 2nd edn

Edited by Robert H Brown, Michael Swash, Piera Pasinelli. Published by Informa Healthcare, 2006, £85.00 (hardcover), pp 362. ISBN 1-84184-463-2

Amyotrophic lateral sclerosis, through its first edition, has become the standard text for clinicians and researchers in the field of amyotrophic lateral sclerosis (ALS)/MND, and with this new edition, which retains many of the strengths of the first, it is likely to remain so. The fact that treatment receives an allocation of only 10% of cases of this relatively rare disease gets 100 pages reflects the state of the ALS world rather well. Bridging the “translational medicine” gap between our ever-increasing knowledge of the basic phenomena observed in genetic and cellular models and what is actually happening in the disease process in patients with sporadic ALS (and ultimately providing treatments) unfortunately remains an aspiration rather than a reality.

The balance of the book in this edition has shifted slightly, away from clinical description and even more towards research. The opening chapter on the clinical spectrum of motor neurone disorders is a useful account of the different forms of motor neurone degeneration (including those at the fringes of most people's clinical practice, like shellfish poisoning), but the opportunity to map out in detail for neurologists the natural history and clinical features of different clinical subtypes of ALS, which can cause much diagnostic confusion, has been missed. The chapter on epidemiology is comprehensive, if a little uncritical, in a subject in which much of the research is methodologically challenged.

Specific chapters devoted to imaging, peripheral neurophysiology and traumatic masturbatory syndrome provide a comprehensive survey of the different techniques in development as

diagnostic and prognostic markers. A chapter on clinical approaches to disease monitoring and prognostication, which are probably as good as any investigative technique in helping patients, would have provided an appropriate balance. The massive increase in interest in ALS as a multisystem neurodegenerative disease is reflected in an extremely useful chapter on cognitive aspects. Much of the rest of the book is devoted to reviews of the main pathways implicated in ALS, such as oxidative stress, apoptosis and mitochondrial dysfunction, which are good but fairly standard accounts that can be found elsewhere. A stimulating exception is the truly integrative and readable chapter from Wills and Brown on insights to be gained from the molecular biology of ageing.

This excellently presented book is still the best available on the subject, but I would make a plea to the editors of future editions not to let the exponentially increasing load of scientific literature on ALS squeeze further the basic clinical description of the disease, which must remain the starting point for all research on ALS.

K Talbot

Clinical neuroimmunology, second edition, 2005

Edited by Jack Antel, Gary Birnbaum, Hans-Peter Hartung, Angel Vincent. Published by Oxford University Press, Oxford, 2005, \$265.00 (hardback). ISBN 0-19-851068-0

The editors and authors should be congratulated on completing the task of producing the second edition of *Clinical neuroimmunology*. The contents live up to its title and cover a wide spectrum of conditions falling within the remit of clinical neuroimmunology and more. A generous number of chapters are dedicated to basic science and animal models of immune-mediated disorders. The book starts with an introductory chapter on immunology and separate chapters on the principles of autoimmunity and immunotherapy. This is followed by chapters relevant to neuroimmunology, which include the organisation and development of the central nervous system (CNS), immune properties of the CNS, the role of the immune response in tissue damage and repair, neural immune interactions in autoimmune disease, immunological properties of the peripheral nervous system, genetics of immune-mediated neurological diseases, principles of immune-virus interactions in the nervous system, immunity to bacterial infections and animal models of neurological disease.

Not unexpectedly, the lion's share of the book goes to multiple sclerosis and related disorders, with chapters on acute disseminated encephalomyelitis, the pathology and immunology of multiple sclerosis, imaging the immunobiology of multiple sclerosis, effects of immune mediators on neurophysiological function in multiple sclerosis, myelin repair in multiple sclerosis and immune-directed treatments in multiple sclerosis. The last chapter is testament to how far we have advanced with the treatment of multiple sclerosis and includes some of the emerging treatments that are considerably more effective than the current licensed multiple sclerosis disease-modifying treatments.

There are several excellent chapters on immune-mediated disorders of the peripheral nervous system. These include chapters on the

Guillain-Barré syndrome and chronic inflammatory demyelinating polyradiculopathy, antibody-mediated disorders of the neuromuscular junction, neuropathies associated with monoclonal gammopathy and immune mechanisms in inflammatory myopathies.

There are three chapters dedicated to specific infectious diseases, namely HIV-1, HTLV-1 and Lyme disease or neuroborreliosis. In the next edition, the editors may consider expanding this list to include other infectious diseases or agents in which the neurological manifestations of the infection are also immune-mediated.

It is very reassuring that the editors had the wisdom to include sections on the role of the immune system in neurodegenerative diseases and ischaemic stroke; these chapters review the important role the innate immune system has in the pathogenesis of neurodegeneration and the therapeutic implications that have arisen from these recent observations. Other valuable reviews include the chapters on the neuro-Behçets, vasculitis and paraneoplastic syndromes. A notable omission is a chapter or chapters dedicated to the neurological manifestations of common systemic autoimmune diseases—for example, CNS lupus and thrombotic thrombocytopenic purpura. A particularly thought-provoking chapter is the penultimate chapter by Angela Vincent on antibodies in CNS disorders. The chapter covers anti-glutamic acid decarboxylase antibodies in stiff person syndrome and cerebellar ataxia, anti-voltage-gated potassium antibodies in limbic encephalitis and epilepsy, and the questionable role of anti-glutamate receptor 3 antibodies in Rasmussen's encephalitis. There is a provocative section on the role of humoral factors in neurodevelopmental disorders, such as autism, and the potential role of maternal immunity in these and other disorders. The book concludes with a personal perspective on the history of neuroimmunology by Byron Waksman.

The book will be useful for both students studying basic mechanisms in immunology and neuroimmunology and for clinicians managing patients with immune-mediated disorders of the nervous system.

G Giovannoni

How to examine the nervous system, 4th edn

Ross R T, Ross R N. Published by McGraw-Hill Medical, New York, 1998, \$29.95 (hardback), pp 434. ISBN 0-83853-852-5.

How do medical students and neurological trainees learn how to examine the nervous system? Opportunities to observe the faculty of master clinicians at work, the apprenticeship model by which many of us learnt, have perhaps become fewer in this age of planned, briefer, hospital admissions. Hence the need for written supplements to clinical training, such as this text, now in its fourth edition.

This book falls into the middle range of "how to do it" books devoted to neurological examination; less than one-third the length of *De Jong's Neurologic examination* but double that of Professor MJG Harrison's *Neurological skills* (now out of print, sadly). A step-by-step approach to examination technique ("operationalisation" is the *mot juste*, I think) is

adopted, with additional brief text on possible findings and their interpretation, clinicoanatomical localisation and some clinicopathological causes. Clinical lore garnered from years of experience is much in evidence, such that even those already trained in the art may learn something new. (I particularly enjoyed the Groucho Marx manoeuvre, p 98.)

Emphasis is always an issue in a short book. Some believe, perhaps depending on personal interest, that the relative space devoted to vision and eye movements (7 chapters) and higher mental function (7 pages) is entirely appropriate or totally unjustified. However, there are omissions: I find no account of tongue fasciculations or testing colour vision. In this era of multimedia, students may find the black and white illustrations a little dry—in the UK, examination videos have been with us ever since Dr Anthony Hopkin's study aid was prepared for the Royal College of Physicians in 1993, and CD-Roms are not uncommon textbook accompaniments these days. The index is unusually thorough but not perfect (eg no mention of inverted reflexes, p 167).

These caveats aside, I have no hesitation in recommending this book, although, as the dedication makes clear, attending those skilled in the art remains the preferred way of learning how to examine the nervous system.

A Larner

Functional magnetic resonance imaging: applications in clinical neurology and psychiatry

Edited by Mark D'Esposito. Published by Taylor and Francis, New York, 2006, £85.00 (hardcover), pp 206. ISBN 1-84214-295-X

Magnetic resonance imaging has matured rapidly as a tool for studying brain function in <15 years' time. In particular, the fast developments of methods for data acquisition, paradigm design and data analysis techniques of functional MRI (fMRI) have enabled a multidisciplinary community of researchers to study normal brain function. In a time span of few years, fMRI has become the most widely used method for imaging brain function, leading to impressive accomplishments in the studies of normal brain function.

The developments of studies focusing on the clinical utility of fMRI have been slower. However, many fMRI methods are being developed and validated and by now, fMRI has also become a valuable tool in the study of many neurological and psychiatric disorders.

Many textbooks on MRI and clinical MRI are available. Some books on fMRI are also available, most of which have a more technical or methodological focus. This book, for the first time, focuses on the clinical utility of fMRI. The first two chapters provide an introduction to fMRI and explain how fMRI compares with other imaging modalities such as positron emission tomography. The principles of fMRI and basic underlying concepts are discussed, explaining the approaches in its use for studying brain function.

In the remaining 10 chapters, an overview of the current status of fMRI results obtained in neurological, psychiatric and developmental disorders and some other important clinical conditions is given. These chapters focus on one

condition each: schizophrenia, drug addiction, Alzheimer's disease, dyslexia, traumatic brain injury, stroke, epilepsy, depression and anxiety, pain, presurgical planning. This selection was carried out on the basis of the progress made in fMRI research in those disciplines. Each chapter also includes an overview of the results obtained with positron emission tomography imaging.

All chapters are clearly written by different experts in the field. The combination of introductory chapters on fMRI and chapters focusing on different disorders makes this book interesting to many researchers with a clinical interest, including trainees and clinicians with little experience in fMRI.

S. Rombouts

The neurobiology of painting

Authored by F Clifford Rose. Published by Elsevier, London, 2006, £99.95, pp 341. ISBN 0-12-366875-1

Today's "higher" cerebral functions seem decided mid-level when viewed from the perspective of our neurological forefathers. We study language, attention, memory, perception, planning—recently, even consciousness—all without shame. But few will stand up and declare a research interest in art, culture and aesthetics. It was not always so. At the dawn of brain science, such subjects were self-evident as subjects of proper scientific study. Franz Joseph Gall included gift for music, talents for architecture and poetry, and various faces of love (for offspring, authority and glory) in the 27 independent brain functions of his system of organology. Gall reasoned that variations in these propensities across species, clinical groups and the normal population would be reflected in the size of the brain regions underlying them. However, his choice of the skull as an indirect measure of regional brain size dealt these functions a near-fatal blow. The first tentative steps towards their rehabilitation have been taken in the last few years, championed by a handful of maverick neuroscientists and clinicians. Clifford Rose stands among them and this, his second edited volume on the arts, focuses specifically on painting, equal weight being given to contributions related to painting in neurological conditions as painting of neurological conditions—a neurological version of Patrick Trevor-Roper's ophthalmological "World through blunted sight". Those tempted to the volume by its title will be disappointed by the poor coverage of the act of painting itself, and a conspicuous absence of neurobiology, in the sense of non-clinical brain science. Indeed, we get the impression that the title owes more to the work's provenance (volume 74 in the International Review of Neurobiology series) than its content. In such an embryonic field, an overlap between contributions is inevitable, here within the volume and with its predecessor. Yet, as a catalogue of painters and paintings with even the most tenuous of links to neurology, there is little to rival it. Neither for the coffee table nor for the academic bookshelf, the niche it falls into is as one of several vanguard works helping to reinstate neuroscientific respectability to the "highest" of our cerebral functions.

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