

Book Reviews

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The Clinical Science of Neurologic Rehabilitation (2nd edition)

One of the major challenges facing a neurorehabilitationist-in-training is how to build up the breadth of knowledge necessary for the modern biopsychosocial, interdisciplinary approach to rehabilitation. The neuroscience literature has often provided in-depth studies on mechanism without a clear message on rehabilitation context, whereas the rehabilitation literature examined clinical practice without a clear link to biological mechanism.

This systematic, readable and well-referenced volume, by a neurologist who specialises in neurorehabilitation, succeeds in bridging this gap. The first section summarises the current state of knowledge of nervous system structure and function, changes in response to injury, and the rationale for different medical and non-medical rehabilitation interventions. The second section, 'Common practices across disorders', spans the composition of the inter-disciplinary team, outcome measurement, gait rehabilitation and the medical management of common complications.

The third section focuses on an evidence-based approach to the rehabilitation of stroke, traumatic brain injury, and acute and chronic myelopathies, with a shorter final chapter on other neurological disorders. The current state of the literature is reviewed, together with comments on the likely place of new interventions in the rehabilitation process and suggestions of directions further research is likely to take.

I would recommend this as compulsory reading for any neuro-rehabilitationist who seriously wants to integrate their everyday clinical practice with a sound knowledge of neuroscience. As a useful starting point for anyone wanting to explore the evidence for (and clinical context of) particular rehabilitation interventions, it should also have a place on library shelves beside standard neurology texts.

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Edited by: Bruce H Dobkin
ISBN: 0195150643
Publisher: Oxford University Press
Price: £85 (hardback)

Vascular Cognitive Impairment. Preventable Dementia

The editors of this book coined the term "vascular cognitive impairment" (VCI), to replace the concept of vascular dementia (VaD), in 1995. This book reviews the clinical, neuropsychological, neuroimaging and neuropathological aspects of VCI, as well as addressing treatment. It enters a field which has seen at least two major publications in recent years (Chui E, Gustafson L, Ames D, Folstein MF (eds.). Cerebrovascular disease and dementia. Pathology, neuropsychiatry and management. London: Martin Dunitz, 2000; and Erkinjuntti T, Gauthier S (eds.). Vascular cognitive impairment. London: Martin Dunitz, 2002).

Various themes emerge. The definition of VCI stemmed, at least in part, from a desire to identify cases at the earliest possible stage, before dementia (i.e. sufficient cognitive impairment to affect occupational or social function) was evident, the rationale being that intervention at this stage might prevent dementia (hence the subtitle of the book), in much the same way that the concept of mild cognitive impairment has been developed by researchers aiming to identify the earliest, and potentially treatable, stages of Alzheimer's disease (AD). However, the editors are at pains to point out that this conceptual change from VaD to VCI necessitates abandoning diagnostic criteria based on an Alzheimer-like neuropsychological profile, particularly with its emphasis on memory loss (the "Alzheimerised" dementia con-

cept). Hence VCI cases, which may manifest frontal executive dysfunction, language and motor problems, will by-and-large not be identified in "memory clinics" (certainly our experience in this centre). This also has implications for recruitment to clinical trials, selection criteria often revolving around "objective" test scores which might possibly exclude individuals who might benefit from treatment. The difficulty in trying to differentiate VCI from AD is compounded by the observation that they share risk factors, and histopathologically a mixed picture may be the most common finding in late-onset dementia patients (MRC CFAS, Lancet 2001; 357: 169-75).

This well-produced volume summarises a great deal of information on the effects of cerebrovascular disease on cognitive function in an accessible manner, and can be unhesitatingly recommended to both cognitive neurologists and stroke physicians. Yet this remains an area where certain data are sparse, meaning that operational criteria for VCI cannot currently be proposed. This book may serve, at least in part, as a manifesto for the concept of VCI. A fuller discussion of the emerging evidence for cholinesterase inhibitors in VCI/VaD would have been desirable, but this was perhaps unavoidably occasioned by the publication schedule.

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Edited by: JV Bowler, V Hachinski
Publisher: Oxford University Press
ISBN: 0-19-263267-1
Price: £79.50

Cerebrovascular Ultrasound: Theory, Practice and Future Developments

The editors have attempted to provide a definitive cerebrovascular ultrasound textbook. Previous texts on the subject have suffered from a dryness of technical prose and insufficient clinical content to inspire even the most dedicated stroke clinician. In the UK this is compounded by the absence from training of obligatory "hands-on" ultrasound exposure. This criticism cannot be levelled at our international colleagues – a fact reflected in the gallery of authors who have contributed to this book.

The target readership for this text is practising stroke clinicians but its broad coverage of the subject should find readers in vascular laboratories and in neurosurgery, vascular surgery and radiology departments. It is subdivided into three sections addressing physics and haemodynamics, clinical intra- and extracranial applications, and future developments. Non-physicists may find the early chapters mathematically intimidating and inaccessible but the excellent clinical sections more than balance this. The clinical coverage is logically set out and extends from plaque morphogenesis, characterisation and natural history, through to quantification of carotid stenosis with reference to carotid surgery trials. Intracranial applications include microembolus detection, measurement of intracranial stenosis, arteriovenous malformations, post subarachnoid vasospasm and haemodynamic reserve testing.

Inevitably there is some repetition and redundancy of text,

but the editing has minimised this and it allows each chapter to stand alone sufficiently for the majority of readers approaching this as a reference text. Those of us who must interpret the significance of carotid ultrasound reports in the TIA clinic will find much of relevance to our practice.

The section on future developments is short but manages to cover multi-gated embolus detection, 3 and 4D carotid imaging, and functional Doppler testing which will interest clinicians. But the text is weighted towards the extracranial circulation. I was disappointed by the paucity of text related to intracranial 3D power Doppler to image the circle of Willis and transcranial Doppler perfusion measurement. The latter would have complemented the chapter on ultrasonic thrombolysis. One notable absence is the use of transcranial Doppler to measure cerebral autoregulation from analysis of phase shifts or rate of recovery from rapid changes in systemic blood pressure – both of which are familiar research tools for assessment of cerebrovascular pathophysiology.

This is a very welcome addition to the cerebrovascular library and is to be recommended. It is a well-marshalled, systematic, well-illustrated and readable text, accessible to a wide variety of clinicians, radiologists and scientists dealing with cerebrovascular disease.

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