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SPECT in Dementia (Advances in Biological Psychiatry Vol. 22)

This slim tome gives details of a study entitled "SPECT in dementia", a collaborative European initiative designed to improve the use of single photon emission computed tomography in the diagnosis of dementia, involving centres in Scotland, France, Germany, Italy and Israel.

Many of the chapters are quite technical in their orientation, e.g. combining images from different clinical settings, voxel-based approaches to imaging (statistical parametric mapping apparently improves rater accuracy of scan reading), comparison of HMPAO-SPECT with FDG-PET, and use of novel receptor ligands. There is no specific discussion of the functional imaging signatures of different dementia syndromes (frontotemporal dementia, dementia with Lewy bodies, vascular cognitive impairment, prion disease), the focus being principally on Alzheimer's disease (AD), in which context an exhaustive systematic review (taking up more than a quarter of the book) that finds ^{99m}Tc -HMPAO-SPECT can successfully discriminate between normal controls and AD is reassuring though hardly earth-shattering.

Of perhaps greater clinical impact are chapters on the use of SPECT to correlate specific cognitive and psychi-

atric phenomena in AD with specific patterns of regional cerebral perfusion, and, particularly topical, assessing the efficacy of cholinesterase inhibitor (ChEI) therapy in AD. Donepezil seems to preserve regional cerebral blood flow patterns in comparison to untreated AD patients, and in responders vs. non-responders. In the future, use of acetylcholine receptor ligands may also provide a surrogate measure of ChEI efficacy.

A cost-effectiveness study of SPECT in the diagnosis of AD rounds off the text, and makes interesting reading for those of us unfamiliar with the methodology of such studies. Some of the assumptions, for example monthly follow up of AD patients for 3 months before deciding whether ChEI is continued, and transfer of responders to a GP who will then prescribe the drug, caused some raising of eyebrows.

Thus, this book's appeal is largely to the cognoscenti of functional brain imaging, rather than to the clinical neurologist, but nonetheless is worth dipping into by those with an interest in dementia.

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Editors: KP Ebmeier (ed.)
Published by: Karger 2003
ISBN: 3-8055-7595-5
Price: EUR80.00

Neuropsychological Assessment (Fourth Edition)

This is an update of what for almost three decades has been the classic textbook of clinical neuropsychological assessment. The first edition appeared back in 1976, followed by updates in 1983 and 1995. The volume of what is covered in this textbook has grown significantly, perhaps reflecting the exponential development of knowledge in this exciting field.

As before, the basic scientific knowledge underpinning the practice of neuropsychological assessment is covered in great depth before discussing implications for clinical practice. It is both striking and reassuring that often there is not a single, definitive answer to clinical dilemmas. A good example of this is the question of how to determine pre-morbid ability (Chapter 4) where a critical appraisal of the different methods is followed by providing a pragmatic solution to this perennial problem in neuropsychological assessment. A general theme emphasising the need to be "clinically streetwise" permeates the text. Indeed, the point is made that it is now harder than ever to be a good clinician (page 102).

In general, there is now more on neuro-imaging and a better integration of insights from cognitive neuropsychology. The limitations of findings from neuro-imaging studies are however highlighted throughout (For example, page 287). A particular strength remains the provision of strong links between research findings and clinical practice. There is also more on the implications of neuropsychological assessment for the practice of neuropsychological rehabilitation, in effect removing the rather artificial barrier between assessment and rehabilitation.

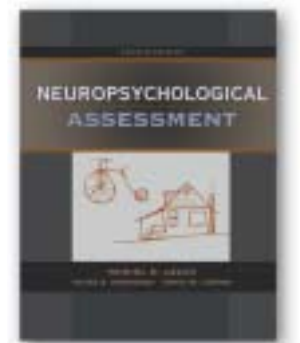
The basic structure of the book is, as before, that the first few chapters address the core, scientific basis of clinical neuropsychological assessment (Chapters 1 – 8), before proceeding to review a truly wide range of tests, rating scales and inventories (Chapters 9 – 19). Finally, a new chapter on response bias has been added (Chapter 20). The application of computers in neuropsychological assessment is not covered. It is likely that the first eight

chapters will as before be the "must know" part of the book, while the section on tests will probably be used more as a reference source.

A vast array of tests are comprehensively reviewed, including some of the new versions of existing, widely used tests such as the Wechsler Adult Intelligence Scale – III, the Wechsler Memory Scale – III and the Rivermead Behavioural Memory Test - E. Newer tests that are now being used in practice, for example the Delis-Kaplan Executive Function System and the Behavioural Assessment of the Dysexecutive Syndrome, as well as tests that have been around for several decades, for example the Porteus mazes, are reviewed. The tests are critically reviewed regarding reliability, validity and other neuropsychological findings, providing essential guidance to the practitioner. As is often the case in neuroscience, a lot of the answers are not straightforward. Indeed, the point is made that it remains unclear what many tests measure (page 108).

Are there any gaps in this truly phenomenal textbook? The short answer is no. Perhaps bedside cognitive assessment and psychopharmacology could have been covered in a bit more depth, but there are textbooks specifically dedicated to these topics. The chapters on rating scales, inventories and questionnaires used in neuropsychological assessment (Chapters 18 & 19) could possibly have included more instruments, for example the European Brain Injury Questionnaire and the Brain Injury Community Rehabilitation Outcome scale, but then again, it is simply not possible to include every test or questionnaire currently in use. Neuropsychological Assessment (Fourth Edition) represents a monumental achievement by the authors and remains the most important text on clinical neuropsychological assessment. No practitioner or researcher should be without it.

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Publisher: Oxford University Press, 2004
ISBN: 0-19-511121-4
Price: £59.50