

■'Forensic neuropathology and associated neurology', Oehmichen M, Auer RN, König HA <u>Springer-Verlag</u> 2006 ISBN 3-540-23500-0 £220

After many years of a deficit of decent titles, along comes another cracking text dedicated to the highly specialised area of forensic neuropathology. Following in the footsteps of Whitwell ('Forensic Neuropathology' - see review below), this title goes further, and details the clinical and neurological features of entities described, before illustrating the pathology and neuropathology in detail.

The immediate strength of this interesting book lies in the clinicopathological correlation - matching clinical symptoms and signs with the pathological changes. The authors supplement their material with well referenced pathophysiological mechanisms for many neuropathological phenomena, facilitating understanding of many complex matters.

Unlike Whitwell's text, Oehmichen et al do not attempt to provide the reader with an overview of neuroanatomy, but do set out a detailed review of pathological changes seen in neuropathological material, which will be of interest to those starting out in the field, but probably less so for the more experienced practitioner. I found the review of

immunohistochemical and staining patterns of different reaction patterns to be particularly useful.

Macroscopic findings are placed in a pathophysiological context, for example oedema and herniation.

The principles of forensic examination and neuropathological principles in a forensic setting are described, providing an introduction for the reader into the subsequent chapters on traumatic brain injury.

Biomechanical principles of relevance to head injury are summarised, and the reader is presented with excellent reviews of open and closed head injuries, although I was disappointed to find only a brief introduction to the use of BAPP without any comment about hypothesised links between staining patterns and ischaemia vs trauma.

The micro-neuropathology of gunshot wounds is well covered, and the chapter on intracranial haemorrhage succinct. Useful tables and figures detailing criteria for ageing subdural haemorrhages, for example, are found throughout the text.

Injuries to the spinal cord and peripheral nerves are well illustrated, but perhaps the most interesting aspect of this book is the provision of chapters dealing with forensic pathology matters that potentially have neuropathological issues, such as strangulation/ asphyxia, thermal trauma/ burns, electrocution, lightening and decompression/ barotrauma etc.

These chapters were extremely interesting from a trainee perspective, as they provide an alternative way of looking at these entities, and assist in their clinicopathological correlation.

Hypoxic/ ischaemic brain damage is described in detail, and the findings expected in 'ventilator brain' and permanent vegetative states are well illustrated.

The effects of toxins (e.g.. carbon monoxide), drugs of abuse (e.g.. opioid) and alcohol (including central pontine myelinolysis and Wernike's encephalopathy) are clearly described, again presented alongside the relevant clinical findings.

Paediatric neuropathology appears to me to be quite impenetrable as a subject, and replete with opportunities to make major interpretive

errors. However, one is assured somewhat after reading the 6 chapters in this book, covering basic principles and anatomic variations in this population, hypoxic-ischaemic damage, traumatic brain injury, and postnatal 'natural' CNS death.

The final section of this text covers other aspects of neuropathology where medico-legal issues arise, such as in epilepsy. Major causes of neurological morbidity and mortality such as vascular disease are well covered in a section on 'clinical neuropathology', in addition to an excellent chapter in inflammatory diseases/ infection.

When carrying out neuropathological examinations of brains in the elderly, it may be difficult to determine whether atrophy is due to normal 'ageing' or represents a dementing process. A final chapter assists in this differentiation, detailing ageing changes at gross and microscopic levels and giving an overview of the findings in dementia.

The illustrations provided in this book are of high quality, and mostly by means of colour photographs and photomicrographs. Referencing is comprehensive, and utilises international literature, not limited to the English language - a bonus for those of us who can only understand one language!

This book should find its way onto the shelves of those who undertake forensic neuropathological examinations, as well as neuropathologists carrying out any medico-legal autopsies.

Trainees will benefit from the comprehensive nature of this title, and is recommended to those training in forensic pathology, neuropathology, paediatric pathology and general autopsy pathology.

Should the trainee purchase both this and Whitwell's text? Yes, I think so, in view of the more academic slant to this book, which complements the more practical approach found in Whitwell.