Book Reviews

HUMAN NEUROANATOMY, by Malcolm B. Carpenter and Jerome Sutin, Williams & Wilkins, Baltimore, 1983 (8th Edition), 872 pages, U.S. $46.25.

The busy neurological clinician needing a suitable reference for matters neuroanatomical may well feel inundated by the burgeoning host of textbooks and atlases being offered in this discipline. It would be hard to find a more lucid example than this eighth edition of the old Strong and Elwyn, latterly Truex and Carpenter textbook, "Human Neuroanatomy", extensively revised by Malcolm Carpenter and Jerome Sutin, Chairman of the Anatomy Department at the Uniformed Services University of the Health Sciences (Bethesda) and Emory University Medical School (Atlanta), respectively. While still containing 20 chapters, the text is some 111 pages longer than the seventh (1976) edition; and the exhaustive bibliography, with more than 2,800 entries, is not only alphabetically listed, but each citation is also numbered for comparison with its mention within the text. Having all these references gathered together at the back of the book, rather than scattered throughout at the end of each chapter, remains a decided plus.

Chapter headings are largely unchanged (the previous "Basal Ganglia" chapter is now entitled "The Corpus Striatum"), and include such topics as meninges and CSF, gross brain anatomy; embryological development; histological facets of neurons and glia; the automatic nervous sytem; spinal cord and brain stem regions; cerebellar anatomy; chapters on diencephalic, hypothalamic, basal ganglionic, and limbic regions; and anatomical facets of the cerebral cortex. The final chapter deals with the anatomy of the blood supply to the brain and cord.

Considerable new information has been included in this edition about the blood-brain barrier, axoplasmic flow, neurotransmitters, pain mechanisms and autonomic pathways, the complex organization of the cerebellar, thalamic and visual sytstems, and the role of peptides in endocrine regulation. Of particular attraction to neurologists and neurosurgeons is the section in each chapter on "Functional Considerations", attempting to synthesize information pertinent to clinical problems. This version adds more than 100 new illustrations, and has retained the very helpful Atlas section at the back of the book, the colour plates of which are particularly handy when recalling brain stem anatomy.

It is possible that some research neuroanatomist might find a minor flaw here or there. (The cluster of magnocellular neurons within the substantia innominata known as the nucleus basalis of Meynert is not listed in the Index either under "Meynert's" or "nucleus basalis", but rather "basal magnocellular nucleus (substantia innominata)".) On the other hand, all the light- and electron-micrographs, as well as cerebral angiograms, are extremely well reproduced; the type set is easy on the eyes; and the huge number of semischematic drawings and diagrams (frequently with 2 or 3 colours to help distinguish closely apposed pathways and connections) renders this text extremely comprehensive and eminently readable for the clinical neuroscientist.

This latest edition is attractively priced, and will undoubtedly find a prominent place in the personal libraries of neurological practitioners as well as medical students.

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MUSCLE PATHOLOGY IN NEUROMUSCULAR DISEASE. By András L. Korényi - Both. Published by Charles C. Thomas, Springfield, Illinois. 486 pages. $74.50 US.

Superficial inspection of this text suggested that it might turn out to be an important addition to the field of muscle pathology. Unfortunately detailed review did not confirm the reviewer's initial impression.

Firstly, the vocabulary, at times, is unusual. Terms such as lipid thesaurosis, hyperthyrosis and myogelosis would undoubtedly send many potential readers to their medical dictionaries.

Secondly, there seems to be a serious imbalance in the coverage of certain items and also significant omissions for a text that lists references up to at least 1980. An example of imbalance would be the five pages of photographs of ring fibres and two pages of photographs of mitochondrial abnormalities in muscle from myasthenia gravis and no photographs of such morphological distinct myopathies as nemaline myopathy, reducing body myopathy and multi-core disease. Examples of omissions include the failure to mention Emery-Dreifuss muscular dystrophy, inclusion body myositis, myoadenylate deaminase deficiency and penicillamine induced polymyositis.

Thirdly, there are many statements that would not be acceptable to most myopathologists and/or clinicians. Examples of these are as follows:

1) The average width of a muscle fibre is 10 to 40 micrometers. 2) It is still questionable whether a single axon can supply more than one fibre. 3) Disuse atrophy is greater in type 1 than in type 11 fibres. 4) Cores have a predelection for type 11 fibres. 5) Central cores are easily seen by H and E staining. 6) In the Eaton-Lambert syndrome the pathologic changes at the neuromuscular junction are identical to those in myasthenia gravis. 7) Venereal infections are an intensifying factor for alcoholic myopathy.

More care in editing would have picked up errors such as substitutions of phosphorylase for phosphatase, hypermyelination for hypomyelination and ATPase for ATP. Finally, the pictures, although generally of high quality (an exception is Figure 7-14 C which is said to show Wallerian degeneration) may in several instances be open to a different interpretation. For example, in Figure 5-23 structures labelled as dilated sarcoplasmic reticulum appear to be lipid droplets and in Figure 8-5 many of the inclusion bodies appear intramitochondrial rather than intracytoplasmic.

Because of these criticisms I do not believe that this is a book that is suitable for beginners and I believe that most workers in the field of neuromuscular disease would be reluctant to use this as a definitive reference text.

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