
This book comprises a series of algorithms or flow charts (decision trees) which are aimed at providing a step by step method of diagnosis as part of a series on "clinical decision making." The format is a flow chart and on the facing page a brief description, a few short notes on some of the topics raised and two or three useful references.

A number of common neurological symptoms and signs are covered: these include headache (initial and chronic), facial pain, arm pain, tremor, weakness, dizziness, visual loss, memory loss and others. There are also sections on specific neurological conditions: for example transient ischaemic attacks (TIAs), completed stroke, subarachnoid haemorrhage, neuropathies, multiple sclerosis. It is not always simple to follow a specific diagnostic problem. For example a sudden episode of loss of consciousness, a very common symptom, requires the decision tree of a suspected seizure. This section includes cross reference to many types of seizure, and also to syncope, which has a separate section. The last includes disturbances of heart rhythm (not rate) but no mention of hyperventilation, which is only listed in the differential diagnosis of vertebro-basilar TIAs. There are some headings about lines of treatment but some are sketchy and, for example in trigeminal neuralgia, it might have been a useful adjunct to know how to proceed when medical treatment has failed.

There are a number of irritating spelling mistakes on the same page, discs and disks, truncal and trunkal. The book is expensive for its content and its rigid bulky size suggests it may lie on a shelf whereas in my view it would have been better aimed as a pocket aid.

It is difficult to get the balance between a simple flow chart that is easy to follow and one sufficiently comprehensive to cover the most likely outcomes. Too much detail will result in a very complex chart criss-crossed with lines. The authors have made a useful compromise and this will help clinical diagnosis and management.


The authors of this book are Professor and Assistant Professor of Neurosurgery at Emory University in Atlanta. It is therefore no surprise that the book is written very much from the surgical standpoint and therein lies its strength and its weakness. Like all good surgical texts it begins with anatomy, in this case the anatomy of the sphenoid bone and associated structures. No doubt this is of crucial importance to young neurosurgeons, but for the physician it makes very turgid reading and the diagrams are depressingly similar to those in Gray's Anatomy. A later chapter on pituitary surgery, describing in detail the technique of the trans-sphenoidal approach contains equally little to hold the attention of the physician. If this criticism seems too carping one must add that this is the only text book of pituitary disorders which considers in detail the technical aspects of pituitary surgery, and will presumably be of considerable value to neurosurgeons in training.

It would, however, seem a pity if neurosurgeons attracted to the book by its surgical approach confine themselves to the remaining chapters for their view of the medical aspects of pituitary disease. Apart from an excellent chapter which provides a review of neuro-endocrinology by Professor JB Martin as an invited contributor, the two surgeons have decided to write the major chapters on endocrine presentation and investigation themselves. Inevitably perhaps, the result is a somewhat shallow and unbalanced view. The chapter on clinical and endocrine evaluation for example, is largely a list of baseline and dynamic tests of endocrine function, with little guidance to their relative value in the assessment of particular cases. Thus, in the investigation of acromegaly more space is devoted to the measurement of somatomedin-C levels than to the use of the oral glucose tolerance test, which in this country at least, forms the cornerstone of diagnosis. Physicians might also be surprised to find that hypertension and diabetes are dealt with rather briefly under the heading "associated medical conditions and metabolic disturbances in patients with acromegaly". The prognosis of acromegaly in particular is dealt with in a matter of ten lines ending with the rather lame observation that it is believed effective treatment may favourably influence mortality. No consideration is given to the effects of medical or surgical treatment on impaired glucose tolerance or hypertension as opposed to plasma growth hormone levels.

The bias towards surgical management is particularly evident in the chapter on prolactinomas. Whilst it is pointed out that there is a recurrence rate of microprolactinomas following apparently curative surgery, that microprolactinomas only rarely enlarge significantly, and that sudden enlargement of microprolactinomas (in pregnancy) is extremely rare, the authors state with the characteristic conviction of their training, that trans-sphenoidal surgery is the treatment of first choice. Most neurosurgeons are in fact, increasingly aware of the wide acceptance that treatment with bromocriptine should be offered to patients with microprolactinomas in the first instance. Antipathy towards bromocriptine is highlighted deliberately by the authors with repeated references in italics to the fact that bromocriptine is not tumorigenic. The implication of course, is that bromocriptine must be given on a life-time basis and it is a pity that this is not balanced by reference to recent evidence that bromocriptine dosage can be substantially reduced if not totally withdrawn in some patients with both micro and macroadenomas. In their description of the surgical treatment of microprolactinomas, on the other hand, the authors fail to do justice to the merits of surgical treatment. They have chosen to consider the results of surgery on the basis of the plasma prolactin levels, rather than putting the case for surgical decompression of the chiasm as a means of effectively restoring vision. No attempt is made, it is true, to conceal the fact that bromocriptine often produces dramatic shrinkage of macroprolactinomas but the authors fail to point out that this is by no means a universal response. The case for surgical treatment would rest more securely on the excellent results in terms of improved acuity as opposed to the fairly lousy results in terms of normal plasma prolactin levels.

An idiosyncratic view of pituitary disorders is also apparent in the chapter on empty sella syndrome. It is stated that uncomplicated primary empty sella syndrome requires no treatment, but this is followed by a description of a rather curious operation involving mobilisation of the flattened pituitary gland and propping it up with a piece of fat and a wedge of bone. The indications for this are not at all clear. The chapter on the radiology of pituitary disease on the other hand, is excellent. Finally however, a further criticism must be made. This is the absence of a chapter devoted to the neuroophthalmology of pituitary disease, which is dealt with in a very few pages together with two diagrams of standard visual field defects plotted on a Goldman screen.

This book can be recommended to those interested in the technique of trans-sphenoidal surgery in which both authors...
are acknowledged experts. It seems a pity however, that they did not choose to invite equally expert physicians to write the appropriate chapters.

NF LAWTON


This is not a textbook of child neurology—it has no detailed systematic accounts of childhood neurological disease (though there are some very useful brief summaries), and few illustrations. It does, however, address itself to an important practical need, where a textbook does not always help: how to set about making a diagnosis when a child presents with a particular neurological problem. The authors take 102 presenting problems, such as progressive retardation, possible meningitis, and head trauma, and deal with each in two large pages. On the right hand page is an algorithm, a set of branching paths, with instructions on which path to follow according to the examination findings or the results of investigations. On the facing pages are concise explanatory notes.

This is the way we like to think we make diagnoses or decisions, in a series of logical steps, each depending on asking the appropriate question, and knowing what to do next for each of the possible answers. Does it work? It depends on there being clear-cut answers to the questions, which allow an unequivocal decision to reject one path and proceed down another. In the real world of child neurology, the diagnostic process is often not so black and white. For example, the algorithm for the child with a large head does not allow the diagnosis of familial macrocephaly to be made if the head has been growing abnormally fast, yet the rate of head growth in this condition may be just as fast in the first year of life as in the child with progressive hydrocephalus. There is some danger in closing off diagnostic pathways, particularly at an early stage in decision making.

"Two roads diverged in a wood and I — I took the one less traveled by And that has made all the difference". Sometimes Robert Frost's road "less traveled by" may be the only one which will lead to a correct answer.

Some problems are just too complex to be dealt with in the double-page format. For example "progressive retardation" has an additional four pages of very useful tables which list the possible diseases causing particular clinical features. Furthermore, some algorithms can only be used when a first diagnostic step has been achieved, for example "Reye's syndrome" and "optic pathway tumour".

Despite these limitations (which the authors frankly acknowledge) this is a useful, interesting and above all enjoyable book. It has been carefully thought out and attractively presented. It is instructive to compare the algorithms with the way we actually do proceed in a child with a neurological problem. We can certainly clarify our thinking if we try to make our own algorithms for tackling particular problems. If computers are ever going to help us in clinical decision-making, the first requirement will be to devise algorithms like these and to test their reliability in clinical practice.

ROGER J ROBINSON


Despite the clinical importance of visceral pain, the subject has received scant attention, compared with somatic pain, until recent years. This book reflects the renewed interest in peripheral and central mechanisms and neurochemistry of visceral sensation. A recurring question through the various chapters in this volume is whether visceral sensory receptors subserve normal visceral sensation and visceral nociception. Most evidence points to an absence of specific nociceptors.

The clinical phenomena of visceral sensation and pain are described by Procacci et al in one of the three opening review chapters. The characteristics of visceral pain and referred pain are discussed, drawing on observations in patients and some human experiments. All the other 17 chapters, are based on animal neurophysiology. In the other two review chapters in section one, Painlal considers mechanisms of respiratory, bladder and rectal sensations, together with thirst and hunger. Iggo discusses C fibre afferent properties in detail.

The second section of the book contains chapters on afferent systems from the heart, lungs, gastrointestinal tract and pelvic organs and chapters on neurochemistry and pharmacological aspects of visceral sensory receptors. Particularly noteworthy is the long chapter by Janig and Morrison which examines some functional properties of spinal visceral afferents particularly with respect to pain. The facts which emerge from their review are that the density of spinal innervation is very low, visceral afferents comprising only 1-5 to 2-5% of the total spinal input; there is very poor spatial resolution of the afferent input due to inputs over many spinal cord segments, and the responses of afferents are to a large degree dependent upon the strength of the stimulus. Janig and Morrison found no specific population of visceral nociceptors, again suggesting that pain is related to the intensity of the afferent discharge.

The third section deals with central nervous system mechanisms of visceral sensation, containing eight chapters on spinal cord and brain stem integration and reflex control of some outputs. There is an excellent chapter by McMahon on sensory-motor integration in urinary bladder function, in which the complexity of neural coordination is necessary for the reflex act of micturition is demonstrated. This and other chapters in this section are not light reading, nor do their content have immediate impact for the clinician. They demonstrate how little we understand of our vegetative functions.

It is clear from the mass of data in this book that current knowledge still does not permit more than speculation about the mechanisms of many visceral sensations and pains in man and that the information cannot as yet be put to clinical use.

This book will appeal mainly to experimental neurophysiologists, but the third section is readily accessible to the clinical physician. Physicians and surgeons interested in the various viscera discussed will perhaps find more of interest in their particular visceral field in the remainder of the book than with the clinical neurologist.

JW SCADDIN

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