MATTERS ARISING

Brain and spinal cord MRI in motor neuron disease

We read with interest the article by Thorpe et al1 raising the question of the importance of MRI alterations as prognostic factors in motor neuron disease. In a retrospective study in our institute, we also found signal abnormalities in MRI along the pyramidal tracts in 11 of 16 patients affected by amyotrophic lateral sclerosis.2 In all of them, symmetric hyperintensity in T2 weighted images were recognizable at the level of the corona radiata, in the internal capsule and the cerebral peduncles; in two of these cases signal changes were also present in the pons. When the patients with and without MRI abnormalities were compared, we failed to find prognostic factors. Age, spinal or bulbar onset, disease severity as assessed by the Norris scale,3 time interval between onset of disease and MRI investigation, duration of disease (time interval between onset and death or study closure) did not differ between the two groups of patients. Conversely, MRI signal abnormalities were associated with more pronounced upper motor neuron signs. Thus in our experience, alterations in MRI do not have a prognostic value but they simply reflect the severity of pyramidal tract degeneration. As Thorpe et al suggested,1 abnormalities of MRI may be helpful in early diagnosis of motor neuron disease. However, this has to be confirmed in further studies, as neuropathological examinations have shown great variability in the expression of the involvement of the pyramidal tracts even in the typical cases.4

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Pituitary Adenomas

I very much enjoyed reviewing this book which has been edited by three neurosurgeons, from Europe, the United States and Australia. It is a very complete text which covers everything that you wanted to know about pituitary adenomas and would previously have to search widely for contemporary answers. The editors have succeeded in commissioning a wide range of expert opinion covering all related specialist areas. The chapters have been logically arranged and there are many high quality illustrations including colour plates of histological slides. This is essential to achieve adequate clarity for interpretation by the non-expert reader. Inevitably there is some repetition, but in some ways this is no bad thing as the chapters can be read in isolation.

As a neurologist I was particularly interested in the chapters covering endocrinology, microsurgical anatomy, the history of pituitary surgery and current surgical techniques. The contemporary surgeon largely operates via the transsphenoidal approach with minimal morbidity and high rates of cure. These remarkable achievements rely very much on sophisticated pre and per operative imaging techniques and the use of the operating microscope. Following a careful and detailed account of the trans-sphenoidal approach there are further chapters on surgical results and prognosis for the various pituitary adenomas.

Following on from surgical considerations are excellent and very readable chapters covering the medical treatment of the different endocrinopathies associated with pituitary tumours. I particularly enjoyed the chapters on the different radiotherapeutic approaches to pituitary tumours. I have never been certain about which patients can safely be spared the potential long term morbidity of this treatment. Although optic neuropathy, brain necrosis and vascular injury are the most feared complications, hypopituitarism requiring hormonal replacement therapy eventually develops in a large proportion of patients after fractionated radiotherapy. It seems increasingly clear that despite full hormone replacement therapy many patients with iatrogenic hypopituitarism have a reduced quality of life.

The clinical features, diagnosis, and management of pituitary apoplexy are covered in a single chapter. This gives sound advice to the non-specialist neurosurgeon who may be called upon to deal with these cases when they present as emergencies. I would concur with the view that the beneficial effects on neurological, visual, and endocrine functions are sound and reason for early surgical intervention by the transphenoidal approach. The improved prognosis of pituitary apoplexy that has been achieved by contemporary management is illustrated by the fact that all 12 patients in the first published series of apoplexy were diagnosed at necropsy.

Overall I think that this is an excellent book by cheque in sterling drawn on a United Kingdom bank, or by credit card (Mastercard, Visa or American Express) sending card number, expiry date, and your full name.