torical, anatomical, pathophysiological and therapeutic point of view.

It was only in 1954 that the first report of successful carotid reconstruction was published, earlier attempts having been made in the previous three years. In 1983 85,000 endarterectomies were carried out in the USA, and the number predicted for 1986 was over 100,000. Like many lesions in the head and neck, carotid disease and its consequences fall within the scope of several disciplines, and the need for collaboration between them is paramount. "Medical and surgical therapy should be seen as mutually supportive and complimentary" especially in the evaluation of treatment. The burgeoning of surgical therapy means that many operations are likely to be undertaken by surgeons with limited experience of neurology, or even of vascular surgery in some cases. This book provides guidance for the investigation and treatment of patients, but selection of the surgeon is also extremely important.

After a full discussion of atheroembolic mechanisms and haemodynamic factors giving rise to cerebral lesions, the clinical aspects of strokes are summarised. More information on the natural history of untreated strokes might be helpful to those without neurological experience. Surgical therapy consists in the restoration of occluded vessels or the provision of a bypass. The many methods for demonstrating lesions are described, and thereafter there are descriptions of carotid endarterectomy and various alternative reconstructions of these and other vessels. Finally, the different forms of Extracranial/Intracranial (EC/IC) by-pass are mentioned in detail.

It is not until the final three chapters that one is able to reach a conclusion as to the present position of surgical treatment for all forms of stroke. The chapters on the treatment of asymptomatic lesions and transient ischaemic attacks (TIA) will be of most interest to neurologists. Despite the problems of providing sufficiently up-to-date information in a book, this work includes references to 1985 publications, among them the disappointing findings concerning the results of EC/IC by-pass in complete carotid occlusions, middle cerebral artery occlusions and TIA and small strokes. Excellent results in the treatment of other vascular lesions are well documented and are likely to continue to improve in the future.

Cerebrovascular disease can be looked at from several points of view. This surgical appraisal is to be welcomed, and neurologists should take the opportunity to add it to their experience. It is to be hoped that more neurological evaluation of surgical results will be undertaken in the future as collaborative research, so that the possibility of a surgical procedure is not regarded as a qualification for its performance, unless it can be justified by the results. Neither is an operation that could be beneficial denied on account of prejudice or ignorance of the possibilities. The book will help to bring this about.

PETER H SCHURR

Multiple Sclerosis. Edited by W lan McDonald and Donald H Silberberg. (Pp 193; £25.00.) Sevenoaks: The Butterworth Group, 1986.

This is essential reading for those responsible for the diagnosis and care of patients with multiple sclerosis. Having the advantage of a dual authorship from Queen Square and Philadelphia, we have the benefit of a very balanced approach to the problem of multiple sclerosis considering both the United Kingdom and the North American attitudes. The book assumes the reader a considerable knowledge of neurology and of the disease itself. An excellent introductory chapter on the diagnosis of multiple sclerosis and a review of the Poser Committee's criteria for diagnosis is followed by an up to date chapter on imaging, including the recent findings on MR scanning. What we understand of the epidemiology is very clearly outlined in the fourth chapter and after Compton's careful consideration of the genetic factors involved in the aetiology of this disease, Lisak writes on the immunological abnormalities, Silberberg himself writes on the pathogenesis of demyelination, and Professor McDonald on the pathophysiology of the disease, with further chapters on psychological aspects and treatment including an excellent chapter on the symptomatic management of the patient.

This book is enjoyable to read, accurate and comprehensive. Inevitably it must be compared with the Churchill Livingstone volume on multiple sclerosis initially edited by McAlpine, and now by Lumsden and Aitchison in its third edition. I feel the aims of the larger work are different, and the authors of that volume attempt to cover a much wider research field than is addressed by the volume under review. However, the two books are complementary and I would wholly recommend that any neurologist, whether in training or in practice, with an interest in this enigmatic disease.

PETER H SCHURR


In 1932 Wilfrid Le Gros Clark needed only 64 pages of Brain to review almost everything that was known at the time about the organisation, development and comparative anatomy of the thalamus. Today, we need a monumental book of 2 kg weight to review the same topic, but are we any closer to knowing what the thalamus actually does? Concluding his classic book on the primate thalamus 50 years ago, the 31 year old A Earl Walker stated his case quite clearly. "The thalamus ... holds the secret of much that goes on within the cerebral cortex." After more than 800 pages, Prof Jones, is rather more sceptical, and confides that it "would almost be possible to study the cortex without considering the thalamus as anything more than a direct relay that neither added to nor subtracted from the information flowing through it."

Such an attitude is, of course, extremely Dr Jones goes on to attack it with vigour. However, it is an attitude that I have heard several neuroscientists espouse in the past. Indeed, surveying much of the information in this book, one might be tempted to agree with them. Segregation of information now appears to be a general rule of thalamic organisation. The thalamic nuclei are quite separate, with no interconnections between them. Within the principal sensory nuclei not only is there a spatially ordered projection of afferent fibre terminals, but in many cases, different types of afferent fibre from the same body part or area of retina remain separate. Such segregation, however, does not mean that the thalamic nuclei are "relay" input to the cortex. This was made clear in the classic studies by Hubel and Wiesel of receptive field properties in the lateral geniculate nucleus (LGN). The contrast sensitivity of LGN cells is greater than in retinal ganglion cells, indicating that the incoming signal is transformed, as well as transmitted through, the LGN. Similar experiments also suggested a second, and important thalamic function: transmission through the LGN was highly dependent on the overall state of the animal. That is,