

and of executive functions (implicating lack of dorsolateral frontal involvement). This model appears to support an animal-based model of dreaming that hypothesizes "orientational" functions (interest, surprise, startle) for central PGO activity<sup>5,6</sup> much more than it does a model proposing PGO to be a random, chaotic process.<sup>3</sup>

Some minor, stylistic features of the work deserve mention because they reflect the author's general eye to detail. One is the generous use of tables to organize materials, be they collections of prior studies on a given theme, or sub-samples of patients from his own collection with similar symptoms. These tables allow the reader to easily size up the relative weight of evidence for a topic and to make easy comparisons between patient groups. A second noteworthy feature is a glossary of nosological terms which gives the less neuro-savvy reader easy access to definitions of highly specific terms used in the book (e.g., irremembrance, adynamia, anosognosia, etc).

Are there problems with this book? Yes, at least two that deserve mention, but neither of which is damaging enough to exclude the book from any reader's shelf. One is that most of the case descriptions and statistical analyses reported have nowhere first been published in peer-reviewed journals. Thus, the scientific value of most of the findings has not been established via the usual empirical channels and must remain uncertain. A second problem is that the author has not considered the most recent brain imaging studies of REM sleep and dreaming in his formulation of a dreaming model. Although these studies are consistent with his thinking on many points, on many others it is not an unfortunate oversight because of the potential value such studies will have in independently validating or failing to validate his ideas.<sup>4</sup>

In sum, Solms has produced a rare work that is as original and useful as it is comprehensive and well-organized. It is surely one of the most important books on dreaming to appear in the last 25 years, and by far *the* most important work on dream neuropsychology to have been published. The book will likely come to be considered essential reading for students of sleep medicine.

1. Doricchi F Violani C. Dream recall in brain-damaged patients: a contribution to the neuropsychology of dreaming through a review of the literature. *In*: J.S. Antrobus and M. Bertini, eds. *The neuropsychology of sleep and dreaming*. Hillsdale, NJ, US, Lawrence Erlbaum Associates, Inc., 1992; 99-129.
2. Greenberg M.S Farah, MJ. The laterality of dreaming. *Brain and Cognition*. 1986; 5: 307-321.
3. Hobson J. McCarley RW. The brain as a dream state generator: an activation-synthesis hypothesis of the dream process, *American Journal of Psychiatry*, 1977; 134: 1335-1348.
4. Hobson JA, Stickgold R Paceschott EF. The neuropsychology of REM sleep dreaming, *Neuroreport*, 1998; 9: R:1-R 14.
5. Kuiken D. Dreams and feeling realization. *Dreaming*, 1995; 5: 129-157.
6. Morrison AR. A window on the sleeping brain. *Scientific American*, 1983; 248: 94-102.

Tore A. Nielsen,  
Montreal, Quebec

explain the recent explosion in our knowledge concerning the trigeminal vascular system and the role of some of the newer serotonin agonists on this system.

The first chapter of the book is concerned with the history of migraine from Sumerian times to the growing understanding of the condition throughout the Renaissance, the Victorian era, and the 20th century. There is a chapter on the classification of headache, which attempts to make the 1988 International Classification of Headache more understandable and useable. The chapter on the practical pathophysiology of headache is well set out and clear with excellent diagrams and tables detailing the mechanisms of headache production. The section on physical examination is well covered, emphasizing the appropriate taking of the history and appropriate examination as it pertains to the likely causes of head pain. The red flag headaches are particularly clearly defined, while an approach to a diagnosis is described in an algorithm which is easy to follow. Ultimately, this book is more designed for the general physician and family doctor rather than neurologists.

Investigations for headache patients are well covered. The chapter on tension type headaches attempts to clarify a rather muddy area. There is some discussion of post traumatic and cervicogenic headaches, which is adequate in a general book like this. Migraine is dealt with in more detail with treatments adapted from standard guidelines. The use of prophylactic medication is dealt with in adequate detail, but I am not sure why Pizotifen, which is one of the most commonly prescribed medications in Canada and Europe, and Depakene, and Epival are lumped under "other medications". I would have thought that they deserved a more prominent place.

The section on cluster headache is comprehensive and includes discussions on pericarotid syndromes and indomethacin-responsive headache syndromes which, though rare, can be important diagnostic considerations.

Other chapters deal with cranial neuralgia and facial pain, headaches of cerebrovascular origin, headaches of inflammatory origin, headaches caused by drugs, headaches in women and headaches in the elderly.

In short this book is an extremely valuable addition to the headache literature. The only problem I had was with the CD ROM included with the book, which is basically the book on CD ROM. There is some information at the front of the book which helps one get into the CD ROM. However, if one is to search for any of the references using a Med-Line search engine, this has to be accessed separately from the CD ROM. It would have been admirable if the reference sections of the book could be accessed in full directly through Med-Line. This is probably wishful thinking.

Overall I congratulate the authors on an excellent effort to simplify a sometimes complicated subject.

Marek Gawel,  
Toronto, Ontario

CRITICAL DECISIONS IN HEADACHE MANAGEMENT. 1st Edition. 1998. By R. Giammarco, J. Edmeads and D. Dodick. Published by B.C. Decker Inc. 192 pages. Price unavailable

This addition to the growing library of books about headache is particularly well presented. For example, there are extremely clear diagrams dealing with the pathophysiology of headache, which help

GENE THERAPY FOR NEUROLOGICAL DISORDERS AND BRAIN TUMORS. 1998. By E. Antonio Chiocca and Xandra O. Breakefield. Published by Humana Press. 458 pages. \$ C 175.50

Chiocca and Breakefield, two outstanding scientists with research efforts in gene therapy, have recruited an impressive array of neuro-oncologists to fashion the first comprehensive volume on gene therapy for neurological disorders and brain tumors.