Atlas of EEG Patterns

by John M. Stern and Jerome Engel, 307 pp., Philadelphia, Lippincott Williams & Wilkins, \$140

Diagnoses in medicine are made in a number of ways, with pattern recognition (*Augenblick*, literally, "the blink of an eye") serving as the strategy used by experts with extensive clinical experience. Novices must often develop exhaustive lists of differential diagnoses before arriving at a conclusion. Each approach has its advantages, and the *Atlas of EEG Patterns* draws on the strengths of both methods.

The text is intended primarily for neurology trainees learning to read EEGs. Given the central role of pattern recognition in reading EEGs, this book teaches a useful and standardized approach to the identification of various waveforms. The authors rationally deconstruct features of various waveform patterns to help the reader navigate the rough seas of EEG waveforms while emphasizing common patterns, so that over time, patterns will be recognized more readily.

The book is divided into three sections: an introduction that discusses how to use the book, a categorization by pattern features, and a discussion of the patterns themselves. The first section includes a brief discussion of the basics of EEG. The authors avoid a detailed discussion of electrical physics, but they do define terms commonly used in EEG reading. The second section categorizes specific features of EEG to lay the groundwork for a section of pattern feature tables. These tables are subdivided into attenuations, transients, and repetitions, with each further subdivided into morphology, location on the surface recording, polarity of the waveforms, and the page number on which the discussion and following examples appear. These tables might or might not lead to a definite analysis of any given waveform, but their systematic,

rational approach makes them a manageable place to start for those learning to read EEGs.

The pattern chapters each begin with synonyms for the pattern and a description of the pattern itself. Features that distinguish this pattern from others are presented along with common co-occurring waveforms. The usual clinical significance of the pattern is discussed. This format that is extremely useful for trainees and combines pattern recognition with rational analysis of EEG. Samples of each pattern are shown on following pages. References are listed at the end of this section, followed by a subject index.

Advantages of learning from this kind of text are reminiscent of how one learns dermatology: start with a description of the lesion, and then try to make the best diagnosis based on the clinical context. One hopes that with experience, more patterns will be recognized in an *Augenblick*.

Criticisms are fairly minor, especially for a first edition of such a comprehensive text. Given that this is a teaching text, it would have been useful if arrows pointing out specific features appeared on the EEG tracings themselves. Because of the size of EEGs on paper, books like this necessarily require the reader to flip back and forth between pages, but this is a minor nuisance. The book is more expensive than some other introductory texts. As such, it might be most useful as a reference text instead of one purchased for an EEG rotation.

I strongly recommend this atlas to EEG fellows and residents with an interest in epilepsy. The book is well-written and the examples are clear. The authors should be congratulated on filling an important niche in a field where pattern recognition is so important.

Adam L. Hartman, MD

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Neurology®

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Neurology 2005;65;E6

DOI 10.1212/01.wnl.0000174180.41994.39

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