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EEG in childhood epilepsy : initial presentation and long-term follow-up

Hermann Doose, John Libbey Eurotext, Paris, 2003, 410 p.

In adult epileptology, imaging procedures have come to overshadow EEG in a number of situations or syndromes. This is not the case when dealing with the vast spectrum of childhood epilepsies. In the EEG literature, descriptions and illustrations of the pathognomic EEG patterns of seizures and syndromes are classically discussed. The extremely variable, maturation-dependant changes of the EEG tracings during the course of disease are not systematically shown, probably because continuous, long-term follow-up is lacking. Moreover, little attention is paid to the EEG pattern of healthy individuals compared to epileptic patients. A publication integrating long-term follow-up data from families of patients with epilepsy was clearly desirable.

The Atlas was not designed to discuss the development of normal EEG patterns in detail or the basic mechanisms of the EEG and the general methodology of EEG investigation. Hermann Doose and co-workers, provide a well-illustrated discussion of EEG patterns based on a systematic study of 2500 families. Based upon a systematic evaluation of follow-up and large – scale family studies, including not only the patients themselves but also their relatives, combined with the authors clinical experience, the book offers a conception of childhood epilepsy that differs in many respects from the current classical textbooks. The reader of this "Kiel epileptology" textbook should accept that epilepsy in childhood is highly complex, and any attempts to consider the issues involved in a very schematic fashion have an inherent risk of oversimplification. This especially applies to the attempts to limit the genetics of epilepsy to a 'hunt' for genes, which is obviously important and has brought about several interesting results, but which now appears to be much too restrictive. The author emphasizes the essential importance of interactions among genes and of genes with other epigenetic and environmental factors involved, in the development of the brain, and underlines the fact that the epilepsies are, in their great majority, multifactorial disorders.

Demonstrating only typical findings and neglecting the morphological changes of the EEG and clinical manifestations of epilepsy during brain maturation can lead to errors resulting from the changing aspects of the records and evolution of seizures. To avoid such a pitfall, the present Atlas contains a number of unusual figures that are meant to offer the reader a clearer idea of the huge variety of EEG alterations that can be found when recording a developing epileptic child. The text is quite readable and the quality of the figures is excellent. This book is undoubtedly a useful tool for childhood epileptologists and child neurologists, and should find its place in all neurophysiology departments.

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