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Short-form Article

Classifying Neonatal and Infant Epilepsy Syndromes

The ILAE Task Force on Nosology and Definitions updates their 2017 guidelines for the classification of epilepsy syndromes in neonates and infants

Background

The incidence of epilepsy is remarkably high in children up to 2 years of age, and often syndromic, with a significant mortality rate. However, the study and licensing of syndrome-specific anti-epileptics and development of gene therapies require the identification of electroclinical phenotypes of these conditions.

What this study addresses

A revised classification for epilepsy syndromes with seizure onset before 2 years of age is proposed, with pointers for their effective diagnosis and clinical management.

Main findings

The proposed classification discusses the emerging class of aetiology-specific epilepsies, which have genetic, structural, metabolic, immune, or infectious causes. These include self-limited epilepsy syndromes, in which there is a likelihood of spontaneous remission, and developmental and epileptic encephalopathies (DEEs), which involve developmental impairment or brain lesions resulting in epileptiform activity. Some other changes include:

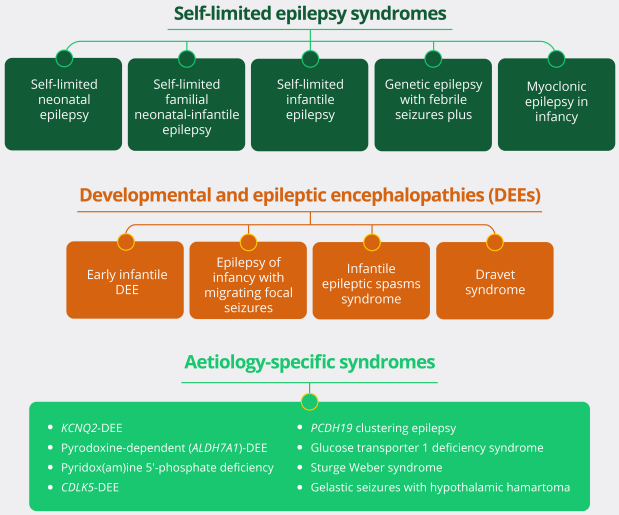
1. Incorporation of transparent clinically descriptive terms and merging of clinically related syndromes
2. Suggested changes to syndrome names that contain the terms “severe,” “malignant,” or “benign”
3. Replacing “partial seizures” with “focal seizures” and “convulsions” with “epilepsies” in some places
4. Certain newly coined nomenclatures

Lastly, the document tabulates seizure presentation, MRI, EEG, and neurological examination features for common syndromes, and outlines the minimum criteria for syndrome diagnosis in underdeveloped areas.

Key takeaway

The new classification aims to improve early diagnosis, optimal treatment, and long-term prognosis of epilepsy syndromes in neonates and infants, while ensuring readiness for precision medicine trials.

Figure: Revised classification of epilepsy syndromes in neonates and infants



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