CACNA1A-related disorders

https://pubmed.ncbi.nlm.nih.gov/36592223/

In the last decade, variants in the Ca

2+

channel gene CACNA1A emerged as a frequent aetiology of rare neurological phenotypes sharing a common denominator of variable paroxysmal manifestations and chronic cerebellar dysfunction. The spectrum of paroxysmal manifestations encompasses migraine with hemiplegic aura, episodic ataxia, epilepsy and paroxysmal non-epileptic movement disorders. Additional chronic neurological symptoms range from severe developmental phenotypes in early-onset cases to neurobehavioural disorders and chronic cerebellar ataxia in older children and adults.In the present review we systematically approach the clinical manifestations of CACNA1A variants, delineate genotype-phenotype correlations and elaborate on the emerging concept of an age-dependent phenotypic spectrum in CACNA1A disease. We furthermore reflect on different therapy options available for paroxysmal symptoms in CACNA1A and address open issues to prioritize in the future clinical research.