Vermian dysplasia and lipoma in a child with headache and epileptic seizure

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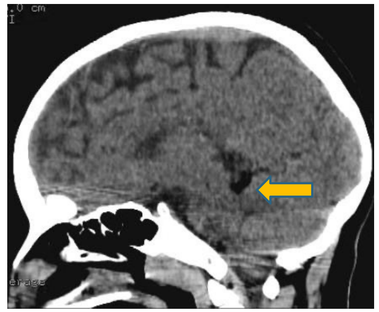
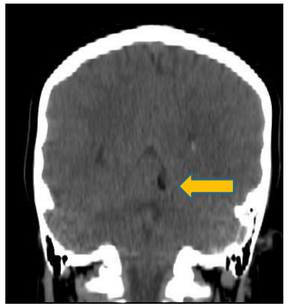
Cerebellar malformations are a rare group of disorders with clinical heterogeneity. The congenital malformations affecting the cerebellar parenchyma are very rare.

Cerebellar malformations are less adequately understood entity partly because of the complex cerebellar embryology and limited histologic studies of these disorders. Genes expressed in migration and maintenance of the Purkinje cells and/or in the generation and migration of granular cells when mutated will disrupt cerebellar migration and foliation and thus cause cerebellar malformation.3-5 Cerebellum is known to be a centre for motor learning, coordination, and higher cognitive functions. Clinical presentation of cerebellar malformations is highly variable and depends on the degree of cerebellar involvement, presence of associated cerebral involvement and the underlying disorders such as muscular dystrophy if any.

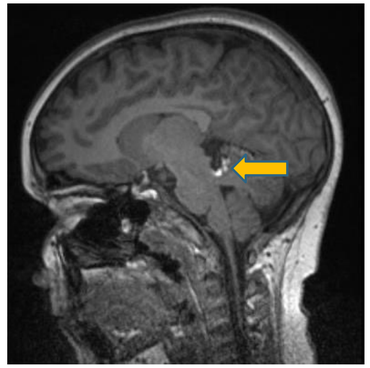
Describing the MRI features of cerebellar dysplasia and lipoma in a child with epilepsi.

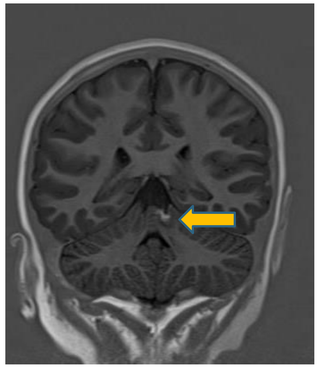
A nine year old boy who has been treated for headache at our pediatric neurology dapartment had a severe seizure during his follow-up. His family descripted the seizure as 'falling on his back with unconsciousness' . The birth history was unremarkable. Family history revealed no known consanguinity. General examination revealed no dysmorphic features. Neurological examination revealed no cognitive deficits/signs to suggest cerebellar pathology. We obtained a cranial MRI which showed us that superior part of the cerebellar vermis is dysplastic and had fat signal consistant with lipoma.





Computed tomography images show the fat density of the lipoma at the left part of cerebellar vermis.





T1 weighted MR images show teh dysplasia of the vermis and hyperintense lipoma at the left part of cerebellar vermis.

We describe a case of 9 years old boy with cerebellar hypoplasia accompanying a lipoma who had a severe epileptic seizure while being treated for headache, with emphasis on the MRI features of this rare entity.

Treatment depends upon the severity of symptoms and the underlying disorder in case of syndromic malformations. Generally, treatment is symptomatic and supportive. Understanding of the basics of cerebellar embryology, knowledge of the imaging features, and clinical presentation aids in the precise diagnosis of this disorder and its optimal management.

1. Isolated Unilateral Cerebellar Hemispheric Dysplasia: A Rare Entity, *Chinky Chatur et al.* Can J Neurol Sci . 2019 Nov;46(6):760-761.

2. **Unilateral Cerebellar Hypoplasia: A Rare Cause of Childhood Seizures,** *Minhaj Shaikh et al***. J** Pediatr Neurosci . 2019 Oct-Dec;14(4):236-237.

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