Clinical commentary

Epileptic Disord 2019; 21 (6): 591-7

LGI-1 antibody encephalitis in a seven-year-old girl

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Epileptic Disorders

A case of LGI-1 antibody encephalitis

- LGI-1 is one of the proteins associated with VGKC, and autoantibodies to this protein may give rise to limbic encephalitis.
- LGI-1 limbic encephalitis has been reported predominantly in adults. To our knowledge, our patient is the youngest case ever reported in the literature and highlights the importance to consider this diagnosis in children as well.
- The clinical manifestations are diverse and typically comprise acute or sub-acute onset of seizures, memory deficits, cognitive impairment, autonomic dysfunction, psychosis, hallucinations, emotional disturbances, spatial disorientation, sleep problems and hyponatremia.
- Patients may present with multiple seizure types including characteristic FBDS, focal seizures with automatisms, generalized tonic-clonic seizures, drop attacks, and myoclonic seizures.
- FBDS have not been reported in children so far, but if present, should not be confused with Rolandic seizures.

A case of LGI-1 antibody encephalitis in a seven-year-old girl

- Our patient presented with seizures characterized as right or left focal-onset seizures with impaired awareness, followed by stereotypic movements of the arm associated with a clear ipsilateral ictal EEG change.
- It was assumed that these stereotypic movements were automatisms due to ipsilateral ictal electrographic changes, impaired awareness during the seizures, and frontal-temporal ictal onset.

Epileptic Disorders

Diagnosis and treatment

- Autoantibodies to LGI-1 and VGKC can be detected in both CSF and serum but serum is more sensitive. Using both serum and CSF may increase the sensitivity of the test.
- Antiepileptic drugs are usually not helpful. First-line treatment includes glucocorticoids and IVIG, and combination of the two has been shown to be better.
- Early diagnosis can lead to prompt and appropriate treatment with immunotherapy and potential harmful treatments such as pharmacological coma can be avoided.
- Prognosis of this condition is usually good in most patients but if there is recurrence, this usually occurs within the first six months. Data on children in lacking.