

Images in medicine

Seizures as a first manifestation of schizencephaly

Convulsiones como primera manifestación de una esquizencefalia

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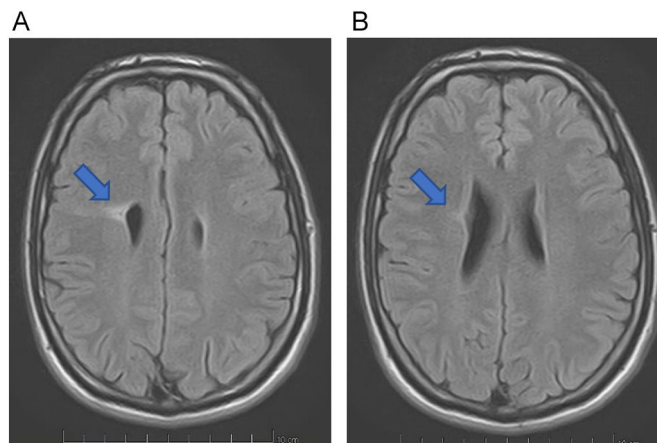


Fig. 1. A and 1B: T2 FLAIR MRI revealing dysplastic cortex and right lateral ventricle wall umbilication.

Clinical Case: A 22 year-old male arrived in the emergency service after first episode of seizures preceded by nausea and dizziness. The patient had history of migraine and mild development disturbance he couldn't characterize. No previous similar episodes. The patient started levetiracetam and emergency CT-Scan revealed brain malformation in the right frontal cortex without other relevant findings. Blood tests ruled out metabolic causes. Clinical follow-up in the outpatient setting by MRI revealed unknown right frontal encephalic cleft from the middle frontal circumvolution until the ventricular wall surrounded by dysplastic cortex and ventricle wall umbilication (Fig. 1A and 1B, confirming closed lip schizencephaly). Ipsilateral frontal superior circumvolution also presented dysplastic cortex being the presence of cleft in this area doubtful (Fig. 2).

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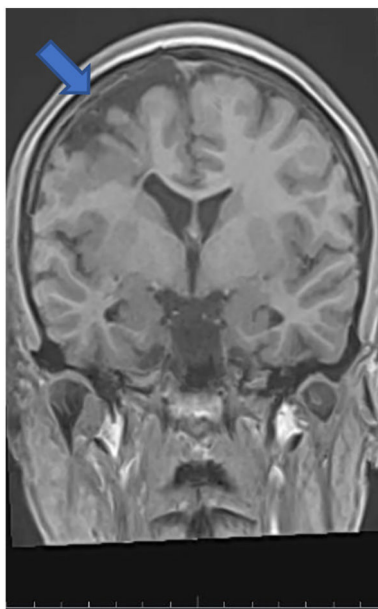


Fig. 2. T1 MPR batch coronal right frontal cortex dysplasia.

Schizencephaly is a rare congenital neuronal migration disorder characterized by a cleft lined by heterotopic gray matter, which connects the surface of the cerebral hemisphere to the lateral ventricle. In closed lip schizencephaly the cleft is fused, preventing cerebrospinal fluid passage. Heterotopic gray matter and dysplastic cortex are frequently epileptogenic zones on EEG.

Clinical follow-up has presented no paroxysmal activity under levetiracetam 500 mg 12/12h.