Periodic lateralized epileptiform discharges in a child with solitary cysticercus granuloma

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Sir,

Periodic lateralized epileptiform discharges (PLEDs) are a well-defined electroencephalographic entity known for the past four decades. PLEDs have been associated with both partial and generalized seizures, and typically with status epilepticus (SE). PLEDs were found in only 0.5% of 8002 pediatric electroencephalographic (EEG) studies. PLEDs have been described in association with a variety of conditions including cerebrovascular accidents, viral encephalitis, subdural hematoma, metabolic abnormalities, mitochondrial encephalomyopathy, diffuse neurocysticercosis, neurosyphilis and acquired immunodeficiency syndrome. Approximately two-thirds of pediatric cases are related to central nervous system infections.

A ten-year-old child, the youngest of nine siblings, was brought with a five-hour history of repeated right focal motor seizures. He had twitching of tongue and right hand associated with tonic deviation of head to the right side. Initial episodes were secondarily generalized, but after admission, he continued to have right focal motor seizures without loss of consciousness. A clinical diagnosis of status epilepticus was made. He was treated with intravenous lorazepam and phenytoin loading dose with which his seizures were controlled.

Contrast brain CT scan (Figure 1) showed features suggestive of a solitary cysticercus granuloma (SCG) in the left medial frontal lobe. Electroencephalogram (EEG) done the following day (Figure 2) showed persistent periodic bursts of biphasic sharp-wave discharges up to 500 mv in amplitude, periodic lateralized epileptiform discharges (PLEDs) over the left hemisphere with predominance to the central and parietal regions, occurring at a frequency of one per second. Serum anticyticercal antibody was positive.

EEG repeated after ten days had normalized. The child has been seizure-free during 15 months of follow-up and a repeat CT scan seven months after the initial presentation showed...
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complete resolution of the granuloma.

SE can rarely be the presenting feature of SCG.\(^4\) Patients with diffuse neurocysticercosis have shown EEG changes suggestive of PLEDs.\(^3\) PLEDs are thought to be ictal phenomena and this hypothesis has been strengthened by demonstrating increased cerebral blood flow in the region of origin of PLEDs, with the help of SPECT studies.\(^5\) PLEDs occur in the later stages of SE.\(^1\) Others believe that PLEDs may be considered as a manifestation of an increased neuronal excitability caused by different etiologies but not an ictal pattern.\(^6\) PLEDs are thought to indicate an adverse clinical outcome. In an earlier study, about half the children with PLEDs died and the majority of survivors developed epilepsy.\(^7\) In a recent study, out of 13 children with PLEDs, two died and six had neurological sequelae.\(^8\) However, in the current report, the child had an excellent outcome. The good outcome in this child suggests that the prognosis in patients with PLEDs is determined by the underlying cause. If the etiology is a benign condition like SCG, the outcome may be excellent.

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Intracranial dermoid cyst mimicking a giant thrombosed aneurysm

Sir,

Dermoid tumors are dysembryogenetic cysts derived from ectodermal inclusions of primitive pluripotent cells.\(^1\) They frequently occur in the midline, but parasellar and frontobasal regions are also involved.\(^2,3\) We describe a case with histopathologically proven intracranial dermoid cyst which resembled a giant thrombosed aneurysm.

A 24-year-old female had severe headache and left earache for 4 months. There was no other symptom. Neurological examination revealed no evidence of focal deficit, but the patient had hyperactive right deep tendon reflexes, and positive Hoffmann and Babinski sign on the right side. Plain CT scan showed an approximately 7.5 x 7 x 6.5 cm iso-hypodense mass located in the left temporal lobe. MRI, showed an extra-axial lesion, which was heterogeneously hypointense on T1-weighted and hyperintense on T2-weighted images (Figure 1a, b). The images suggested lamellar organized hemorrhagic components within the lesion. Another 2.5 cm nodular lesion was connected with a narrow neck to the superior part of the main lesion (Figure 1c). There was no lesion surrounding edema. DSA was done as the imaging features mimicked a giant thrombosed aneurysm. It did not reveal any vascular abnormality (Figure 2). At surgery, a dermoid tumor with hair follicles and keratin like material was identified and was radically resected. The patient was well after surgery and postoperative CT scan showed no residual tumor. Histopathological examination confirmed that the lesion was a dermoid cyst (Figure 3).

Dermoid cysts are well-circumscribed lesions lined by stratified squamous epithelium. They include a viscous greenish brown fluid, which comprises lipid metabolites, whorls of hair, calcifications, and decomposed epithelial cells.\(^2,4\) These contents of the cyst determine its characteristic appearance on MRI studies. They are usually hypodense on plain CT scan. The magnetic resonance appearance includes typical high sig-