

Abdominal epilepsy as an unusual cause of abdominal pain: a case report.

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Abstract:

Introduction: Abdominal pain, in etiology sometimes difficult to be defined, is a frequent complaint in childhood. Abdominal epilepsy is a rare cause of abdominal pain.

Objectives: In this article, we report on 5 year old girl patient with abdominal epilepsy.

Methods: Some investigations (stool investigation, routine blood tests, ultrasonography (USG), electrocardiogram (ECHO) and electrocardiography (ECG), holter for 24hr.) were done to understand the origin of these complaints; but no abnormalities were found. Finally an EEG was done during an episode of abdominal pain and it was shown that there were generalized spikes especially precipitated by hyperventilation. The patient did well on valproic acid therapy and EEG was normal 1 month after beginning of the treatment.

Discussion: The cause of chronic recurrent paroxymal abdominal pain is difficult for the clinicians to diagnose in childhood. A lot of disease may lead to paroxysmal gastrointestinal symptoms like familial mediterranean fever and porfria. Abdominal epilepsy is one of the rare but easily treatable cause of abdominal pain.

Conclusion: In conclusion, abdominal epilepsy should be suspected in children with recurrent abdominal pain.

Keywords: Abdominal epilepsy, abdominal pain, case report.

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Introduction

Abdominal pain, in etiology sometimes difficult to be defined, is a frequent complaint in childhood. Abdominal epilepsy, also known as autonomic epilepsy, is an extremely rare cause of abdominal pain¹. It is characterised by; unexplained, paroxysmal- episodic abdominal and periumbilical pain resulting from a central nervous system disturbance^{1,2,3}, an abnormal electro-encephalogram (EEG) with the spesific findings for epileptic disorders⁴, and favorable response to anti-epileptic drugs³. In this article, we present a 5 year old girl with diagnosis of idiopathic abdominal epilepsy.

Case study

A 5 year old girl was brought to pediatric outpatient clinic with a history of recurrent, paroxysmal abdomi-

nal pain for 7-8 months. The attacks occurred suddenly, resolved spontaneously, and lasted 1-2 minutes with palpitation and stuttering, every 2-3 days. There was no associated vomiting, headache, convulsions or loss of consciousness, but each episode was usually followed by tiredness and lethargy. The patient underwent exhaustive investigations including stool investigation for parasites, routine blood tests, echocardiogram (ECHO) and electrocardiography (ECG), holter for 24 hours. No abnormalities were found. Finally an EEG was done during an episode of abdominal pain and showed generalized spike especially precipitated by hyperventilation (Figure 1).

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Figure 1. EEG during an episode of abdominal pain; generalized spikes



Figure 2. Patient's EEG after the treatment

Her cranial magnetic resonance imaging (MRI) was normal. The patient did well on an anticonvulsant (valproic

acid) and EEG was normal 1 month after beginning of the treatment (Figure 2). Focal and generalized motor seizure was not shown in our patient.

Discussion

In childhood, it is difficult to determine the cause of the chronic recurrent paroxysmal abdominal pain. A lot of disease may lead to paroxysmal gastrointestinal symptoms like abdominal migraine, familial mediterranean fever, porphyria and cyclic vomiting. Abdominal epilepsy is one of the rare but easily treatable causes of paroxysmal abdominal pain. The syndrome is characterised by paroxysmal abdominal pain; exclusion of organic abdominal pathology; signs of neurological disturbances such as alteration of mental status; along with a noted disturbance on an EEG; as well as a significant improvement when the patient takes an anticonvulsive medication⁵.

The predominant symptoms are recurrent abdominal pain, vomiting, nausea, flushing, palpitation, and stuttering. Some central nervous system disturbance signs like alteration of mental status, headache, dizziness and convulsions may accompany these symptoms in at least some episodes. After the exclusion of more common etiologies, the neurological examination and EEG should be performed in suspected patients.

Patients with abdominal epilepsy usually have specific EEG abnormalities. The EEG often shows runs of high voltage slow waves, generalized spikes, and wave discharges or local abnormalities particularly in temporal lobe⁶. The etiologies of abdominal epilepsy are different. Some possible etiologies have been described, such as cortical malformations, cerebral astrocytoma, febrile seizures, neuroendocrine dysfunction and prematurity¹.

We did not detect a possible etiologic factor in our patient. The pathophysiology of disease remains unknown. Insula and Sylvian fissure may have an important role in explaining ictal abdominal pain¹. Supplementary motor area and somatosensory area may be related with location for abdominal epilepsy.

Conclusion

Abdominal epilepsy is one of the rare but easily treatable causes of paroxysmal abdominal pain. Abdominal epilepsy should be suspected in children with recurrent abdominal pain and EEG should be done in such patients.

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