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Temporal epilepsy causing recurrent abdominal pain in adults

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Introduction:
Abdominal epilepsy is an unusual syndrome in which paroxysmal symptoms resembling abdominal pathology result from seizure activity. Although abdominal sensations are common manifestations of seizures, symptoms resembling gastrointestinal conditions (such as abdominal pain, vomiting or diarrhoea) are rare ictal symptoms, particularly in adults. Ictal pain is an uncommon ictal symptom, seen in as few as 2 per 1,000 patients and ictal abdominal pain is seen in only 33% of patients with ictal pain. The syndrome of abdominal epilepsy is characterised by: a) Otherwise unexplained, paroxysmal gastrointestinal complaints, mainly pain and vomiting; b) Symptoms arise from a central nervous system disturbance; c) Abnormal EEG with findings specific for a seizure disorder; and d) Improvement with anticonvulsant medication. A review of the history of this syndrome yielded 36 cases reported in the English literature in the previous 34 years.

Background studies:
Abdominal epilepsy is well documented among children, but is infrequently recognised in adults. The clinical presentation of abdominal epilepsy is characterised by paroxysmal episodes with both gastrointestinal and central nervous system (CNS) manifestations . The gastrointestinal manifestations include all or a combination of the following: recurrent abdominal pain, nausea, vomiting, bloating or diarrhea. In our case, we found that the most common presenting ictal symptoms were paroxysmal abdominal pain, speech arrest and visual aura. Although abdominal symptoms may be similar to those of irritable bowel syndrome, abdominal epilepsy may be distinguished from the latter by the presence of altered consciousness during some of the episodes. The key to diagnosis in the present case was provided by symptoms suggestive of functional abdominal pain in association with definite EEG and video-EEG abnormalities. We report here ictal recordings in abdominal epilepsy, which to our knowledge has only been reported once before.

Previous reports suggest that the most common interictal EEG abnormalities in patients with abdominal epilepsy are bursts of sharp waves or spikes over one or both temporal lobes. A video-EEG is a standard non-invasive investigation which may be crucial for the differential diagnosis between gastrointestinal conditions and abdominal epilepsy, as patients with abdominal epilepsy often have ictal EEG abnormalities. Abdominal ictal symptoms such as retching, flatulence and urge to urinate are usually interpreted as insular symptoms arising from the non-dominant hemisphere.

However the lateralising value of abdominal pain is less clear. Most series describing abdominal epilepsy do not report the laterality of brain abnormalities. Many patients show bitemporal independent discharges. There is one case report of ictal diarrhea arising from the left hemisphere.

A sustained response to anticonvulsants has been accepted as one of the diagnostic criteria for abdominal epilepsy. However, there are no recommendations on the choice of anticonvulsants. Our patient was improved on lamotrigine and lacosamide.

Results:
The patient is a 26 year-old, Arabic speaking, right handed female. Her birth and initial development were normal. She suffered febrile convulsions at 9 months. She did well at school until grade 6, after which her school performance deteriorated. At age 10, she suffered several complex partial seizures and later started to suffer episodes of head turning to the left and then right, with right arm tonic-clonic convulsions followed by generalization, episodes that later subsided. At present, she suffers the following episodes:

1) Episodes of aggressive behaviour associate with visual perceptions consisting of seeing a black colour and/or figures of “ghosts”.

2) Abdominal pain described as pinching, lasting for approximately 30 seconds, often associated with inability to speak and followed by post-ictal confusion with excessive eating for which she has no recall. This is the most frequent seizure type, occurring almost every day.

3) Episodes of confusion and disorientation.

Since investigations for gastrointestinal conditions were normal, epilepsy was suspected. The frequency of episodes reduced by 30% on lamotrigine (400mg/day) and lacosamide (200mg/day). A brain MRI showed left mesial temporal sclerosis. An EEG showed mild diffuse slowing of the background activity and left anterior temporal epileptiform discharges.