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Case Report

A Rare Case of Abdominal Epilepsy in a Young Female

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Abstract

Abdominal epilepsy is a condition characterized by unexplained paroxysms of gastrointestinal symptoms with concomitant abnormal electroencephalogram (EEG) findings and improvement with anticonvulsants. (1) We hereby present the case of a 22-year-old lady who came with complaints of recurrent episodes of vomiting with only occasional discomfort in abdomen during periods of emesis. She was ultimately diagnosed with abdominal epilepsy based on electroencephalogram (EEG) findings of spike-wave pattern noticed during symptomatic period, and normal electroencephalogram (EEG) during intervening symptom-free period. After treatment with anticonvulsants, she showed a complete remission of symptoms and follow-up electroencephalogram (EEG) was also found to be normal.

Keywords: Abdominal Epilepsy; Vomiting

Introduction

Abdominal epilepsy is a condition characterized by unexplained paroxysms of gastrointestinal symptoms with concomitant abnormal electroencephalogram (EEG) findings and improvement of symptoms with anticonvulsants [1]. Although cases have been identified in children, there is minimal data for adulthood presentation. Also, the predominant symptom reported in medical literature is abdominal pain [2].

Case Report

A 22-year-old woman, presented to our outpatient department with history of recurrent vomiting for 8 years. Initial episodes occurred at an interval of 3-4 months with each episode lasting 3-4 days. Two years prior to her presentation in our clinic, episodes of vomiting occurred every month and each episode lasted for about 3-4 days. Vomiting was non-projectile, non-bilious and was followed by periumbilical abdominal pain.

There was no history of abdominal distension, obstipation, gastrointestinal bleed, or diarrhoea. Episodes of vomiting were

not related to food intake or any food item and had no relationship to her menstrual cycles. No prior history of abdominal surgery or tuberculosis was elicited. She had menarche at the age of 13 years. Initially menses were regular, however, for 2 years' menstrual irregularity was noticed, and she was amenorrhoeic for the past 10 months. She was considered to have major depressive disorder since all other investigations were normal. She was given symptomatic treatment (antiemetic and proton pump inhibitor) during every episode. No history of any drug or substance abuse was given by patient or patient's relatives. On further questioning, her mother was also found to have similar history of recurrent vomiting in her adolescence.

Her weight at the time of first consultation was 29 Kgs (Body mass index 11.3 kg/m^2). Her investigations revealed a haemoglobin of 15 g/dl, total white blood cell count of 7500/cmm, no eosinophilia, erythrocyte sedimentation rate of 15 mm (Normal 0-20 mm) at the end of 1 hour. Liver function and renal function tests were within normal limits. Urine examination was normal and so was thyroid function test. Repeated ultrasonography examinations of the abdomen and pelvis did not reveal any abnormality. Ileo-colonoscopy was also normal. Computed tomography of brain, electroencephalogram (done during asymptomatic period), and 2D echocardiography were normal.

Index upper gastrointestinal endoscopy (done in year 2016 – almost 6 years from onset of symptoms) showed Los Angeles grade A esophagitis and repeat examination performed in February 2018 was within normal limits. Contrast Enhanced Computed Tomography of abdomen performed on 2 occasions (February 2017 and January 2018) showed mal-rotated left kidney with partial duplication of left pelvi-calyceal system.

Patient was admitted in February 2018 for evaluation during emesis episode. Electroencephalogram was repeated at the onset of vomiting episode. It showed generalised spike and wave pattern (Figure a).

Figure a: Electroencephalogram (EEG) changes during symptomatic period (Arrowhead denoting epileptiform activity).

She was started on tablet Divalproex Sodium 250 mg once a day for 7 days initially. Subsequently, dose was increased to 500 mg once a day. Patient was followed up over the next year. Her vomiting subsided and she subsequently had resumption of menses and weight gain of approximately 10 Kgs in one year (BMI improved up to 15.2 kg/m^2).

Discussion

Abdominal epilepsy is a syndrome which requires high degree of suspicion. Common gastrointestinal symptoms are abdominal pain, nausea, and vomiting, while neurological symptoms are post-ictal lethargy/drowsiness, generalized tonic-clonic seizures (GTCS), sweating/paraesthesia, pain, and blindness. (1) (6). The criteria for diagnosis of abdominal epilepsy are (i) unexplained periodic or paroxysmal abdominal pain (ii) exclusion of visceral pathology (iii) symptoms of central nervous system (iv) abnormal electro-encephalogram and (v) response to anticonvulsant therapy [3].

Previous case reports have shown this syndrome is more common in children and presents commonly as pain in abdomen. There are very few reports of adulthood presentation and available data suggest presentation as abdominal pain (predominantly) along with few cases having additional symptoms as nausea and/or vomiting [4,5].

Our patient presented as cyclical vomiting syndrome and was being considered to have major depressive disorder. EEG performed during intervening symptom-free interval was normal. We repeated the EEG during symptomatic period and successfully diagnosed a spike and wave pattern. Patient was treated as epilepsy syndrome with clinical improvement. Thereafter, EEG was done during follow up and found to be normal. (Figure b). It took almost 8 years for our patient to reach her diagnosis. There is variable time delay in previously reported cases of adulthood abdominal epilepsy ranging from 0 years to 23 years [6].

Figure b: Electroencephalogram (EEG) normalised during follow-up asymptomatic phase.

High degree of suspicion is the key to reach diagnosis of abdominal epilepsy after thorough investigations to rule out other structural and functional illnesses. Antiepileptic drugs are the mainstay of therapy once diagnosis of abdominal epilepsy is reached. There is paucity of data regarding complications of abdominal epilepsy and its association with particular gastrointestinal and/or neurological disorder.

Conclusion

Highlights of our case include vomiting as presenting feature as compared to pain in previous studies. In addition, abnormal electroencephalogram (EEG) only in peri-emetic phase with normal electroencephalogram (EEG) in intervening asymptomatic period and during follow-up indicates good response with anti-epileptic therapy, all of which clinches the diagnosis of abdominal epilepsy as per the diagnostic criteria discussed above.

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