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## Abdominal epilepsy mimicking conversion disorder: a case report

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### ABSTRACT

In children and adolescents, especially younger ones, recurrent abdominal pains may develop as a response to psychosocial stressors. They may be considered as functional and be one of the common reasons for clinical referrals. A rare cause of recurrent, organic abdominal pain is abdominal epilepsy. Abdominal epilepsy may be considered in differential diagnosis of patients that were thought to have functional complaints. In this case, a 16-year-old adolescent girl whose chief complaints included loss of consciousness and recurrent abdominal pains lasting for a year is presented.

### ARTICLE HISTORY

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Abdominal epilepsy;  
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### Introduction

It is accepted that 2.0–10.0% of the cases evaluated in paediatrics clinics are composed of individuals with functional complaints related to the nervous system without organic basis [1]. The cases are usually evaluated at different times and at different outpatient clinics. They are not referred to the child and adolescent psychiatry clinics for reasons such as stigmatization perceived by the patients/families as well as lack of awareness of mental factors in aetiology by the patients/families as well as physicians. On the other hand, a significant portion of the children and adolescents assessed with the preliminary diagnosis of “Conversion Disorder” may have an underlying organic cause at baseline or organic disorders may develop during the follow-up period. According to available data, organic disorders are most often missed in preschool children (48.0%) due to a preliminary diagnosis of Conversion Disorder, followed by those in the age of primary school (25.0%) and adolescents (19.0%) [2].

Good treatment response to functional neurological complaints was reported to be related with early diagnosis, determination of predisposing, initiating and sustaining factors, interventions focused on these factors, and treatment of comorbidities. On the other hand, it has been also reported that late diagnosis/treatment, lack of apparent stressors, low socioeconomic status, and secondary gains reduce treatment response [1–3].

In children and adolescents, recurrent abdominal pains, especially in younger children, can develop as a response to psychosocial stressors, can be considered as functional, and can be one of the common reasons for clinical referrals [2]. A rare cause of recurrent abdominal pain is abdominal epilepsy and it may be

useful to consider in cases that have functional complaints [4]. In this case, a 16-year-old adolescent girl whose chief complaints included loss of consciousness and recurrent abdominal pains lasting for a year is presented.

### Case presentation

A 16-year-old female high school junior applied to our outpatient department with a complaint of “nausea, recurrent abdominal pain and amnesia, persistent anxiety, inability to relax, difficulty concentrating.” It was learned from the history that nausea, abdominal pain, and amnesia began a year ago for the first time while she was at home. A brief spell of nausea and abdominal pain lasting for 5 minutes was followed by loss of orientation to place, person, and time lasting for about 2 minutes. Immediately thereafter, she went into a deep sleep for half an hour and regained consciousness after awakening. Afterwards, those episodes began to recur almost every day, several times a day, and at unexpected moments. Apart from those complaints, she reported experiencing persistent, uncontrollable anxiety focusing on peer/family relationships and academic success lasting for 2 years. She couldn't relax, complained of vague aches and pains, and had difficulty concentrating.

Past medical history was normal except a single epileptic seizure at the age of 7 years. This seizure was not repeated and was not treated. Family history did not reveal any psychiatric or medical illnesses.

She was diagnosed with “Conversion Disorder” and “Generalized Anxiety Disorder (GAD)” at another child and adolescent psychiatry department and received fluoxetine and sertraline for varying durations and doses

without benefit. In our clinic, she was re-evaluated and features of episodes were further delineated. It was learned that episodes started with nausea and stomach pains, followed by loss of orientation and automatisms. Consciousness was regained after 30 minutes of amnesia and stupor. Generalized tonic clonic features and enuresis sometimes accompanied seizures. Although these seizures were not accompanied by a significant trigger, they increased with nervousness and sadness. She developed persistent concerns about experiencing seizures, reported that her anxiety increased after their onset and was concerned about their implications. Due to both increasing anxiety and concern for seizures, she avoided attending school for 2 weeks.

A consultation with the Department of Child Neurology was requested. Neurological and physical examinations, laboratory evaluations, and Magnetic Resonance Imaging (MRI) were within normal limits. Electroencephalogram (EEG) revealed “slow wave paroxysms in the temporal region without clear lateralization” during sleep.

The adolescent was evaluated with Beck Depression Inventory (BDI), Screen for Child Anxiety Related Disorders (SCARED), and Clinical Global Impressions Scale-Severity (CGI-S). Baseline scores were 12 (mild depressive symptoms), 30 (significant anxiety symptoms), and 4 (moderately ill), respectively. Additionally, the patient met three criteria for GAD in the SCARED scale.

After evaluation with paediatric neurology, the adolescent and family were informed that the results of the history, examinations, and tests were in accordance with abdominal epilepsy and GAD diagnoses. Valproate 500 mg/day and sertraline 50 mg/day treatment were started. Fortnightly follow-ups were planned. Seizures reduced to twice per week at the first visit and anxiety symptoms reduced. The seizures ceased completely at the first month of valproate and sertraline medications and time evaluation with SCARED revealed a score of 18 (subthreshold anxiety symptoms) at the same time. Evaluations with BDI, SCARED, and CGI-S at the third month of treatment revealed scores of 4 (minimal depressive symptoms), 12 (subthreshold anxiety symptoms), and 2 (borderline mentally ill). No symptoms of GAD were met in the SCARED scale.

## Discussion

Here we report an adolescent patient whose chief complaints included loss of consciousness and recurrent abdominal pains. The patient was initially diagnosed with “Conversion Disorder” at another centre and a thorough evaluation led to a change of diagnosis to “Abdominal Epilepsy and GAD.” She responded to treatment with valproate and sertraline.

It is difficult to identify the cause of the chronic recurrent abdominal pain in the childhood. Various disorders 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 [5].

Abdominal epilepsy also known as “autonomic epilepsy” is an uncommon syndrome in which gastrointestinal complaints, such as abdominal pain, nausea, vomiting, and neurological findings, such as lethargy and convulsion, result from seizure activity [5]. It is characterized by otherwise unexplained, paroxysmal gastrointestinal complaints, symptoms of a central nervous system disturbance, an abnormal electroencephalogram with findings specific for a seizure disorder, and improvement with anticonvulsant medication [6].

Patients with abdominal epilepsy usually have specific EEG abnormalities. The EEG often shows a burst of sharp waves and/or spikes from one or both temporal lobe [7]. The pathophysiology of abdominal epilepsy is not known. Some possible aetiologies have been described, such as cerebral tumours (astrocytoma) in temporal area, malformations, bilateral perisylvian polymicrogyria, febrile seizures, neuroendocrine dysfunction, and prematurity [8].

Abdominal epilepsy can be masked or misdiagnosed as a physical or psychological disorder like this case and be subjected to a number of expensive, time-consuming, and futile investigations [9,10].

One of the criteria for the diagnosis of patients with abdominal epilepsy is a sustained response to anticonvulsants. However, there are no recommendations on the choice of anticonvulsant to be used [11]. Several drugs, either singly or in combination, have been used in management. Kshirsagar et al. [12] and Dutta et al. [7] found that oxcarbazepine significantly reduced the symptoms in patients. Yunus et al. [13] reported that valproic acid treatment in the abdominal epilepsy like this case rapidly improved their patient’s abdominal symptoms.

Recurrent “functional” abdominal pains with accompanying the loss of consciousness and enuresis may be caused by abdominal epilepsy. Clinicians should be aware of organic aetiologies arising in patients with presumed conversion symptoms.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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