

## Long-lasting conversion disorder and hospitalization in a young girl: importance of early recognition and intervention

Murat Coşkun, Salih Zoroğlu

Department of Child and Adolescent Psychiatry, İstanbul University İstanbul Faculty of Medicine, İstanbul, Turkey

**SUMMARY:** Coşkun M, Zoroğlu S. Long-lasting conversion disorder and hospitalization in a young girl: importance of early recognition and intervention. Turk J Pediatr 2009; 51: 282-286.

Psychosomatic symptoms are frequently observed in children in response to psychosocial stressors and may be a reason for referral. However, it may be difficult to identify psychosomatic symptoms in a non-psychiatric clinical setting, and it is not unusual in pediatric practice for patients to be admitted and/or investigated for psychosomatic symptoms. Here, we present a case of a 10-year-old girl who was admitted and investigated for a suddenly developing motor loss in her legs for more than three months. However, no medical causes were detected to explain her clinical picture and she was eventually diagnosed with conversion disorder. We discuss herein the importance of early recognition and intervention and clues to the diagnosis of conversion disorder in children in a non-psychiatric clinical setting.

*Key words:* children, psychosomatic symptoms, conversion disorder.

Conversion disorder (CD) refers to a disturbance of body function characterized by neurological sensory or motor symptoms in which known medical states do not explain or fail to account for the severity of the patient's impairment (American Psychiatric Association, 2000). According to DSM IV-TR (Diagnostic and Statistical Manual of Mental Disorders, 4<sup>th</sup> edition, text revision)<sup>1</sup>, the diagnostic criteria for CD are as follows: a functional disorder that is (1) not explained by a neurological or other general medical condition, or by the effect of a substance; (2) directly related to psychological factors; (3) not intentionally produced; (4) not limited to pain or sexual dysfunction; and (5) causes significant distress or functional impairment in social, professional, and other areas of life (American Psychiatric Association, 2000).

Conversion disorder in both adults and children is frequently preceded by psychological stressors and related with socio-cultural, environmental and family factors<sup>2-7</sup>. The most frequently reported symptoms of CD in children and adolescents are motor loss (particularly abnormal gait or inability to walk) and episodic loss of consciousness in the form of syncope

or pseudoseizures<sup>2-7</sup>. Recognition and diagnosis of CD in children in a non-psychiatric clinical setting may be difficult. This difficulty may arise from either inexperience and/or limited time of clinicians or the complexity and nature of the symptoms. Failure to diagnose CD is not unusual in pediatric practice and may result in unnecessary hospitalization and investigations<sup>6-8</sup>.

Here we present a case of a 10-year-old girl who was admitted and investigated for more than three months for a suddenly developing motor loss in her legs. No medical causes were detected and she was eventually diagnosed with CD. We discuss herein the importance of early recognition and intervention and clues to the diagnosis of CD in children in a non-psychiatric clinical setting.

### Case Report

We present "E", a 10-year-old-girl with one younger brother. She was first seen during admission to a different hospital. She was consulted by her physicians for refusal to eat, drink or communicate. In the first interview, it was observed that she was lying on the bed with eyes closed, not responding to verbal stimuli and not communicating at all.

She was admitted 14 weeks before for a sudden onset of pain and subsequent loss of motor function in her legs. She has been at the hospital since that time except for a period of three days at home. Prior to this admittance, she had displayed some somatic complaints near the end of the first school term. She complained of chest pain and chills and/or trembling, particularly in the mornings. She was seen by a pediatrician, but no medical causes were detected to explain these symptoms. During the second school term, she started to complain of leg pain. Two days later she developed a sudden onset of more severe pain and motor loss in her legs while playing a puzzle with her father at home, which occurred when her father was about to win the game. She was admitted thereafter and her motor deficits worsened at the hospital over the first week. Initial investigations (blood tests, neuroimaging studies) did not reveal any medical causes. The first muscle biopsy revealed a mild inflammatory reaction, but two subsequent biopsies were normal. She was reported as not having any other significant neurological symptoms or complaints at that time. After three months of hospitalization, no medical condition was detected and no improvement was observed. The clinicians decided to discharge her and conduct other investigations on an outpatient basis. Her condition worsened at home within three days as she became unable to sit, hold her head, speak or eat. The mother reported that additional motor symptoms developed without any obvious reason, but food refusal started after the mother warned her not to eat so much because she was overweight. She was hospitalized again and parenteral feeding was started. However, her condition worsened and liquid refusal started additionally after four days. She was consulted to child psychiatry at that time.

On the psychiatric examination, she was non-cooperative with no verbal or nonverbal communication and her eyes were closed. After a detailed interview with the mother and staff, the consultant psychiatrist considered the possibility of CD. Although the consultant psychiatrist informed the mother and clinicians about the possibility of psychological origin of her symptoms and supplied a basic psychoeducation especially for the mother, he

did not administer or suggest any particular psychological intervention for the child at that time. However, following the psychiatric consultation, the mother talked to her child several times, with comments such as "Look at my girl! You are not sick or defective. Many doctors have seen you and none of them could find anything wrong with you. You are a good and smart girl, you can do that. You can achieve that, I trust you". A few hours later the patient started to talk, eat and drink, all of which returned to normal levels over the next day. Because she showed a relatively good improvement in her clinical picture, she was discharged and scheduled for further investigation [i.e. cerebrospinal fluid (CSF) and electroencephalogram (EEG) examinations] as her motor symptoms showed no improvement, and the consultant psychiatrist was not able to give a definitive diagnosis of CD or to exclude any other medical causes in the first interview. However, one week after discharge she started to walk and her gait returned to normal within a day before her appointment for further investigation.

Prenatal, postnatal and early developmental histories were unremarkable. She did not have any serious childhood illness, psychological or physical traumas or any of these symptoms until the current year. The mother defined her daughter as competitive, hardworking, and well-mannered, and as a contender, with a low tolerance for losing.

She had been doing well in school until this year, but she had had some difficulties and received some low scores for the first time during the current school term. The mother reported that she voiced her concerns about school scores a few times during the first term. She also had some difficulties in peer relations due mainly to being a new student at this school.

The family is originally from a city located in the eastern part of Turkey. They moved to İstanbul after the patient's birth. Both parents have primary school education. The mother has a current diagnosis of generalized anxiety and CD. The mother mentioned her conversive symptoms (marked by being unable to talk, fainting and having contractions) as if they were normal reactions. "I have some crises when I have arguments with my husband's

family". The family had moved to another neighborhood five months before their daughter was admitted. According to the reports of both the child and mother, she had experienced difficulties in adjusting to the new school and establishing new friendships.

### **Follow-Up**

She was seen at the child psychiatry clinic for the first time four days after she started to walk. She did not have any neurological deficits at that time. During the interview, it was observed that she was an articulate girl (even able to use related medical terminology correctly) and she remembered almost everything during the hospitalization (including the period during which she did not talk or eat). She explained her initial symptoms as "I think some adverse events, such as problems with my school or friends, made me feel upset and I lost my ability to walk". She further continued as "my teacher and friends came to the hospital for a visit. I felt very happy. But I was discharged as doctors did not find anything and had nothing further to do for me. One week later, I was at home and my friends came to visit and play with me. I was lying on the bed and they were encouraging me to stand and walk. They were trying to make me angry by saying "you can not walk". I said "no, I can walk". Then they pulled me down to the floor from my bed. On the floor, I heard a sound from my legs and started to feel my legs. I stood up with the help of my friends. I walked with help first, and a few hours later I returned to my normal healthy condition. Since that time I have walked normally." The mother confirmed everything that the child related.

In the psychometric evaluation, Wechsler Intelligence Scale for Children-Revised (WISC-R) and Rorschach evaluations revealed a borderline mental capacity, difficulties in social contact and adjustment to new environment, anxiety in relations with the mother, and vigorous neurotic findings.

### **Discussion**

Despite the lack of detailed medical investigations in the initial assessment (such as a lack of CSF investigation), we assume that she did not have an organic disorder in view of the characteristic and typical triggering and improving factors of the symptoms and other important risk factors for the development of CD.

The usual clinical practice for clinicians in such cases is to first suspect, diagnose and/or exclude any organic causes. However, the exclusion process may sometimes be prolonged and require excessive effort. Given the higher frequency of CD or related risk factors in our country both in adults and children, clinicians should be aware of the possibility of psychological origins of such symptoms. The early recognition and intervention in any case with psychosomatic symptoms (i.e. CD) is important for several reasons: a) To avoid unnecessary hospitalization and investigations that may require excessive effort and result in an economic burden for the family, clinicians and health system, all of which were especially true in this case; b) To avoid reinforcing conversive symptoms by unnecessary investigations and attention by both the family and clinicians. For this case, it is possible that hospitalization and attention from the family and environment may have introduced her to the potential benefits associated with the sick role. This may explain why her symptoms worsened during hospitalization and after discharge as the child may have needed to get more attention or to avoid something by staying in the hospital for a longer time. We consider that the extended hospitalization in this case, on its own, could have been an important reinforcing factor in the continuation of conversive symptoms; c) Early recognition and intervention have been reported to be associated with good prognosis<sup>(5)</sup>; and d) To avoid trauma-related psychopathology in children, given the fact that hospitalization or invasive diagnostic procedures may have a traumatic impact on a child's psychology. However, our patient did not complain during her stay in the hospital and we did not detect any signs or symptoms of psychological trauma, since she referred to her time in the hospital in a joyful manner.

Ideally, the diagnosis of CD should be based on positive findings<sup>8</sup>. "Clues" to the diagnosis may include 1) contiguity with psychosocial stressors or the presence of a severe stressor such as maltreatment; 2) previous history of CD or medically unexplained symptoms; 3) association with psychological gain for the child; 4) existence of a symptom model within the social milieu; 5) apparent communicative or symbolic meaning of the symptom within the patient's social milieu; 6) sociocultural

background of the patient or family; 7) the symptom's violation of known anatomic or physiological patterns, and responsiveness to suggestion or psychological intervention; 8) the presence of another psychiatric disorder either in the child or in the family; and 9) premorbid personality characteristics of the patient. Indifference to the symptoms ("la belle indifference") has also been considered a clue, but its subjective nature limits its applicability, particularly in children<sup>8</sup>.

In this case, clues to the diagnosis included 1) Psychosocial stressors such as recent change of school and neighborhood, which possibly contributed to difficulties in peer relations and school performance; 2) Recent history of medically unexplained symptoms, especially during mornings when she was supposed to go to school. These symptoms could easily be considered as early manifestations of CD; 3) In view of the emergence of difficulties at school during this year, we believe her desire to avoid this situation and get more attention from her teacher or family may have contributed to the formation and continuation of these symptoms, since she admitted being very happy with the visit of her teacher/friends and the interest of her father; 4-5-6) The presence of CD in the mother may have served as a symptom model for the child, and the child's symptom seems to have a clear symbolic meaning in the social context of the family. Here the sociocultural background of the family also contributes to this picture. It is well known that the use of nonverbal body language could be a way of communication or expression of self in response to interpersonal conflicts. This usually represents a culturally determined and socially learned behavior and is more common in some regions of our country; 7) Although the initial symptom of motor loss in her legs could be suspected as a neurological disorder, later symptoms of refusal of food and communication are not typical of a previously suspected neurological disorder. Furthermore, her symptoms improved, without any medical or psychiatric interventions, following a simple intervention by the mother and an unintentional intervention by her peers as mentioned above. This improvement history may actually reflect the characteristics of the origin of symptoms and personality of the child and is an important clue to the diagnosis

of CD; 8-9) The presence of generalized anxiety disorder in the mother is a genetic risk factor for her siblings and the child was also diagnosed with anxiety disorder. She also has a competitive personality and low frustration tolerance. Both factors- anxiety disorder and personality characteristics- could be considered as further risk factors for the development of CD in this child<sup>4,5,7</sup>. These factors make the child more vulnerable to interpersonal conflicts that could manifest with somatic symptoms. It is important to note that both triggering and improving events of her symptoms are closely related with the personality features of the child and are important clues to diagnosis.

It is important that the definitive diagnosis of CD was made in a psychiatric setting after all symptoms had resolved without significant intervention (medical or psychiatric), and that medical investigations did not reveal any causes. The only thing that could be considered a psychological intervention was the psychoeducation of the mother in the first interview. The mother was actually not encouraged to speak to her child this way. However, the mother's intervention had a somewhat clear therapeutic effect and this may reflect the importance of appropriate intervention, even in the form of a basic psychoeducation. The mother stated that her anxiety reduced remarkably when she learned that her child's symptoms are very similar to her own conversive symptoms (she knew that her own conversive symptoms are 'psychological' and occur as a response to interpersonal conflicts), and she also changed her attitude towards her child after the psychoeducation. Both factors may have contributed to the improvement in the clinical picture. Psychoeducation of the mother included several important points: a) children, like adults, may sometimes respond to stressful or painful experiences with somatic symptoms without having a serious medical illness; b) this condition does not mean that the child is mentally handicapped; c) although these symptoms are referred to as 'psychological', the child does not produce these symptoms intentionally (the term 'psychological' may frequently be misunderstood by parents as 'intentional'. Parents should be clearly informed against this misperception. Otherwise, the term 'psychological' may cause parents to think that their child is an obnoxious child); d) excessive concern or attention regarding



these symptoms may cause the child to continue them (i.e. prevention of secondary gains and reinforcing symptoms).

This case highlights the importance of early recognition and intervention for psychosomatic symptoms in children. However, while it may be easy to make a diagnosis of CD in a psychiatric setting, it can be difficult to diagnose CD in a non-psychiatric clinical setting. We therefore wish to make some brief conclusions to help clinicians: a) If a pediatric case presenting with acute neurological symptoms, such as motor deficits or seizure-like symptoms, has an obvious constellation of the aforementioned clues or risk factors, it is reasonable to maintain a high level of suspicion about the possibility of psychological origin of these symptoms. b) If the initial investigations do not reveal any medical causes, there is no need to wait until all investigations are determined to be negative. It would be best to request a child psychiatry consultation, when available, and follow the patient together to avoid unnecessary hospitalization or investigations. c) If a provisional diagnosis of CD is given, no further hospitalization is needed to avoid reinforcing conversive symptoms. In such situations, the child could be discharged and scheduled for further investigations, if necessary, on an outpatient basis. d) We consider that such cases are not unusual in pediatric practice and this highlights the

importance of collaboration between pediatric and child psychiatry clinics. However, the shortage of child psychiatry clinics in our country may limit this collaboration. It would be useful to create opportunities for liaison between both disciplines.

#### REFERENCES

1. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders (4<sup>th</sup> ed). Text Revision Washington, DC: American Psychiatric Association; 2000.
2. Fritz GK, Campo JV. Somatoform disorders. In: Lewis M (ed). Child and Adolescent Psychiatry A Comprehensive Textbook. Philadelphia: Lippincott, Williams and Wilkins; 2002: 847-858.
3. Ercan ES, Varan A, Veznederoğlu B. Associated features of conversion disorder in Turkish adolescents. *Pediatr Int* 2003; 45: 150-155.
4. Pehlivan Türk B, Unal F. Conversion disorders in children and adolescents: clinical features and comorbidity with depressive and anxiety disorders. *Turk J Pediatr* 2000; 42: 132-137.
5. Pehlivan Türk B, Unal F. Conversion disorder in children and adolescents. A 4-year follow-up study. *J Psychosom Res* 2002; 52: 187-191.
6. Akdemir D, Unal F. Early onset conversion disorder: a case report. *Turk J Psychiatry* 2006; 17: 1-7.
7. Krishnakumar P, Sumesh P, Mathews L. Temperamental traits associated with conversion disorder. *Indian Pediatr* 2006; 43: 895-898.
8. Campo JV, Negrini BJ. Case study: negative reinforcement and behavioral management of conversion disorder. *J Am Acad Child Adolesc Psychiatry* 2000; 39: 787-790.