

Conversion Disorder in Childhood

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Abstract

Background: Conversion disorder, a mental disorder characterized by the presence of multiple medically unexplained neurological symptoms and signs precipitated by psychological stress, occurs in childhood. Conversion disorder is more common in lower socioeconomic-class individuals who are medically naïve. **Objective:** To demonstrate the salient features of conversion disorder in childhood and to identify needs for future research. **Method:** The report of a nine-year-old girl with medically unexplained neurological complaints following repeated severe psychosocial stressors is presented. **Results:** The subject presented symptoms suggesting blindness, deafness, and seizures while experiencing chronic child abuse and neglect. **Conclusions:** Conversion symptoms often occur in cases of severe psychosocial stress including sexual abuse. The presentation of conversion disorder in childhood may convince examining clinicians to institute medical and surgical interventions. Prompt identification of the condition and institution of appropriate treatment facilitates speedy recovery. Vigorous search for treatable neurological and medical diseases is indicated. Mood and anxiety disorders are likely to develop in individuals with conversion disorders in childhood and adolescence. Proactive involvement of child protective services may be required to prevent further child abuse and neglect (*German J Psychiatry* 2002;5(2):54-61).

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Introduction

Conversion disorder is characterized by the presence of (A) apparent dysfunction of the sensory and motor systems consistent with neurological and medical conditions and (B) psychological conflicts and psychosocial stressors (Lazare, 1981). Seizures, convulsions, and other

spells may occur in conversion disorder. Medically naïve individuals may produce conversion symptoms that flagrantly violate the established principles of anatomy and physiology evaluation (American Psychiatric Association, 2000). The subject does not fabricate the symptoms reported in conversion disorder. On the contrary people with conversion disorder sincerely believe the accuracy of their reported experiences. The symptoms and signs of conversion disorder are not due to neurological or medical condi-

tions or the administration of substances. The symptoms and signs of conversion disorder are not consistent with the culture of the subject. Thus, conversion disorder is not diagnosed for perceptions of deceased persons that are commonplace occurrences accepted as normal in some communities. Conversion disorder is diagnosed only if the manifestations of the condition result in marked distress, impairment in functioning, or medical evaluation (American Psychiatric Association, 2000). Care must be taken to avoid diagnosing conversion disorder in persons who actually have neurological illnesses, particularly demyelinating disease, myasthenia gravis, dystonia (American Psychiatric Association, 2000), sensory (Lesser et al., 1983) and complex partial seizures (Drake and Coffey, 1983), systemic lupus erythematosus, syphilis, hyperparathyroidism, and chronic meningo-encephalitis including tuberculosis. Deterioration in the level of academic work is a common feature of children with neurological symptoms due to neurological disorders (Rivinus et al., 1975). Conversion disorder is commonly associated with rural settings, lower socioeconomic status, and absences of a sophisticated understanding of medical and psychological concepts (Abdur-Rahim et al., 1996; American Psychiatric Association, 2000). In both adult and child populations, conversion disorder is more common in females (American Psychiatric Association, 2000; Goodyer, 1981; Yang et al., 1996). Conversion disorder is more common in relatives of people with conversion disorder (American Psychiatric Association, 2000). Although estimates of the prevalence of conversion disorder vary widely (Trott et al., 1996), as many as 3% of patients referred to outpatient psychiatric clinics may have conversion disorder (American Psychiatric Association, 2000).

Conversion disorder is characterized by the presence of symptoms and signs suggesting dysfunction of the nervous system without involvement of other organ systems. The absence of symptoms and signs outside the nervous system differentiates conversion disorder from other somatoform disorders. Somatoform disorders are characterized by the presence of physical symptoms that cannot be explained by medical or mental disorders including substance use (American Psychiatric Association, 2000; Goodwin and Guze, 1996). Persons with conversion disorder must be fully interviewed and examined to rule out somatization disorder, a condition characterized by medically unexplained somatic complaints in many organs in addition to neurological symptoms (Brasic, 1978; Goodwin and Guze, 1996). Somatization disorder, a somatoform disorder beginning before thirty years of age, is characterized by repeated, multiple somatic complaints without physical abnormalities. People with somatization disorder usually exhibit conversion complaints including blindness, deafness, aphonia, paralysis, and spells, gastrointestinal, reproductive, sexual, and cardiopulmonary symptoms. The condition occurs predominantly in women. Anxiety and antisocial personality disorders can also often be diagnosed in the patients. Usually symptoms begin in the teens, but

rarely in childhood (Robins and O'Neal, 1953). Approximately one percent of females have this disorder; it occurs rarely in men. Family members of patients may have antisocial personality disorder as well as somatization disorder (Brasic, 1978; Goodwin and Guze, 1996). Somatization disorder in women receives a less severe societal reaction because the sick role may not be considered markedly deviant in women (Rosenfeld, 1982).

The purpose of this paper is to review conversion disorder in childhood, to present a case report of a young girl with conversion disorder and severe chronic psychosocial stress, and to point out areas for future research on conversion disorder and related conditions.

Methods

Subject

On the day before her ninth birthday a prepubertal girl of low socio-economic class residing in an urban minority neighborhood was taken to the emergency room of a tertiary-care voluntary teaching hospital in a city on the Atlantic coast of North America for her first psychiatric contact with the chief complaint of "I can't see" for the preceding twenty-four hours.

History of present illness

One week before her emergency room visit a girl at school punched her in her eye. Her subsequent complaints of poor vision resulted in her being led around by classmates, her being seated by her teacher at the front of the classroom near the blackboard, and her teacher's advising her mother to get her eyeglasses. Despite these interventions, she complained of progressive deterioration of vision.

The day before her emergency room visit the subject began complaining of difficulty hearing. This occurred when her mother's boyfriend threatened to leave during an intensification of the chronic arguments between her mother and her mother's boyfriend.

On the day of the emergency room visit her mother took her to the hospital because she complained of blindness and deafness for the preceding day.

Past medical history

She always had poor articulation and stuttering.

At the age of five years she was admitted to the hospital for a thoracotomy after being shot in the left thorax and the left arm at the distance of two feet reportedly as an accident on a street corner by a stranger. The family did not explain the four-hour delay between the subject's injury and her

being taken to the hospital. Subsequently she had chronic nightmares about being followed and killed by strange men. Psychiatric consultation was not obtained.

Family history

Her mother, 24, reportedly had suffered from a convulsive seizure disorder since the age of 13, treated with phenobarbital by a neurology clinic. Her mother claimed that she had experienced no seizures for the preceding year without neurologic treatment off medication following an intense religious experience.

Her mother had not seen the subject's genetic father, 23, whose personal and family histories are unknown, since she was two months pregnant with the subject. They never married.

The subject's mother's boyfriend, 24, lived intermittently with the subject and her mother for seven years. He worked steadily as a deliveryman. The subject's mother argued with him for staying out late at night, drinking alcohol excessively, and entertaining other women at home.

A half-brother, 6, and a half-sister, 4, live with their father, the mother, and the subject.

Physical examination

Although she claimed that she could neither hear nor see, she shook hands and looked at the examiners. She readily responded to questions asked in a conversational tone in the noisy emergency room. Physical examination was unremarkable.

Mental status examination

She is a slender, well-developed, well-nourished young girl who is neatly and appropriately dressed. She appears her stated age. She is in no acute respiratory distress. She is awake and alert. She is cheerful and cooperative. She does not display the expected concern when describing her symptoms. She maintains fair eye contact during the interview. Speech is slow and soft. She displays paucity of speech. She slurs consonants resulting in unclear articulation. There is mild latency of response of movement and speech. Although she claims that she cannot hear, she answers questions asked by the examiner in a soft voice in the din of the admitting ward. Similarly, although she claims that she cannot see, she looks at objects and identifies them by name. Mood is mildly depressed. She states that she wants her parents to stop fighting. She expresses the fear that "my Daddy will leave us." The examination is otherwise unremarkable.

Psychological examination

On the Wechsler Intelligence Scale for Children-Revised (WISC-R) (Wechsler, 1974), she scored a full-scale intelli-

gence quotient (IQ) of 78, a verbal IQ of 67, and a performance IQ of 92. On the Wide Range Achievement Test (WRAT) (Jastak et al., 1978) performed when she was at the actual grade level of 3.7, her word recognition was at the grade level of 4.0 with a standard score of 97, her spelling was at the grade level of 3.3 with a standard score of 90, and her arithmetic ability was at the grade level of 3.5 with a standard score of 93. On the Gray Oral Reading Test (Gray and Robinson, 1967, cited in Harber, 1982) her accuracy was at the grade level 2.9 and her comprehension was at the grade level 2.1. On the Peabody Picture Vocabulary Test (PPVT) (Dunn, 1965) her mental age was six years eight months which is 8% in her age group.

Course

The subject came intermittently with her family to the child psychiatry clinic. In the child psychiatry clinic she correctly identified that the examiner's pants were brown when she used her eyeglasses. Without her eyeglasses she said that the pants were blue.

At her teacher's suggestion, her mother got eyeglasses for her. The teacher reported that she did well in school although she often did not use her eyeglasses.

A few weeks after the emergency room visit she could hear and see normally.

A few months later, on the bus going to school, two boys allegedly raped her. Her mother did not take her for evaluation after this episode.

The subject then began having episodes of twisting her mouth to the right, shaking of the body, and frothing at the mouth followed by confusion and sleepiness. This led to an emergency room visit when her medical record was unavailable resulting in the initiation of treatment with phenobarbital 100 milligrams by mouth twice daily for an apparent convulsive seizure disorder.

The mother's boyfriend allegedly accidentally hit the subject on the head with a glass coffee table during an argument with the mother while he was intoxicated. The subject was not taken to the emergency room until the following day due to abrasions and headaches. Suspected child abuse was reported to the authorities.

The patient and her half-brother played with matches kept by her mother in a dresser drawer. The brother set a fire in the closet while the subject was sleeping and the mother was out. Neighbors called the fire department to extinguish the blaze before the mother returned.

The family moved without providing the correct forwarding address to the clinic or the school. Despite multiple reports to authorities of suspected child abuse and neglect, the subject and her family were not located and were lost to follow-up.

Table 1. Diagnoses Resulting from the Diagnostic and Statistical manual of mental disorders, fourth edition, text revision (DSM-IV-TR™; American Psychiatric Association, 2000), Multiaxial Evaluation

Axis I	300.11	Conversion disorder with mixed presentation
	315.39	Phonological disorder
Axis II	V62.89	Borderline intellectual functioning
Axis III		Status post thoracotomy for gunshot wound of left thorax
		Status post gunshot wound of left arm
		Status post rape
Axis IV		Abandonment by genetic father
		Chronic physical altercations between her mother and her mother's boyfriend
		Fire setting by half brother
		Victim of child neglect
		Victim of rape
Axis V		GAF = 53 (highest level last year)

Discussion

The case illustrates the development of conversion disorder by a young girl following repeated severe psychosocial stressors. Conversion symptoms in children and adolescents frequently follow family and other environmental stress (Al Jeshi et al., 1998; Maloney, 1980; Yang et al., 1996). A remarkable feature is the absence of psychotic symptoms despite her marked chronic psychosocial stresses. Other traumatized children who experience psychosocial stress develop psychotic symptoms (Andrade and Srinath, 1986; Brašić and Perry, 1997a, b). Children with brain injury have particular vulnerability to develop a variety of neurological and psychological conditions (Shaffer, 1974; Shaffer et al., 1975).

Another salient feature of this subject is the failure of the authorities to provide the needed psychiatric, neurological, and medical interventions despite the chronic history of many episodes of apparent child neglect and child abuse. Since children with conversion disorders often drop out of clinic treatment (Lehmkuhl et al., 1989), the elicitation of assistance through reports to child protective services is appropriate. Administration of procedures to document that families follow the medical recommendations for their children, like the Family Compliance Checklist (Brašić et al., 1998, 2001), helps to identify early evidence of lack of following necessary instructions and the need to refer families for child protective services.

The subject manifests symptoms consistent with recurrent conversion disorder, such as the classic neurological symptoms of blindness (Fennig and Fennig, 1999), deafness, intractable sneezing (Fochtman, 1995), and seizures (American Psychiatric Association, 1987; Yang et al., 1996). Conversion disorders do not consistently demonstrate a predominant lateralization (Roelofs et al., 2000). The consistently normal physical examination is evidence against a neurological or medical disorder. Psychological influences clearly precipitate and aggravate the conversion symptoms of this unfortunate child (American Psychiatric Association, 1987; Friedman, 1973). The reported cure of the mother's seizure disorder following a religious experience suggests that the mother may also have a conversion disorder. The development of symptoms consistent with a convulsive seizure disorder in this subject whose mother also had a history of a convulsive seizure disorder since adolescence suddenly remitting after a religious experience suggests the presence of imitation of the mother's likely conversion symptom in this situation (Goodyer, 1981). Children presenting with conversion symptoms, such as back pain and stiffness (Grattan-Smith et al., 2000), may eventually exhibit evidence of neurological and medical disorders (Andriola and Ettinger, 1999; Rivinus et al., 1975), so clinicians must remind themselves to seek evidence of physical illness throughout the course of treatment of children with conversion symptoms (American Psychiatric Association, 1987; Andriola and Ettinger, 1999; Grattan-Smith et al., 2000; Yang et al., 1996).

The need to differentiate conversion disorder from specific neurological conditions (Goodyer, 1985; Lehmkuhl et al., 1989; Maloney, 1980; Massey and McHenry, 1986; Moene et al., 2000; Stevens and Milstein, 1970; Yang et al., 1996) merits emphasis. Partial seizures with complex symptomatology (Drake and Coffey, 1983; Wakai et al., 1994) and sensory seizures (Andriola and Ettinger, 1999; Lesser et al., 1983) may present with behaviors that suggest conversion disorders (Goodyer, 1985). Electroencephalography and neurological consultation are warranted for patients with episodic behavioral phenomena (Andriola and Ettinger, 1999; Stevens and Milstein, 1970; Stores, 1985; Wakai et al., 1994; Yang et al., 1996). In particular the presence of language disorders increases the likelihood of the presence of epilepsy and related phenomena (Ballaban-Gil, 1996). An additional challenge is presented by subjects with both epileptic and nonepileptic seizures (Devinsky and Gordon, 1998; Herskowitz and Rosman, 1985; Parraga and Kashani, 1981). Simultaneous video-electroencephalographic monitoring during spells may be useful to identify subjects with epileptic seizures, nonepileptic seizures, and both epileptic and non-epileptic seizures (Bowman and Coons, 2000).

The presence of conversion symptoms requires not only exclusion of neurological and medical disorders, but also other psychiatric conditions. Depression (Trott et al., 1996; Weller and Weller, 1983) and dissociative disorders (Bowman and Coons, 2000) must be ruled out in the evaluation

of a child with conversion symptoms. Since neurological symptoms are a hallmark of somatoform disorders (American Psychiatric Association, 2000; Blanz and Lehmkuhl, 1986; Perley and Guze, 1962), clinicians must rule out medical complaints in other organ systems (Brasic, 1978). In addition to other somatoform disorders, conversion disorder must be differentiated from factitious disorders and malingering (Tuckman, 2002). People with conversion disorders and other somatoform disorders believe the symptoms that they report to examiners. On the other hand people with factitious disorders and malingering realize that the symptoms that they describe are false (Grady, 1999). Malingering is characterized by the fabrication of symptoms for secondary gain, e. g., to receive drugs, to obtain insurance, and to avoid work or jail (Grady, 1999; Jauhar, 1999; Tuckman, 2002). In contrast to malingerers, people with factitious disorders fabricate symptoms to get attention (Grady, 1999; Jauhar, 1999). Careful motor assessment may facilitate the differentiation of feigned motor impairments from conversion disorder (Maruff and Velakoulis, 2000; Roelofs et al., 2002). Some individuals with factitious disorders manifest Munchausen syndrome in which elaborate stories are reported (Grady, 1999; www.munchausen.com). Of particular relevance in the assessment of children is the diagnosis of Munchausen syndrome by proxy, a potentially fatal condition in which a guardian fabricates illness in another, typically a child (Schreier, 1992).

A biobehavioral family model incorporating the roles of biological, behavioral, psychological, and family influences on the development of conversion disorder is a useful framework with which to identify the systems contributing to the development and maintenance of the symptoms in the child (Wood, 2001). This case also illustrates the therapeutic effect of the provision of eyeglasses to a child with a visual conversion symptom (Langmann et al., 2001). Psychotherapeutic interventions with children and adolescents with conversion disorder may be facilitated by identification of separation and dependency conflicts (Eggers, 1998). Similarly treatment of conversion disorders in children typically requires the coordinated efforts of many specialists (Keemink et al., 1993; Maloney, 1980). The need for patient education about conversion disorder (Abdur-Rahim et al., 1996) can be addressed by a multidisciplinary treatment team (Fennig and Fennig, 1999) including psychiatry, psychology, pediatrics (Friedman, 1973; Woodbury et al., 1992), family practice (Friedman, 1973), general practice (Friedman, 1973), neurology, nursing, social work, physical therapy (Brazier and Venning, 1997), child protective services, and special education. Written pamphlets (Benbadis, 1997), audiotapes, and videotapes (Lesser, 1997) are useful to help educate patients with conversion seizures and their families.

An additional feature of this case is the association of low socio-economic status with the presentation of conversion symptoms. The expression of psychological distress by physical symptoms is more common in individuals of lower socioeconomic class (Chandra et al., 1993; Crandell and

Dohrenwend, 1967; Kadushin, 1967) and in developing countries (Abdur-Rahim et al., 1995). Members of lower class communities may be less likely to seek help for emotional symptoms alone. Limited resources and overwhelming daily needs may prevent lower class individuals from requesting assistance for psychological concerns. Instead, as in this case, behavioral problems may be ignored until serious crimes, such as arson and rape, occur. Prevention of sexual abuse (Green, 1995) is crucial due to the likelihood of development of chronic conversion disorders (Singh and Lee, 1997) including nonepileptic seizures (Wyllie et al., 1999). Even then, the individuals may present to psychiatric clinics only when coerced by authorities. If psychiatric intervention is obtained early, perhaps the violent manifestations of behavioral disorders can be aborted. Lack of appropriate intervention by child protective services may lead to the deaths of this girl and her siblings. The delays of the family to bring her to the emergency room after she experienced seizures, head trauma, and gunshots to the chest and the arm and the complete absence of seeking help after she was raped are clear evidence of medical neglect. Further evidence of neglect is provided by the mother's absence when the brother started a fire in the apartment while the subject was sleeping requiring intervention by neighbors to summon the fire department. All the children in this family are at risk of death due to the absence of responsible supervision. The failure of the mother to comply with recommended psychiatric treatment suggests that effective interventions may include the removal of all the children from her care and their placement in foster care. Decisive intervention by child protective services is needed. Lack of appropriate responses by the child protective services workers may require calls to supervisors up the chain of command until needed actions occur. The lives of the three children in the family are at risk.

Further research is needed on conversion disorder in childhood to determine the incidence and prevalence around the world. The widely differing estimates of prevalence of conversion disorder in childhood (Abdur-Rahim et al., 1996; Goodyer, 1981; Robins and O'Neal, 1953; Trott et al., 1996) suggest that diagnostic procedures are both invalid and unreliable. Many cases of conversion disorder in childhood may be undiagnosed or misdiagnosed. Development of valid and reliable diagnostic protocols (Brasic and Young, 1994) is needed. Follow-up studies are needed to determine effective interventions.

Conclusions

Conversion disorder in childhood is a condition characterized by the presence of medically unexplained neurological symptoms and signs in a child experiencing psychological distress. Since children with the diagnosis of conversion disorder may have physical disorders, continued search for neurological and medical bases for the complaints is war-

ranted. Amelioration of symptoms of conversion disorders is likely to follow the prompt institution of appropriate interventions (Pehlivanürk and Unal, 2002; Zeharia et al., 1999). Children with conversion disorders are likely to develop mood and anxiety disorders (Pehlivanürk and Unal, 2002). Sexual and physical abuse of children is likely in conversion disorder so referral to child protective services may be warranted. Follow-up by clinicians familiar with conversion disorder is desirable to foster appropriate interventions and to avoid unnecessary procedures (Crimlisk et al., 2000).

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