04 - 13.4 Functional Neurological Symptom Disorder

13.4 Functional Neurological Symptom Disorder (Conversion Disorder)

however, are resistant to seeing a doctor in the first place, or, if having done so, of accepting the fact that there is nothing to worry about. Invasive diagnostic and therapeutic procedures should only be undertaken when objective evidence calls for them. When possible, the clinician should refrain from treating equivocal or incidental physical examination findings. Pharmacotherapy may be of help in alleviating the anxiety generated by the fear that the patient has about illness, especially if it is one that is life-threatening; but it is only ameliorative and cannot provide lasting relief. That can only come from an effective psychotherapeutic program that is acceptable to the patient and in which he or she is willing and able to participate. REFERENCES Blumenfield M, Strain JJ. Psychosomatic Medicine. Philadelphia: Lippincott Williams & Wilkins; 2006. Brakoulias V. DSM-5 bids farewell to hypochondriasis and welcomes somatic symptom disorder and illness anxiety disorder. Aust N Z J Psychiatry. 2014 Feb 26. [Epub ahead of print]. Brody S. Hypochondriasis: Attentional, sensory, and cognitive factors. Psychosomatics. 2013;54(1):98. El-Gabalawy R, Mackenzie CS, Thibodeau MA, Asmundson GJG, Sareen J. Health anxiety disorders in older adults: Conceptualizing complex conditions in late life. Clin Psychol Rev. 2013;33(8):1096–1105. Escobar JI, Gara MA, Diaz-Martinez A, Interian A, Warman M. Effectiveness of a time-limited, cognitive behavior therapy– type intervention among primary care patients with medically unexplained symptoms. Ann Fam Med. 2007;5:328–335. Gropalis M, Bleichhardt G, Hiller W, Witthoft M. Specificity and modifiability of cognitive biases in hypochondriasis. J Consult Clin Psychol. 2013;81(3):558–565. Hirsch JK, Walker KL, Chang EC, Lyness JM. Illness burden and symptoms of anxiety in older adults: Optimism and pessimism as moderators. Int Psychogeriatr. 2012;24(10):1614–1621. Höfling V, Weck F. Assessing bodily preoccupations is sufficient: Clinically effective screening for

hypochondriasis. J Psychosom Res. 2013;75(6):526–531. Holmes TH, Rahe RH. The social readjustment rating scale. J Psychosom Res. 1967;11:213–218. Kroenke K, Sharpe M, Sykes R. Revising the classification of somatoform disorders: Key questions and preliminary recommendations. Psychosomatics. 2007;48:277–285. Lee S, Lam IM, Kwok KP, Leung C. A community-based epidemiological study of health anxiety and generalized anxiety disorder. J Anxiety Disord. 2014;28(2):187–194. Muschalla B, Glatz J, Linden M. Heart-related anxieties in relation to general anxiety and severity of illness in cardiology patients. Psychol Health Med. 2014;19(1):83–92. Noyes R Jr, Stuart SP, Langbehn DR, Happel RL, Longley SL, Muller BA, Yagla SJ. Test of an interpersonal model of hypochondriasis. Psychosom Med. 2003;65:292–300. Starcevic V. Hypochondriasis and health anxiety: conceptual challenges. Br J Psychiatry. 2013;202(1):7–8. Voigt K, Wollburg E, Weinmann N, Herzog A, Meyer B, Langs G, Löwe B. Predictive validity and clinical utility of DSM-5 Somatic Symptom Disorder: Prospective 1-year follow-up study. J Psychosom Res. 2013;75(4):358–361. 13.4 Functional Neurological Symptom Disorder (Conversion Disorder)

Conversion disorder, also called functional neurological symptom disorder in the Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5), is an illness of symptoms or deficits that affect voluntary motor or sensory functions, which suggest another medical condition, but that is judged to be caused by psychological factors because the illness is preceded by conflicts or other stressors. The symptoms or deficits of conversion disorder are not intentionally produced, are not caused by substance use, are not limited to pain or sexual symptoms, and the gain is primarily psychological and not social, monetary, or legal (Table 13.4-1). Table 13.4-1 Common Symptoms of Conversion Disorder The syndrome currently known as conversion disorder was originally combined with the syndrome known as somatization disorder and was referred to as hysteria, conversion reaction, or dissociative reaction. Paul Briquet and Jean-Martin Charcot contributed to the development of the concept of conversion disorder by noting the influence of heredity on the symptom and the common association with a traumatic event. The term conversion was introduced by Sigmund Freud, who, based on his work with Anna O, hypothesized that the symptoms of conversion disorder reflect unconscious conflicts. EPIDEMIOLOGY Some symptoms of conversion disorder that are not sufficiently severe to warrant the diagnosis may occur in up to one third of the general population sometime during their lives. Reported rates of conversion disorder vary from 11 of 100,000 to 300 of 100,000 in general population samples. Among specific populations, the occurrence of conversion disorder may be even higher than that, perhaps making conversion disorder the most common somatoform disorder in some populations. Several studies have reported that 5 to 15 percent of psychiatric consultations in a general hospital and 25 to

30 percent of admissions to a Veterans Administration hospital involve patients with conversion disorder diagnoses. The ratio of women to men among adult patients is at least 2 to 1 and as much as 10 to 1; among children, an even higher predominance is seen in girls. Symptoms are more common on the left than on the right side of the body in women. Women who present with conversion symptoms are more likely subsequently to develop somatization disorder than women who have not had conversion symptoms. An association exists between conversion disorder and antisocial personality disorder in men. Men with conversion disorder have often been involved in occupational or military accidents. The onset of conversion disorder is generally from late childhood to early adulthood and is rare before 10 years of age or after 35 years of age, but onset as late as the ninth decade of life has been reported. When symptoms suggest a conversion disorder onset in middle or old age, the probability of an occult neurological or other medical

condition is high. Conversion symptoms in children younger than 10 years of age are usually limited to gait problems or seizures. Data indicate that conversion disorder is most common among rural populations, persons with little education, those with low intelligence quotients, those in low socioeconomic groups, and military personnel who have been exposed to combat situations. Conversion disorder is commonly associated with comorbid diagnoses of major depressive disorder, anxiety disorders, and schizophrenia and shows an increased frequency in relatives of probands with conversion disorder. Limited data suggest that conversion symptoms are more frequent in relatives of people with conversion disorder. An increased risk of conversion disorder in monozygotic, but not dizygotic, twin pairs has been reported. COMORBIDITY Medical and, especially, neurological disorders occur frequently among patients with conversion disorders. What is typically seen in these comorbid neurological or medical conditions is an elaboration of symptoms stemming from the original organic lesion. Depressive disorders, anxiety disorders, and somatization disorders are especially noted for their association with conversion disorder. Conversion disorder in schizophrenia is reported, but it is uncommon. Studies of patients admitted to a psychiatric hospital for conversion disorder reveal, on further study, that one quarter to one half have a clinically significant mood disorder or schizophrenia. Personality disorders also frequently accompany conversion disorder, especially the histrionic type (in 5 to 21 percent of cases) and the passive-dependent type (9 to 40 percent of cases). Conversion disorders can occur, however, in persons with no predisposing medical, neurological, or psychiatric disorder. ETIOLOGY Psychoanalytic Factors

According to psychoanalytic theory, conversion disorder is caused by repression of unconscious intrapsychic conflict and conversion of anxiety into a physical symptom. The conflict is between an instinctual impulse (e.g., aggression or sexuality) and the prohibitions against its expression. The symptoms allow partial expression of the forbidden wish or urge but disguise it, so that patients can avoid consciously confronting their unacceptable impulses; that is, the conversion disorder symptom has a symbolic relation to the unconscious conflict—for example, vaginismus protects the patient from expressing unacceptable sexual wishes. Conversion disorder symptoms also allow patients to communicate that they need special consideration and special treatment. Such symptoms may function as a nonverbal means of controlling or manipulating others. Learning Theory In terms of conditioned learning theory, a conversion symptom can be seen as a piece of classically conditioned learned behavior; symptoms of illness, learned in childhood, are called forth as a means of coping with an otherwise impossible situation. Biological Factors Increasing data implicate biological and neuropsychological factors in the development of conversion disorder symptoms. Preliminary brain-imaging studies have found hypometabolism of the dominant hemisphere and hypermetabolism of the nondominant hemisphere and have implicated impaired hemispheric communication in the cause of conversion disorder. The symptoms may be caused by an excessive cortical arousal that sets off negative feedback loops between the cerebral cortex and the brainstem reticular formation. Elevated levels of corticofugal output, in turn, inhibit the patient’s awareness of bodily sensation, which may explain the observed sensory deficits in some patients with conversion disorder. Neuropsychological tests sometimes reveal subtle cerebral impairments in verbal communication, memory, vigilance, affective incongruity, and attention in these patients. DIAGNOSIS The DSM-5 limits the diagnosis of conversion disorder to those symptoms that affect a voluntary motor or sensory function, that is, neurological symptoms. Physicians cannot explain the neurological symptoms solely on the basis of any known neurological condition. The diagnosis of conversion disorder requires that clinicians find a necessary and critical

association between the cause of the neurological symptoms and psychological factors, although the symptoms cannot result from malingering or factitious disorder. The diagnosis of conversion disorder also excludes symptoms of pain and sexual dysfunction and symptoms that occur only in somatization disorder. DSM-5 allows specification of the type of symptom or deficit seen in conversion disorder, for example,

with weakness or paralysis, with abnormal movements, or with attacks or seizures. CLINICAL FEATURES Paralysis, blindness, and mutism are the most common conversion disorder symptoms. Conversion disorder may be most commonly associated with passive-aggressive, dependent, antisocial, and histrionic personality disorders. Depressive and anxiety disorder symptoms often accompany the symptoms of conversion disorder, and affected patients are at risk for suicide. Mr. J is a 28-year-old single man who is employed in a factory. He was brought to an emergency department by his father, complaining that he had lost his vision while sitting in the back seat on the way home from a family gathering. He had been playing volleyball at the gathering but had sustained no significant injury except for the volleyball hitting him in the head a few times. As was usual for this man, he had been reluctant to play volleyball because of the lack of his athletic skills and was placed on a team at the last moment. He recalls having some problems with seeing during the game, but his vision did not become ablated until he was in the car on the way home. By the time he got to the emergency department, his vision was improving, although he still complained of blurriness and mild diplopia. The double vision could be attenuated by having him focus on items at different distances. On examination, Mr. J was fully cooperative, somewhat uncertain about why this would have occurred, and rather nonchalant. Pupillary, oculomotor, and general sensorimotor examinations were normal. After being cleared medically, the patient was sent to a mental health center for further evaluation. At the mental health center, the patient recounts the same story as he did in the emergency department, and he was still accompanied by his father. He began to recount how his vision started to return to normal when his father pulled over on the side of the road and began to talk to him about the events of the day. He spoke with his father about how he had felt embarrassed and somewhat conflicted about playing volleyball and how he had felt that he really should play because of external pressures. Further history from the patient and his father revealed that this young man had been shy as an adolescent, particularly around athletic participation. He had never had another episode of visual loss. He did recount feeling anxious and sometimes not feeling well in his body during athletic activities. Discussion with the patient at the mental health center focused on the potential role of psychological and social factors in acute vision loss. The patient was somewhat perplexed by this but was also amenable to discussion. He stated that he clearly recognized that he began seeing and feeling better when his father pulled off to the side of the road and discussed things with him. Doctors admitted that they did not know the cause of the vision loss and that it would likely not return. The patient and his father were satisfied with the medical and psychiatric evaluation and agreed to

return for care if there were any further symptoms. The patient was appointed a follow-up time at the outpatient psychiatric clinic. (Courtesy of Michael A. Hollifield, M.D.) Sensory Symptoms In conversion disorder, anesthesia and paresthesia are common, especially of the extremities. All sensory modalities can be involved, and the distribution of the disturbance is usually inconsistent with either central or peripheral neurological disease. Thus, clinicians may see the characteristic stocking-and-glove anesthesia of the hands or feet or the hemianesthesia of the body beginning precisely along the midline. Conversion disorder symptoms may involve the organs of special sense

and can produce deafness, blindness, and tunnel vision. These symptoms can be unilateral or bilateral, but neurological evaluation reveals intact sensory pathways. In conversion disorder blindness, for example, patients walk around without collisions or self-injury, their pupils react to light, and their cortical-evoked potentials are normal. Motor Symptoms The motor symptoms of conversion disorder include abnormal movements, gait disturbance, weakness, and paralysis. Gross rhythmical tremors, choreiform movements, tics, and jerks may be present. The movements generally worsen when attention is called to them. One gait disturbance seen in conversion disorder is astasia-abasia, which is a wildly ataxic, staggering gait accompanied by gross, irregular, jerky truncal movements and thrashing and waving arm movements. Patients with the symptoms rarely fall; if they do, they are generally not injured. Other common motor disturbances are paralysis and paresis involving one, two, or all four limbs, although the distribution of the involved muscles does not conform to the neural pathways. Reflexes remain normal; the patients have no fasciculations or muscle atrophy (except after long-standing conversion paralysis); electromyography findings are normal. Seizure Symptoms Pseudoseizures are another symptom in conversion disorder. Clinicians may find it difficult to differentiate a pseudoseizure from an actual seizure by clinical observation alone. Moreover, about one third of the patient’s pseudoseizures also have a coexisting epileptic disorder. Tongue-biting, urinary incontinence, and injuries after falling can occur in pseudoseizures, although these symptoms are generally not present. Pupillary and gag reflexes are retained after pseudoseizure, and patients have no postseizure increase in prolactin concentrations. Other Associated Features

Several psychological symptoms have also been associated with conversion disorder. Primary Gain. Patients achieve primary gain by keeping internal conflicts outside their awareness. Symptoms have symbolic value; they represent an unconscious psychological conflict. Secondary Gain. Patients accrue tangible advantages and benefits as a result of being sick; for example, being excused from obligations and difficult life situations, receiving support and assistance that might not otherwise be forthcoming, and controlling other persons’ behavior. La Belle Indifférence. La belle indifférence is a patient’s inappropriately cavalier attitude toward serious symptoms; that is, the patient seems to be unconcerned about what appears to be a major impairment. That bland indifference is also seen in some seriously ill medical patients who develop a stoic attitude. The presence or absence of la belle indifférence is not pathognomonic of conversion disorder, but it is often associated with the condition. Identification. Patients with conversion disorder may unconsciously model their symptoms on those of someone important to them. For example, a parent or a person who has recently died may serve as a model for conversion disorder. During pathological grief reaction, bereaved persons commonly have symptoms of the deceased. DIFFERENTIAL DIAGNOSIS One of the major problems in diagnosing conversion disorder is the difficulty of definitively ruling out a medical disorder. Concomitant nonpsychiatric medical disorders are common in hospitalized patients with conversion disorder, and evidence of a current or previous neurological disorder or a systemic disease affecting the brain has been reported in 18 to 64 percent of such patients. An estimated 25 to 50 percent of patients classified as having conversion disorder eventually receive diagnoses of neurological or nonpsychiatric medical disorders that could have caused their earlier symptoms. Thus, a thorough medical and neurological workup is essential in all cases. If the symptoms can be resolved by suggestion, hypnosis, or parenteral amobarbital (Amytal) or lorazepam (Ativan), they are probably the result of conversion disorder. Neurological disorders (e.g., dementia and other degenerative diseases), brain tumors, and basal ganglia disease must be considered in the differential diagnosis. For example,

weakness may be confused with myasthenia gravis, polymyositis, acquired myopathies, or multiple sclerosis. Optic neuritis may be misdiagnosed as conversion disorder blindness. Other diseases that can cause confusing symptoms are Guillain-Barré syndrome, Creutzfeldt-Jakob disease, periodic paralysis, and early neurological manifestations of acquired immunodeficiency syndrome (AIDS). Conversion disorder

symptoms occur in schizophrenia, depressive disorders, and anxiety disorders, but these other disorders are associated with their own distinct symptoms that eventually make differential diagnosis possible. Sensorimotor symptoms also occur in somatization disorder. But somatization disorder is a chronic illness that begins early in life and includes symptoms in many other organ systems. In hypochondriasis, patients have no actual loss or distortion of function; the somatic complaints are chronic and are not limited to neurological symptoms, and the characteristic hypochondriacal attitudes and beliefs are present. If the patient's symptoms are limited to pain, pain disorder can be diagnosed. Patients whose complaints are limited to sexual function are classified as having a sexual dysfunction, rather than conversion disorder. In both malingering and factitious disorder, the symptoms are under conscious, voluntary control. A malingerer's history is usually more inconsistent and contradictory than that of a patient with conversion disorder, and a malingerer's fraudulent behavior is clearly goal directed. Table 13.4-2 lists examples of important tests that are relevant to conversion disorder symptoms. Table 13.4-2 Distinctive Physical Examination Findings in Conversion Disorder COURSE AND PROGNOSIS

The onset of conversion disorder is usually acute, but a crescendo of symptomatology may also occur. Symptoms or deficits are usually of short duration, and approximately 95 percent of acute cases remit spontaneously, usually within 2 weeks in hospitalized patients. If symptoms have been present for 6 months or longer, the prognosis for symptom resolution is less than 50 percent and diminishes further the longer that conversion is present. Recurrence occurs in one fifth to one fourth of people within 1 year of the first episode. Thus, one episode is a predictor for future episodes. A good prognosis is heralded by acute onset, presence of clearly identifiable stressors at the time of onset, a short interval between onset and the institution of treatment, and above average intelligence. Paralysis, aphonia, and blindness are associated with a good prognosis, whereas tremor and seizures are poor prognostic factors. TREATMENT Resolution of the conversion disorder symptom is usually spontaneous, although it is probably facilitated by insight-oriented supportive or behavior therapy. The most important feature of the therapy is a relationship with a caring and confident therapist. With patients who are resistant to the idea of psychotherapy, physicians can suggest that the psychotherapy will focus on issues of stress and coping. Telling such patients that their symptoms are imaginary often makes them worse. Hypnosis, anxiolytics, and behavioral relaxation exercises are effective in some cases. Parenteral amobarbital or lorazepam may be helpful in obtaining additional historic information, especially when a patient has recently experienced a traumatic event. Psychodynamic approaches include psychoanalysis and insight-oriented psychotherapy, in which patients explore intrapsychic conflicts and the symbolism of the conversion disorder symptoms. Brief and direct forms of short-term psychotherapy have also been used to treat conversion disorder. The longer the duration of these patients' sick role and the more they have regressed, the more difficult the treatment. REFERENCES Ani C, Reading R, Lynn R, Forlee S, Garralda E. Incidence and 12-month outcome of non-transient childhood conversion disorder in the UK and Ireland. Br J Psychiatry. 2013;202(6):413–418. Bryant RA, Das P. The neural circuitry of conversion disorder and its recovery. J Abnorm Psychology. 2012;121(1):289. Carson AJ, Brown R, David AS, Duncan R,

Edwards MJ, Goldstein LH, Grunewald R, Howlett S, Kanaan R, Mellers J, Nicholson TR, Reuber M, Schrag AE, Stone J, Voon V; UK-FNS. Functional (conversion) neurological symptoms: Research since the millennium. J Neurol Neurosurg Psychiatry. 2012;83(8):842–850. Daum C, Aybek S. Validity of the “drift without pronation” sign in conversion disorder. BMC Neurol. 2013;13:31. Edwards MJ, Stone J, Nielsen G. Physiotherapists and patients with functional (psychogenic) motor symptoms: A survey of attitudes and interest. J Neurol Neurosurg Psychiatry. 2012;83(6):655–658. Guz H, Doganay Z, Ozkan A, Colak E, Tomac A, Sarisoy G. Conversion and somatization disorders: Dissociative symptoms and other characteristics. J Psychosom Res. 2004;56:287–291. Krasnik C, Grant C. Conversion disorder: Not a malingering matter. Paediatr Child Health. 2012;17(5):246. Martinez MS, Fristad MA. Conversion from bipolar disorder not otherwise specified (BP-NOS) to bipolar I or II in youth

---

Revision #1
Created 2026-01-04 19:50:59 UTC by Omar Ayman
Updated 2026-01-04 19:50:59 UTC by Omar Ayman