

**Parkinson's Disease Center  
and Movement Disorders Clinic**

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**Psychogenic Movement Disorders**

**Diagnosis**

Psychogenic movement disorders are characterized by unwanted movements, such as spasms, shaking or jerks involving any part of the face, neck, trunk or limbs. In addition some patients may have bizarre gait or difficulties with their balance that are caused by underlying stress or some psychological condition. Speech and voice disorders are also relatively common in patients with psychogenic movement disorders, in which patients may experience stuttering, speech arrest, lower speech volume (hypophonia), or even a foreign accent. A variety of blood, imaging and other tests are usually normal and do not reveal any physical (organic) cause that could explain these motor abnormalities. Most psychogenic movements are considered involuntary – performed without conscious awareness or effort. They can mimic organic movement disorders, such as tremor, dystonia, myoclonus, parkinsonism, tics, and paroxysmal dyskinesias. Although a psychogenic movement disorder may resemble or accompany an organic disorder, a skilled and experienced neurologist should be able to differentiate the two types of movement disorders.

Several other terms have been used to describe psychogenic movement disorders and there has been considerable debate regarding the appropriate naming of the disorder. Other terms, including functional, nonorganic, conversion disorder, psychosomatic, medically unexplained, dissociative motor disorder, and hysterical, when applied to the diagnosis, may seem vague and can often be misinterpreted by the patient to perceive themselves as dysfunctional rather than functional. Some physicians use the term “functional,” but this term may be rather confusing and ambiguous as there are several movement disorders that are functional, but not psychogenic. The term, psychogenic, can be reassuring to patients that there is

no evidence of neurologic damage and acknowledges the role of psychological factors including stress.

### Types of Psychogenic Movement Disorders:

#### **Psychogenic Tremor**

Tremor is defined as an oscillatory movement produced by a rhythmic contraction of muscles. Psychogenic tremor is the most common subcategory of psychogenic movement disorders, reported as representing approximately 50% of cases. When present, it often manifests both at rest and with action. The tremor may spread to other body parts, especially when one limb is actively engaged in a different activity. There may be tremor coherence, meaning multiple body parts may simultaneously have tremor and at the same frequency. There can be variability of the tremor in which direction it moves, how fast it moves, and much distance it moves. Another distinguishing characteristic is that it is distractible, meaning it may almost completely resolve when focusing on another task. In comparison to essential, the most common cause of tremor, psychogenic tremor tends to have a sudden onset, short duration, and spontaneous remission of tremor. The tremor may be episodic and it may involve the entire body.

#### **Psychogenic Dystonia**

Dystonia is defined as involuntary, sustained or repetitive, patterned muscle contractions or spasms, frequently causing squeezing, twisting, and other movements or abnormal postures. Psychogenic dystonia can manifest as fixed or mobile dystonia. Fixed dystonia means that the affected body part is stuck in the abnormal posture at rest, whereas mobile dystonia presents as repetitive, prolonged twisting movements. Psychogenic dystonia more commonly manifests as fixed dystonia and may be preceded by an injury to the affected body part. Patients with psychogenic dystonia generally do not describe alleviating maneuvers that can correct the abnormal posture. The arms and legs are more commonly affected than the shoulders, neck and jaw.

## **Psychogenic Myoclonus**

Myoclonus is defined as sudden, brief involuntary jerking of a muscle or group of muscles. Patients with psychogenic myoclonus may have an excessive startle response to sensory stimuli, such as loud noises. In one study, about one-third of patients cited a preceding event, such as a minor surgery, as the triggering factor. Psychogenic myoclonus may be difficult to distinguish from organic myoclonus. Neurophysiologic testing, such as studying the electrical properties of muscle with electromyography (EMG), can help with this distinction.

## **Psychogenic Parkinsonism**

Parkinsonism refers to the clinical signs that may be present in Parkinson's disease or other related disorders, including tremor, slowness, and abnormalities of speech and gait. Psychogenic parkinsonism, although often quite disabling, is one of the least reported subtypes of psychogenic movement disorders. The tremor in psychogenic parkinsonism typically involves the dominant hand and is variable and distractible, as discussed in the psychogenic tremor section. Effortful, rapid successive movements often associated with sighing and grimacing typically characterize the slowness of movement. Speech issues include excessive slowness, stuttering, and whispering. Some patients with psychogenic parkinsonism have clinical improvement with placebo medication. It is important for the physician to bear in mind that both psychogenic parkinsonism and organic parkinsonism may indeed coexist in the same patient.

## **Psychogenic Tics**

Tics are defined as repeated, patterned, individually recognizable movements. They are suppressible, meaning the patient may be able to prevent an oncoming tic from happening. They are usually associated with a premonitory sensation or urge to make the tic movement followed by a sense of relief when the tic movement is completed. It is not uncommon for other psychogenic movement disorders to coexist with psychogenic tics.

## **Psychogenic Paroxysmal Dyskinesia**

Paroxysmal dyskinesia refers to episodic movement disorders in which abnormal movements are only present during attacks. Paroxysmal means that the symptoms are only noticeable at certain times. Dyskinesia broadly means broadly a distortion or difficulty performing a voluntary movement. This most commonly presents as isolated dystonia (discussed above). In one study, approximately 70% of patients with this disorder had a combination of different movements. There was marked variability in the duration and frequency of the dyskinesias. An identifiable trigger, which is not typical for organic paroxysmal dyskinesia, was noted in 50% of patients in this study.

## **Psychogenic Gait Disorders**

Psychogenic gait disorders can present in various ways and are often associated with other psychogenic movement disorders. Patients may have astasia-abasia, characterized by the ability to maintain good balance despite bizarre swaying and contortions of the body. In one study, the most common characteristic was a buckling of the knees. In patients that had other coexisting psychogenic movement disorders, slowness of gait was the most common manifestation of psychogenic gait. Psychogenic gait should be distinguished from a “fear of falling” gait, which is most commonly seen in elderly woman after a fall and is characterized by sliding or shuffling with a need to hold on for support.

When the movements in question are inconsistent over time (over time the movements are observed to be different over subsequent evaluations) or is not characteristic with a classic movement disorder, then the clinician becomes concerned that the movements may be psychogenic.

The diagnosis is based on a combination of a number of clinical observations and recognition of typical characteristics (phenomenology) that include, but are not necessarily limited to the following:

- Abrupt/sudden onset of the movements.
- Movements are triggered by emotional or physical trauma, or by some conflict (marital, sexual, work-related).
- Movements are episodic, or appear intermittently
- Spontaneous remissions of the movements.
- Movements disappear with distraction.
- Movements are suggestible, meaning they may disappear by making a suggestion. For example, suggesting that the application of a tuning fork to the body part affected may help relieve the movements.
- Presence of underlying psychiatric disturbances (depression, anxiety)
- Multiple somatizations and undiagnosed conditions
- Lack of emotional concern about the disorder (“la belle indifférence”)
- Exposure to neurologic disorders during one’s occupation (e.g. nurse, physician) or while caring for someone with similar problems.

Other characteristics include:

- Slurred speech, soft voice, gibberish, foreign accent
- Delayed and excessive startle (bizarre movements in response to sudden, unexpected noise or threatening movement)
- Presence of additional types of abnormal movements that are not known to be part of the primary or principal movement disorder pattern that the patient manifests
- Active resistance against passive movement
- Fixed posture

There is no blood test or any other diagnostic test for psychogenic movement disorder. Making the diagnosis of a psychogenic movement disorder is a two-step process. First is to make a positive diagnosis that the movements are psychogenic rather than from an organic illness. Second is to identify either a psychiatric disorder, such as depression or anxiety, or the psychodynamics that could explain the abnormal movements. It is very important to make the correct diagnosis when it is a psychogenic movement disorder because only then can appropriate treatment be started. Additionally, if the patient has a psychogenic movement disorder that is misdiagnosed, then the patient may be given inappropriate treatment, such as medication that may have harmful side effects. This would also postpone

appropriate psychiatric treatment. Delay in appropriate diagnosis and treatment may lead to chronic disability.

### Cause

Patients should understand that they have a movement disorder, such as tremor or dystonia, but that in their case, the disorder is not due to any damage to the brain, spinal cord or nerves, but it is a manifestation of how their bodies respond to stress. Just as stress can cause elevation in blood pressure, palpitations, and tremors, stress can similarly manifest as disorders of movement. Understandably, the diagnosis of psychogenic (stress-induced) movement disorder can be a delicate matter both for physicians as well as patients. Patients manifesting movements or other motor abnormalities that can be quite dramatic and disabling, often do not readily recognize or acknowledge that these are stress-induced (psychogenic), and may disagree with the diagnosis. Most seasoned physicians believe that it is in the patient's best interest to be honest and to candidly disclose the diagnosis and discuss the psychological nature of the movement disorder. Not all patients are accepting of the diagnosis. In many cases, it takes more time or even several visits before the patient begins to understand the relationship between stress, underlying psychological and psychiatric conditions, and the movement disorder.

### Treatment

Successful treatment of psychogenic movement disorders will likely involve a multidisciplinary approach with several practitioners, including a movement disorder neurologist, psychologist, psychiatrist and physical, speech and occupational therapists in implementing a short-term and long-term therapeutic program.

Physical, speech and occupational therapy may be useful not only in improving physical and psychological functioning, such as activities of daily living, but also to alter the abnormally learned pattern of movement - "motor reprogramming."

Antidepressants and muscle relaxants may be also beneficial. Rarely,

transcutaneous electrical stimulation applied to the area of spasm or involuntary movement may be helpful, analogous to the application of a tuning fork during clinic evaluation. Most importantly, however, the patient should try to understand which stress factors may be playing a role and seek the expertise of a psychologist experienced and skilled in stress management. Psychotherapy The role of a psychiatrist is not to make the diagnosis but to provide insights into underlying psychological or psychiatric issues and to aid in the treatment of psychiatric issues such as depression or anxiety.

Psychogenic movement disorders may be difficult to treat, especially if the patient is diagnosed late or is not accepting of the diagnosis. Indeed, patients with the best prognosis are those who initially accept the diagnosis and work with the movement disorder neurologist, psychologist, psychiatrist and physical, speech and occupational therapists in implementing a short-term and long-term therapeutic program. The diagnosis should be disclosed to patients in a manner that is empathetic and nonjudgmental.

Several critical points are worth emphasizing relating to the diagnosis of psychogenic movement disorder.

- The movement abnormalities are not deliberate but subconsciously generated (i.e. “you are not faking it”).
- The presence of the movement disorder does not mean a psychiatric disease (i.e. “you are not crazy”).
- The movements are real and can interfere with normal functioning.
- There is no evidence of brain, spinal cord or any other neurological damage as the cause of the abnormal movements.
- This is a treatable and likely curable disorder.

In addition to disclosing the diagnosis and exploring various potential psychodynamic factors that could have brought on this condition, it is also important to discuss the role of underlying depression and anxiety, even though many patients deny or are not aware of these psychiatric diagnoses.

The severity of psychogenic movement abnormalities and prognosis varies among individuals. Long-term outcomes appear to be best in patients with a shorter duration of symptoms, those with clearly identifiable trigger or a precipitating or exacerbating factor that can be modified, and most importantly, in those patients who accept the diagnosis and work with their physicians and other healthcare professionals to help them return to the mainstream of life.

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Additional Information

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