

## CASE REPORT

# Identification and initial treatment of involuntary psychogenic movement (conversion) disorder in a 25-year-old male patient

Andrew R. Hamm 

Family Medicine, Naval Medical Center  
Camp Lejeune, Jacksonville, North  
Carolina, USA

**Correspondence**

Andrew R. Hamm, Family Medicine,  
Naval Medical Center Camp Lejeune,  
Jacksonville, North Carolina, USA.  
Email: Hamma9@gmail.com

**Abstract**

Psychogenic movement disorders present a diagnostically challenging entity that is often frightening for patients. Differentiating movement disorders, providing clear explanations, and addressing underlying conditions with a multidisciplinary approach are essential to successful treatment.

**KEYWORDS**

behavioral medicine, clinical counseling, clinical psychology, neurology, psychiatry

## 1 | CASE HISTORY/EXAM

25-year-old male patient, AR, with no significant past medical history, past familial history, without any current medications developed uncontrolled motor tics, twitches, followed shortly by vocal tics, whistling. He initially denied any other associated changes with the onset of his multiple motor tics and vocalizations.

He presented to his primary care physician 3 days after the onset of his acutely developed tics. He initially denied significant life stressors, but upon further investigation, he relayed marital separation from his spouse with his daughter moving out of the house 4 months prior. He had entered his daughter's room for the first time since then about 1 week ago. Of note, a prior coworker had been diagnosed with Tourette's syndrome with similar tics almost 1 year previously.

### 1.1 | Review of symptoms

CONSTITUTIONAL: Denies weight loss, fever and chills.

HEENT: Denies changes in vision and hearing.

RESPIRATORY: Denies SOB and cough.

CV: Denies palpitations and CP.

GI: Denies abdominal pain, nausea, vomiting and diarrhea.

GU: Denies dysuria and urinary frequency.

MSK: Denies myalgia and joint pain.

SKIN: Denies rash and pruritus.

NEUROLOGICAL: Denies headache and syncope. Reported onset of involuntary facial tics and left sided winking with whistling. The tics occur anywhere from two to twelve times per minute.

PSYCHIATRIC: Denies recent changes in mood. Denies anxiety and depression.

### 1.2 | Physical exam

Vitals: Normal

Mental status: The patient is alert, attentive, and oriented. Speech is clear and fluent with good repetition, comprehension, and naming.

HEENT: Normal, Pupils measure 4-mm bilaterally. Visual acuity is 20/20 bilaterally.

Cardiac: Normal

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Pulmonary: Normal

MSK: Strength is full (5/5) and symmetric throughout with good muscle development throughout. Somatic dysfunction of paraspinal cervical muscles indicated by hypertonicity bilaterally.

Neuro: Cranial nerves II-XII are intact. Pupils are 4 mm and briskly reactive to light. There is no pronator drift of out-stretched arms. Reflexes are 2+ and symmetric at the biceps, triceps, knees, and ankles. Plantar responses are flexor. Light touch, pinprick, position sense, and vibration sense are intact in fingers and toes. Rapid alternating movements and fine finger movements are intact. There is no dysmetria on finger-to-nose and heel-knee-shin. There are no abnormal or extraneous movements. Romberg is absent. Posture is normal. Gait is steady with normal steps, base, arm swing, and turning. Heel and toe walking are normal. Tandem gait is normal.

Frequent facial movements, hemifacial left sided spasms, blinking, grimaces and tics, clicks, and whistles during examination. They were apparently involuntary.

Psychiatric: normal speech, denies SI, HI, on further probing, admitted that movements first began after entering his daughter's room for the first time since his marital separation. He discussed failing to meet the expectations that he had for his life, many regrets, decreased sleep, increased jumpiness, and ruminations on every encounter he has with his spouse and daughter remotely. He also reported an impending court date relating to alleged domestic abuse.

He Completed a PHQ-9 scoring 4 and GAD-7 scoring 15, showing concerns for excessive anxiety.

## 2 | DIFFERENTIAL DX, INVESTIGATIONS, TREATMENT INITIAL WORKUP

Differential diagnosis included Tourette's syndrome, dystonia, Parkinsonism, Wilson disease, enhanced physiologic tremor, Multiple sclerosis.

Due to high suspicion of psychogenic movement disorder with very reassuring neurologic physical examination, no follow-on labs, radiology, or special testing was required to begin treatment.

## 3 | INITIAL INTERVENTIONS

The provider discussed the likely diagnosis of psychogenic movement disorder and empathized that his symptoms were genuine and not fabricated and that he could not actively control them. Significant time was spent discussing likely diagnosis pathology and treatment options

to dissuade any thoughts that his health care providers would think he was “faking” or that he was “crazy.” He was educated on breathing techniques to aid with anxiety. He received soft tissue Osteopathic Manipulative Therapy to his head and neck areas with an immediate decrease in the frequency of movements which was then sustained throughout the encounter.

He was initially referred for continued counseling to assess further and address his anxiety.

Behavioral therapy included mindfulness exercises, breathing techniques taught, and referral to Licensed Clinical Social Worker for counseling.

## 4 | OUTCOME AND FOLLOW-UP

AR reported good medication tolerance and a significant decrease in tics upon 3-week follow-up. He continued seeing social work for Cognitive Behavioral Therapy. He returned to PCM with worsened frequency of uncontrolled movements, tics, whistles, and acquiring new explicative tics swearing uncontrollably at random intervals during conversation. Symptoms coincided with temporal proximity to social stressors such as court and custody hearings. His provider drafted an explanation of his symptoms and diagnosis for the court and reiterated current therapy points for his anxiety. He was started on a selective serotonin reuptake inhibitor (SSRI), Escitalopram 10 mg, by mouth daily for Generalized Anxiety disorder after with coordination from his counselor. The patient reported that these interventions were exceptionally well received. He continues to experience improvement in anxiety symptoms and the resolution of his psychogenic movements with counseling and pharmacotherapy at 4 months post initial encounter.

## 5 | DISCUSSION

Psychogenic movement disorder (PMD) refers to the unwanted motor, vocal movements, or sounds caused by an underlying psychological condition when other organic pathologic diagnoses are not suspected and ruled out. These movements can often mimic organic pathology, including parkinsonism, essential tremor, dystonia, or Tourette's syndrome among others.<sup>1</sup> Discernment of diagnosis and clear communication with the patient and treatment team optimize the likelihood of effective treatment.<sup>2</sup>

Psychogenic movement disorder is a type of conversion disorder currently classified by the *Diagnostic and Statistical Manual of Mental Disorders V* under somatic symptom and related disorders (termed somatoform disorders in DSM IV). Somatic symptoms and related disorders

are conditions in which patients experience distressing physical symptoms related to underlying psychiatric conditions. Both physical and mental stress may exacerbate the condition.<sup>3</sup>

The terminology for diagnosis varies and can be considered confusing to providers and patients alike. Other terms include functional, non-organic, psychosomatic, idiopathic, or dissociative motor disorder. This confusion of terms can be particularly disruptive in a patient's treatment course because communicating and understanding terms and definitions of diagnosis can benefit a patient's treatment of the disorder. Because conversion disorder can be considered a vague term, specifying the psychogenic nature of PMD can help patients understand that neurological or organic causes are not contributing to their symptoms. Furthermore, it can help recognition of the role that psychological factors play in their symptoms.<sup>1,2,4</sup>

Diagnosis of PMD is made by observation, usually over multiple clinical encounters, clinical interview, a thorough physical exam by a competent practitioner familiar with neurological disorders, and consideration of tests to rule out medical causes. The basis for diagnosis takes into account a normal physical exam with multiple typical characteristics of PMD that includes, but is not limited to: sudden abrupt onset of symptoms, Movements triggered or worsened by emotional or physical stressors, cessation of movements may occur by trialing a suggested physical treatment (In this patient's case, Cervical Soft tissue Osteopathic Manipulative Therapy significantly decreased tics for some time), encounters demonstrate genuine uncontrolled movements, accompanied by other underlying psychiatric diagnoses, previous exposure to subconsciously mimicked disorder. When performed, laboratory radiologic and special testing do not reveal an organic cause. When the movements in question are inconsistent with an organic cause of movement disorder, the provider may begin to narrow the diagnosis to psychogenic in nature.<sup>1,2,5-8</sup>

Risk factors for development of PMD include underlying psychiatric illness, female sex, history of abuse or adverse childhood events, and personality traits of difficulty feeling and expressing emotions.<sup>2,3,5,8,9</sup>

Treatment of PMD involves recognition and treatment of underlying psychiatric diagnosis while simultaneously educating the patient on PMD. A barrier to care can exist if the patient feels their symptoms are not being taken seriously or think their care team feels they are disingenuous and symptoms are "all in their head." Trust in their care team, validation, and frequent visits are of utmost importance in successful therapy. Successful regimens can include cognitive behavioral therapy, talk therapy, physical therapy, and avoiding unnecessary medicines, tests, and procedures. A large part of treatment initiation should

involve patient education on the significance of the Mind-Body connection. The mind-body connection can be explained by demonstrating the effects that stressors have on other bodily systems, such as elevations in heart rate or blood pressure. Similarly, their stressors have manifested as movement disorders. Often, the diagnosis is stressful in of itself and has the potential not to be received well. It is common for patients to seek second or third opinions and pursue expensive and unnecessary testing to work up their condition. Diagnosis and treatment of associated or underlying comorbid psychiatric conditions benefit overall functioning and recovery. Pharmacological interventions such as SSRIs and muscle relaxants may be helpful to treat underlying conditions of depression/anxiety or muscle spasms respectfully.<sup>1,2,10-12</sup> Swift accurate diagnosis and patient-specific treatment of PMD and underlying disorders significantly improves the likelihood of successful treatment, which otherwise could lead to chronic disability.<sup>13</sup>

Psychogenic movement disorder is a clinically challenging diagnosis that can be moreover more frustrating for patients. However, a skilled clinician who uses a broad range of resources can guide patients toward appropriate understand and therapy for the condition. The severity of psychogenic movement disorder and its prognosis is frequently dependent on the duration of symptoms before presentation, swiftness of initial diagnosis, the success of treating underlying psychiatric causes or exacerbating factors, and thorough patient education and communication from their multidisciplinary care team and available resources.

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#### CONFLICT OF INTEREST

The author certifies that they have NO affiliations with or involvement in any organization or entity with any financial interest, or non-financial interest in the subject matter or materials discussed in this manuscript.

#### AUTHOR CONTRIBUTIONS

The author confirms sole responsibility for the clinical care delivered, manuscript review and preparation.

#### ETHICAL APPROVAL

The patient provided written consent to publish this report.

#### CONSENT

The author has confirmed during submission that patient consent has been signed and collected in accordance with the journal's patient consent policy.

## DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analyzed during the current case report.

## ORCID

Andrew R. Hamm  <https://orcid.org/0000-0003-0576-378X>

## REFERENCES

1. Psychogenic Movement Disorders | Baylor Medicine <https://www.bcm.edu/healthcare/specialties/neurology/parkinsons-disease-and-movement-disorders/psychogenic-movement-disorders>, Accessed July 26, 2021.
2. Clinical Pearls on Best Approaches to Psychogenic Movement. <https://www.psychiatrytimes.com/view/clinical-pearls-best-approaches-psychogenic-movement-disorders>, Accessed July 26, 2021
3. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders*, 5th edn; Arlington, VA: American Psychiatric Association; 2013. <https://doi.org/10.1176/appi.books.9780890425596.dsm09>
4. Jankovic J. “Psychogenic” versus “functional” movement disorders? That is the question. *Mov Disord*. 2014;29(13):1697-1698.
5. Factor SA, Podskalny GD, Molho ES. PMDs: frequency, clinical profile, and characteristics. *J Neurol Neurosurg Psychiatry*. 1995;59:406-412.
6. Thenganatt MA, Jankovic J. Psychogenic (functional) movement disorders. *Continuum (Minneapolis)*. 2019;25(4):1121-1140.
7. Williams DT, Ford B, Fahn S. Phenomenology and psychopathology related to PMDs. *Adv Neurol*. 1995;65:231-257.
8. Tan EK, Jankovic J. Psychogenic hemifacial spasm. *J Neuropsychiatry Clin Neurosci*. 2001;13:380-384.
9. Baizabal-Carvallo JF, Jankovic J. Gender differences in functional movement disorders. *Mov Disord Clin Pract*. 2019;7(2):182-187.
10. Jankovic J, Hallett M, Okun M, Comella C, Fahn S. *Principles and Practice of Movement Disorders*. Elsevier; 2021. (in press).
11. Jankovic J. Parkinson's Disease and Other Movement disorders. Chapter 96. In: Jankovic J, Maziotta J, Newman N, Pomeroy S, eds. *Bradley and Daroff's Neurology in Clinical Practice*, 8th edn. Elsevier; 2021. (in press).
12. Ricciardi L, Edwards MJ. Treatment of functional (psychogenic) movement disorders. *Neurotherapeutics*. 2014;11:201-207.
13. Thomas M, Vuong KD, Jankovic J. Long-term prognosis of patients with PMDs. *Parkinsonism Relat Disord*. 2006;12:382-387.

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