

Abstract:

Identifying movement disorders in the pediatric emergency department can be challenging. It is crucial to recognize which movements are true emergencies or require immediate attention in order to provide optimal care. The purpose of this article is to facilitate proper identification of the most common acute movement disorders in childhood. By reviewing the phenomenology and etiology, we aim to help emergency physicians formulate accurate differentials and, therefore, manage these appropriately.

Keywords:

acute movement disorder; involuntary movements; chorea; dystonia; myoclonus; stereotypies; tics; tremors; children

Identifying Common Movement Disorders in the Emergency Department

Rebecca García Sosa, MD*,
Joanna Blackburn, MD†

*Child Neurology Fellow, Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL; †Pediatric Movement Disorder Specialist and Child Neurology Program Director, Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL.
Reprint requests and correspondence: Rebecca García Sosa, MD, Division of Neurology, Ann & Robert H. Lurie Children's Hospital of Chicago, 225 E Chicago Ave, Box 51, Chicago, IL 60611-2991.
rgarciasosa@luriechildrens.org

1522-8401

© 2015 Elsevier Inc. All rights reserved.

Movement disorders in children can occur as primary or secondary phenomena. They can develop from direct injuries to the basal ganglia or cerebellum but can also be manifestations of underlying systemic diseases, ingestions, medication side effects, infections, autoimmune encephalitides, and psychogenic disorders.

Movement disorders are divided into 2 main categories. There are hyperkinetic movement disorders, which are characterized by an excess of movement including tics, tremor, stereotypy, chorea, dystonia, and myoclonus. There are hypokinetic movement disorders, such as parkinsonism, which are characterized by a paucity of movement. This article will focus on hyperkinetic movement disorders, as they are more common than hypokinetic disorders in children and are more likely to present in the acute setting.¹

Hyperkinetic movement disorders or dyskinesias have been defined as any unwanted excess of movement.² Hyperkinetic movement disorders that can present in the emergency department (ED) setting include chorea, dystonia, tremors, myoclonus,

tics, and stereotypies. Two studies have evaluated acute movement disorders in children. A tertiary hospital in Australia performed a prospective study of 52 children and identified chorea as the most common acute movement disorder.³ A retrospective study of 92 children who presented to a tertiary center in North India found that myoclonus was the most common acute movement disorder.⁴ Most movement disorders in childhood, however, are chronic and should not present as neurologic emergencies.⁵ This is important to keep in mind, as some cases can be managed more appropriately in the outpatient setting.

INITIAL EVALUATION

A thorough history is one of the most valuable tools for formulating an accurate diagnosis for the child who presents with abnormal movements. If possible, history should be obtained both from family members as well as the child. Even young children can provide important information about their involuntary movements. Key features of the history include the age of onset and time course. An involuntary movement may be considered normal in an infant but abnormal in an older child due to changes that occur in a developing nervous system. The differential diagnosis and diagnostic evaluation will depend on whether the presentation is acute, subacute, chronic, progressive, paroxysmal, or waxing and waning. It is important to identify triggers, aggravating or relieving factors, preceding urges, suppressibility, and distractibility.² This information can be used as clues to help narrow the differential and guide emergent diagnostic testing if indicated. The presence or absence of underlying neurologic or nonneurologic medical conditions is also a valuable consideration when trying to narrow a differential diagnosis. Family history could suggest hereditary or genetic disorders relevant to the child's acute presentation.⁵

Meticulous observation is one of the most important and informative parts of the examination of a child with a hyperkinetic movement disorder. Movement disorders are not static; therefore, the patient needs to be observed at rest, during the maintenance of posture and with voluntary actions. Physicians should pay close attention to video recordings, when available. These are especially useful in cases of paroxysmal movement disorders that are not present at the time of evaluation in the ED setting.

Characterizing the phenomenology of the abnormal involuntary movement is essential. The qualities of each movement including rhythm, repetition, interruption, and randomness help to differentiate

among the hyperkinetic movements disorders. A complete neurologic examination is essential to provide diagnostic clues. Abnormalities on examination can lead to some of the more challenging movement phenomena such as chorea, dystonia, and tremors. In contrast, the neurologic examination is usually normal and nonfocal in patients with tic disorders or stereotypies.⁵ The following sections will focus on key aspects of phenomenology, etiologies, and management. Tables 1 and 2 summarize some of these key features described below.

CHOREA

Chorea, derived from a Greek word meaning dance, refers to ongoing, random, and discrete involuntary movements or fragments usually involving the face and proximal extremities.^{2,5} The movements are continuous and nonrhythmic and cannot be controlled by the patient. Patients can seem restless and have motor impersistence, which is appreciable during certain postures or simple

TABLE 1. Taskforce on childhood motor disorders definitions.²

	Definition	Key Features
Chorea	Ongoing, random-appearing sequence of one or more discrete involuntary movements or fragments	+ flowing
Dystonia	Involuntary sustained or intermittent muscle contractions causing twisting and repetitive abnormal postures, or both	+ sensory tricks
Tremor	Rhythmic back-and-forth or oscillating involuntary movement about a joint axis	+/- suppressible + stereotyped
Myoclonus	Sequence of repeated, often nonrhythmic, brief shock-like jerks due to sudden involuntary contraction or relaxation of one or more muscles	+ fast + jerky +/- rhythmic
Tics	Repeated, individually recognizable, intermittent movements or fragments	+ preceding urge + suppressible + distractible + stereotyped
Stereotypies	Repetitive, simple movements	+ suppressible + distractible +/- rhythmic + stereotyped

Download English Version:

<https://daneshyari.com/en/article/3235743>

Download Persian Version:

<https://daneshyari.com/article/3235743>

[Daneshyari.com](https://daneshyari.com)