Movement Disorder Classification

The classification of movement disorders has evolved. Even the terminology has shifted, from an anatomical one of extrapyramidal disorders to a phenomenological one of movement disorders [1].

Classifications of these disorders have inherent shortcomings due to the complex nature of movement disorders and the lack of diagnostic tests for the majority. Undiscriminating terminology, as well as the clinical, pathological, and genetic heterogeneity, further complicate the development of comprehensive categorizations.

Modern classification schemes tend to focus on clinical, pathological, or genetic/molecular criteria, but more recent attempts have been made to integrate across these levels. From a historical perspective, two 'golden ages' have shaped the current and evolving classification schemes: (1) the definition of clinical pathological entities in the early twentieth century and (2) the application of molecular neurogenetics in the past. However, the classification of movement disorders on clinical grounds (according to age at onset, distribution of symptoms, disease course, provoking factors, and therapeutic response) remains one of the most useful modes of categorization. Postmortem criteria have been employed to distinguish between degenerative and nondegenerative disorders, and specific hallmarks may be required to establish or confirm a diagnosis. Genetic features used for classification purposes include mode of inheritance and molecular genetic data, such as linkage to a known gene locus or identification of a specific genetic defect. A final classification scheme is based on alterations in molecular mechanisms (e.g. trinucleotide expansions) or protein function (e.g. channelopathies). Despite recent advances, it may not be possible to develop the 'ultimate' classification of movement disorders, and different patterns of lumping and splitting may be useful for the clinician, the pathologist, or the geneticist/molecular biologist. Furthermore, certain individual cases with unique features may not fit into any particular category [2].

Hemifacial spasm and palatal myoclonus are the only involuntary movement disorders that persist during sleep [3].

Craniofacial movement disorder

see also Pediatric movement disorders

Movement disorders include the following conditions:

Ataxia (lack of coordination, often producing jerky movements)

Dystonia (causes involuntary movement and prolonged muscle contraction)

Huntington's disease (also called chronic progressive chorea)

Multiple system atrophies (e.g., Shy-Drager syndrome)

Myoclonus (rapid, brief, irregular movement)

Parkinson's disease.

Secondary parkinsonism.

Psychogenic movement disorder

Progressive supranuclear palsy (rare disorder that affects purposeful movement)

Restless legs syndrome (RLS) and reflex sympathetic dystrophy/periodic limb movement disorder (RSD/PLMD)

Tics (involuntary muscle contractions)

Tourette's syndrome

Tremor (e.g., essential tremor, resting tremor)

Wilson disease (inherited disorder that causes neurological and psychiatric symptoms and liver disease)

Common dystonias include spasmodic torticollis, which affects muscles of the head, face, and neck, and blepharospasm, which causes involuntary closing of the eyelids.

Tourette's syndrome is an inherited disorder characterized by multiple motor and vocal tics (repeated muscle contractions).

Symptoms of Tourette's usually develop during childhood or early adolescence. Patients with the disorder often develop behavioral problems such as hyperactivity, inattention, impulsivity, obsessions, and compulsions. In most cases, symptoms vary in frequency and in severity.

Tics are involuntary muscle contractions that interrupt normal activities. They often are preceded by a strong sensation or urge that is temporarily relieved following the muscle contraction. Examples of common tics include the following:

Blinking

Clearing the throat

Facial twitching

Grunting

Shrugging the shoulders

Sighing

1)
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2)
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3)
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