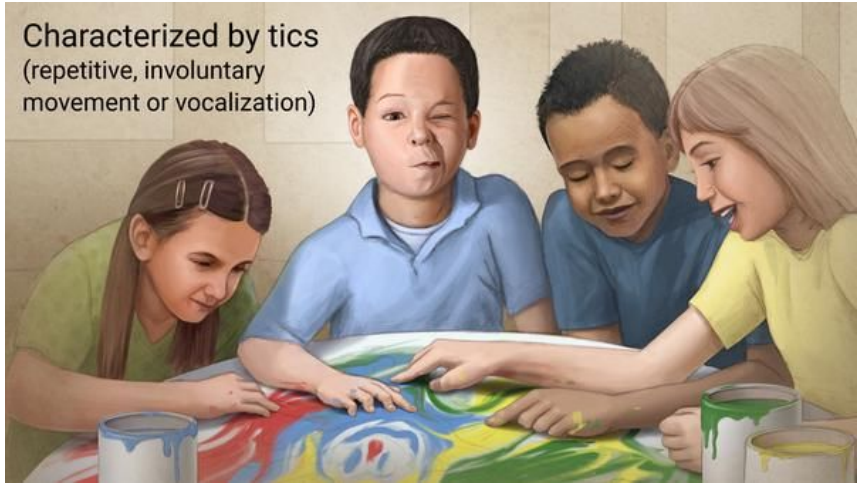
Tourette Syndrome and Tic Disorders



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Case 1: Leslie

- 8 year old previously healthy female. At age 6, she started developing involuntary blinking and head jerking. These movements will sometimes recede for a couple of weeks but then reappear without any known triggers. She has a family history of generalized anxiety disorder in mom, OCD in dad. She is not on any medications currently. Otherwise, she is doing well in school, and has been told she has “above average intelligence. Mom does, however, report that she has “an anxious temperament.”

What is her diagnosis?

Case 2: Benjamin

- 11 year old with history of inattention and hyperactivity presenting with a history of throat clearing since age 10, with grimacing and shoulder shrugging. Mom is frustrated with his behavior, saying “first he wouldn’t stop disrupting class by clearing his throat loudly, which finally got better over the last few weeks, but now he’s starting to make grunting sounds!” Benjamin says he can’t control these actions, that he just has an urge to them and feels better after doing them. He otherwise is not on any medications. His brother has a history of ADHD.

What is his diagnosis?

Tic Disorders: DSM V diagnoses

- *Tourette's disorder*: the presence of both motor and vocal tics for more than 1 year **(Case 2: Benjamin)**
- *Persistent* (*chronic*) *motor or vocal tic disorder*: single or multiple motor or vocal tics for more than 1 year, but not both motor and vocal **(Case 1: Leslie)**
- *Provisional tic disorder* : single or multiple motor and/or vocal tics for less than 1 year

Tourette's Disorder

- Criterion A: Both motor and one or more vocal tics have been present at some during the illness, although not necessarily concurrently
- Criterion B: Tics may vary in frequency but have persisted for greater than 1 year since first onset
- Criterion C: Onset prior to age 18 years
- Criterion D: The disturbance is not attributable to the effects of a substance or another medical condition

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Persistent (chronic) motor OR vocal tic disorder

- Criterion A: Single or multiple motor tics or vocal tics have been present but not both motor and vocal
- Criterion B: Tics may vary in frequency but have persisted for greater than 1 year since first onset
- Criterion C: Onset prior to age 18 years
- Criterion D: The disturbance is not attributable to the effects of a substance or another medical condition
- Criterion E: Never met criteria for Tourette's disorder
- *Specify if* with motor tics only or with vocal tics only

Provisional Tic Disorder

- Criterion A: Single or multiple motor and/or vocal tics
- Criterion B: Tics have persisted for less than 1 year since first onset
- Criterion C: Onset prior to age 18 years
- Criterion D: The disturbance is not attributable to the effects of a substance or another medical condition
- Criterion E: Never met criteria for Tourette’s disorder or persistent (chronic) motor or vocal tic disorder

Other Tic Disorders/Unspecified Tic Disorders

Other specified tic disorders

- Criterion specifies that significant clinical distress or functional impairment must be present, but does not meet full diagnostic criteria for the other tic disorders or any of the disorders in the neurodevelopmental disorders diagnostic class. A situation for this specification is when clinicians choose to communicate reasons, the presentation does not meet full diagnostic criteria for a tic disorder

Unspecified tic disorders

- Criterion specifies that significant clinical distress or functional impairment must be present, but does not meet full diagnostic criteria for the other tic disorders or any of the disorders in the neurodevelopmental disorders diagnostic class. A situation for this specification is when clinicians do not choose to communicate reasons, the presentation does not meet full diagnostic criteria for a tic disorder

Differential Diagnosis

- Stereotypic movement disorder
  - Involuntary, rhythmic, repetitive, predictable movements that appear purposeful and sotp with distraction
  - Do not have a premonitory urge
  - Examples including: stereotypies such as hand flapping, arm waving, finger wiggling. Chorea is another example: bilateral movements affecting most of the body, are random, rapid, abrupt, unpredictable, and nonstereotyped. Finally, dystonia is an example which is involuntary muscle contractions.
    - Stereotypies: Example 1 Example 2
    - Chorea Example
    - Dystonia Example

Differential Diagnosis cont.

- Another consideration includes substance induced and paroxysmal dyskinesias, which are hyperkinetic movement disorders that are episodic, involuntary, and sudden
- Myoclonus is another consideration, which is a unidirectional, sudden, nonrhythmic movement
  - A common pediatric one (it is suppressible, occurs during sleep, and very common so important to identify as you can hear the mom is very distressed in the video): Benign Neonatal Myoclonus
- Finally, it is important to rule out OCD and other related disorders

Comorbid Conditions

- Associated with OCD and ADHD
- One survey of children diagnosed with Tourette's Disorder showed that: 79% were also diagnosed with at least one comorbid psychiatric or neurodevelopmental disorder.
    - Specifically, 64% were also diagnosed with ADHD, 43% with behavior or conduct problems, 40% with anxiety, 36% with depression, and 28% with a developmental delay
- The comorbidities with ADHD/OCD is thought to be secondary to similarities in cortico-striatal-thalamic dysfunction

Treatment

- Primary treatment includes behavioral therapy
  - habit reversal training (HRT)
  - comprehensive behavioral therapy (CBIT) for tics
  - expose with response prevention (ERP)
- Pharmacologic management is indicated when there is:
  - Social impairment
  - Functional impairment
  - Pain
  - neurological/harmful behavior (self-injurious)
- Medications include guanfacine and clonidine
  - May increase frequency of tics, so must monitor closely

Closing Comments

- Prognosis is very good for tics with many children having improvement or resolution of tics by adulthood, especially with behavioral therapy
    - But remember to identify any comorbid conditions
- Remember, tics can be something that are distressing to a parent but may not even be noticeable to the patient, so especially when considering pharmacologic management, talk with both the child and the parent about the tics (rather than focusing solely on the parent)
    - Please remember to screen your patients not only for comorbid conditions such as ADHD, OCD, and anxiety but also for bullying or depression
- Ask parents to record movements that they find abnormal, so definitely remember this for tics, seizure like activity, or any abnormal movements

Billie Eilish recently confirmed she has Tourette's Syndrome

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