

Diagnosis of Incidental Tourette Syndrome at a Routine Adult Checkup



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INTRODUCTION

- Diagnosis of tic disorders in the adult primary care setting may be limited by lack of training, comfort with diagnosis, and management of neuropsychiatric disorders.
- Some tics can be camouflaged or misinterpreted as voluntary actions, and thus may go unnoticed by physicians.
- Primary care physicians are often the sole clinicians evaluating patients with tics including up to 20% of school-age children and up to 3% of adults.

PATIENT PRESENTATION

ID/CC:

A 24-year-old male presented for a first wellness check.

HPI:

During the visit, the patient repeatedly winked and turned his head to the right. At the end of the visit, the patient incidentally asked about this behavior, which had never been formally evaluated in the past. He shared that he had had repetitive, difficult-to-control behaviors since early adolescence, evolving from nodding and nose rubbing to the current presentation. A vocal tic (cough) was intermittently present.

PEx:

Vital signs, neurological and general physical exam were all within normal limits excluding presenting tic.

Assessment/Plan:

24-year-old man with longstanding verbal (throat clearing) and motor (head turning, winking) tic, by history and noted on exam. Additional history was not consistent with attention deficit hyperactivity disorder (ADHD) or obsessive-compulsive disorder (OCD) and negative for history of stimulant use or other neurologic issues. Given the presence of both motor and vocal tics for greater than one year and the patient's perceived level of symptom burden, the patient was prescribed guanfacine and given information about behavioral treatment options.

DISCUSSION

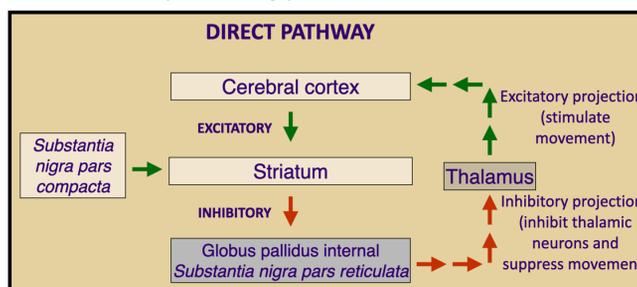
Clinical Presentation

Tourette syndrome (TS) is the most common cause of tics, which are brief, repetitive, intermittent movements or sounds. Patients with TS typically develop symptoms before adolescence and must exhibit two or more motor tics and one or more vocal tic for more than one year. About one-half of cases resolve in early adulthood. TS is often associated with ADHD, OCD, and other psychiatric co-morbidities. TS is more prevalent in males than females. It is unclear how this generalizes to intersex children/adults as they are not well represented in research studies.

1. Tourette Syndrome (TS)
2. Persistent (Chronic) Motor or Vocal Tic Disorder (MTD or VTD)
3. Provisional Tic Disorder

Name	Age	Duration of Symptoms	Features
TS	< 18 yo start	> 1 year	≥ 2 motor tics AND ≥ 1 phonic/vocal tics <i>Do not have to happen at the same time</i>
MTD persistent	< 18 yo start	> 1 year	≥ 1 motor tics
VTD persistent	< 18 yo start	> 1 year	≥ 1 phonic/vocal tics
MTD provisional	< 18 yo start	< 1 year	≥ 1 motor tics
VTD provisional	< 18 yo start	< 1 year	≥ 1 phonic/vocal tics

Pathophysiology



Basal ganglia dysfunction alone does not account for all important features of TS including male predominance. Evolving understanding implicates a phylogenetically conserved network of subcortical nuclei, the social behavior network, which is modulated by gonadal steroids. Recent research indicates that the social behavior network integrates together with basal ganglia to form a larger network, the Social Decision Making Network (SDM). Developmental SDM abnormalities can explain all major TS features including natural history and male predominance.

Treatment

The treatment for TS and other tic disorders is the same. Specific, structured non-pharmacological treatments focus on behavioral intervention and habit reversal. First-line pharmacologic treatments include alpha 2 adrenergic receptor agonists such as guanfacine, which are generally well-tolerated. Clonidine is proven more effective than guanfacine but less favored due to sedation. Dopamine-receptor antagonists may be needed for multiple, complex tics, but carry the risk of side effects including acute dystonic reactions and tardive dyskinesia. We highlight several interventions based on 2019 systematic review of all treatments to date. Additionally, we attach the evaluation of evidence for efficacy in improving tic severity when comparing a given treatment with placebo.

Confidence in the evidence	Behavioral Interventions	Medication	Neuromodulation
HIGH	Comprehensive Behavioral Intervention for Tics (CBIT)		
MODERATE		* Haloperidol * Risperidone * Aripiprazole * Clonidine	Deep brain stimulation of the globus pallidus
LOW		* Pimozide * Metoclopramide * Guanfacine * Topiramate	
VERY LOW		* Baclofen * Omega-3 fatty acids * Ondansetron	

CONCLUSION

- This case illustrates the importance of initiating a dialogue regarding all of a patient's presenting symptoms, regardless of their perceived complexity or one's perceived limitations in training.
- Despite complexity of pathophysiology and evolving offering of treatments, the diagnostic criteria and first-line treatments have not changed substantially.
- With the application of clear diagnostic criteria and treatment guidelines, this patient was able to receive an appropriately comprehensive evaluation and first-line treatment for TS in the outpatient primary care setting.

References

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