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Distinguishing and Managing Acute-Onset Complex Tic-like Behaviors in Adolescence

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Consistent with international reports,¹ this group of Tourette Syndrome (TS) experts has noticed a recent increase in adolescents presenting with tic-like symptoms that show a markedly atypical onset and course. These sudden onset motor movements and vocalizations are often associated with significant impairment and disability, resulting in Emergency Department visits and hospitalizations for some affected youths.

The typical clinical presentation of TS has been well described.² Tics typically onset in childhood (~4–8 years), begin with simple movements or vocalizations, progress in a rostrocaudal fashion, and increase in complexity over time. Many patients report premonitory urges that precede tics, and being able to suppress tics for brief periods.

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Contextual factors can also influence tic expression, both increasing and decreasing tic severity. Finally, TS affects males more than females (4:1), and frequently presents with obsessive-compulsive symptoms and attention-deficit/hyperactivity disorder.

In contrast, the recent surge of adolescent-onset tic-like movements have a markedly atypical course and presentation.¹ These atypical presentations seem to disproportionately affect adolescent females, without a family history of TS, who report an abrupt and explosive onset of complex motor movements and vocalizations. Common symptoms include complex limb movements, hitting/punching, forceful head movements, speaking with an accent, and/or uncharacteristically complex vocalizations including copro- and echo-phenomena. These patients generally do not report premonitory urges and display variable ability to temporarily suppress symptoms. The pattern of comorbid conditions is also uncharacteristic and often includes anxiety and/or depressive disorders. However, similar to TS cases, many report that contextual factors influence symptom expression.

While longitudinal research findings do not support a link between streptococcal infection and tic onset or exacerbation,⁴ some clinicians have thought that Pediatric Autoimmune Neuropsychiatric Syndrome (PANS) may explain the atypical presentation due to the sudden symptom onset. Yet when evaluated for PANS, patients do not have relevant clinical/laboratory findings. The ability to differentiate atypical cases from typical presentations of TS is complicated by a concurrent increase in the number of patients with a history of typical TS reporting a dramatic increase in tic severity; possibly related to stressors resulting from the COVID-19 pandemic such as loss of peer social supports, greater academic challenges, and/or family-related stress.

With these caveats addressed, we propose that functional movement disorder be considered in the differential diagnosis of atypical presentations of tic-like movements and vocalizations described above. Furthermore, the increased cultural visibility of TS over the past year on social media platforms may contribute to both symptom presentations among typical and atypical cases. To date “#tourette” has been viewed over 3 billion times on TikTok. “Challenge videos” (e.g., “Tourette’s Alphabet Challenge”) have also gained popularity. As tics can be susceptible to suggestion (e.g., mimicking) and reinforced by consequences (e.g., attention), there are indeed similarities between the symptoms exhibited by patients and the social media influencers they report following.

With regard to assessment and diagnosis, a comprehensive evaluation by a multi-disciplinary team is critical and should include a detailed history of symptoms, age of onset, clinical course, family history, and assessment of co-occurring psychiatric/medical diagnoses. A functional assessment to identify contextual factors (e.g., family, academic, and/or social stressors, daily routines, activity selection, and social media exposure) associated with symptom expression is important for the assessment and treatment of typical TS and the atypical presentation described above.

Regarding treatment, for typical cases of TS—whether a new onset or exacerbation of existing symptoms—we recommend following AACAP’s practice parameters.³ As psychosocial stress and psychiatric comorbidity can worsen symptom severity and increase

impairment, clinicians should provide psychoeducation regarding how contextual factors can influence tics and/or tic-like behaviors. Behavioral treatment including Comprehensive Behavioral Intervention for Tics (CBIT) and pharmacotherapy can be useful. CBIT includes both habit reversal training and functional interventions to reduce unwanted patterns of reinforcement that may unintentionally increase tic severity. For patients with an atypical presentation and potential influence of contextual factors, functional interventions within CBIT can determine activities associated with greater symptom expression and assist with developing targeted interventions. For example, patients who report a worsening of tic-like symptoms after watching TS videos on social media may benefit from limited social media exposure to potentially tic-exacerbating content. For patients with atypical presentations who cannot access CBIT, motivational interviewing and cognitive behavior therapy (CBT) can effectively reduce psychosocial stress, increase adaptive functioning, and target comorbidity that exacerbates the expression of problematic tic-like symptoms (i.e., anxiety, depression). If a functional movement disorder diagnosis is given, other specific behavioral therapies may also be beneficial (see La Faver et al.⁵).

Spikes in atypical presentations of tic-like movements are not new and will likely recur. Thus, characterizing the phenomenology, investigating mechanisms underlying symptom onset, tracing symptom trajectory to understand long-term outcomes, and developing effective treatments is of increasing importance.

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