

Global tic phenomenon: rapid onset of explosive complex tic-like behaviours

During the COVID-19 pandemic, cases of young people with what are described as complex tic-like behaviors have been presenting at clinics in Canada and around the world. These individuals are mainly females between 12 and 25 years of age who experience a sudden onset of complex motor and vocal tic-like behaviors. Due to the tic-like behaviours starting suddenly and aggressively, they are sometimes referred to as being an “explosive outburst”.

What do typical tics in patients with Tourette syndrome look like?

Tics usually start in young children, often boys, typically between the ages of four and seven. Tics evolve in character and follow a waxing and waning path – that is, they intermittently appear and then disappear. In early years, simple motor and vocal tics are mostly evident, for example, eye blinking, nose twitching, sniffing, or coughing. Complex tics may appear later after a few years, for example, gestures with hands, touching objects, repetition of syllables or words, or patterns of speech. Obscene and aggressive words or statements are uncommon, occurring in less than 10% of patients. Often a child recognizes an urge to tic, finds relief after the tic, and is able to suppress their tic for short periods. Tics often reduce when an individual is distracted. If the symptoms have lasted for at least a year, a child with both motor and vocal tics is diagnosed with Tourette syndrome.

How are acute onset tic-like behaviours different from typical tics in Tourette syndrome?

As the definition “acute onset” implies, the tics start rapidly and progress in frequency and severity over a period of hours and days. The tics start primarily in teenage or young adult females, most often with no past personal history of tics. The tic-like movements and vocalizations are complex, with a lack of simple motor or vocal tics. There may or may not be an urge to tic or an ability to suppress them. Often the tic-like movements reduce when the individual is distracted. Some affected individuals have a previous history of mild simple and motor tics for many years, which have dramatically worsened in frequency, intensity and complexity over a period of hours to days.

In individuals with tic-like behaviours, the associated (comorbid) conditions are different

Typically, 50% of children diagnosed with Tourette syndrome are diagnosed with Attention Deficit/Hyperactivity Disorder (ADHD) and Obsessive Compulsive Disorder (OCD). However, in the case of acute onset of tic-like behaviours, there is a higher representation of anxiety disorders and major depression. Despite the absence of a past personal history of tics in the majority, adolescents show a relatively high frequency of family history of other neurodevelopmental and emotional disorders. This suggests within the family, genetic and/or environmental factors are significant.

Pandemic stress

COVID-19 pandemic has substantially increased exposure to stressors within the family and/or school and academic challenges. Moreover, social isolation has markedly increased among younger people, resulting in a lack of social and psychological support. The stress

and anxiety caused by the pandemic may be a relevant association with this new clinical presentation of tic-like behaviours.

The role of social media

Many individuals with acute onset explosive tic-like behaviours have reported watching people with tic-like behaviours on social media, notably TikTok. Videos focusing on youth with tics and tic-like behaviours have gained increased popularity on social networks during the pandemic. Videos on the TikTok site marked with the hashtag #tourettes have had 2.9 billion views. There is a similarity between many of the tic-like behaviors individuals have exhibited in the clinical setting and the tic-like behaviours shown on social networks. It is believed the individuals' tic-like behaviors are modelled on the tic-like behaviors they are exposed to, and thereby produce imitative behaviours. Additionally, psychological and social stressors, in combination with media exposure, could contribute to a susceptibility to repetitive behavioral patterns, triggering the expression of tic-like symptoms. These cases have caused a very high level of distress for the patients and their families, with disruptions to academic and family life.

Treatment of acute onset of tic-like behaviors

One of the recommended treatments for the acute onset of tic-like behaviours is functional behavior intervention. Generally, behavioural therapy is recommended, rather than medication. Personalized psychoeducation strategies are advised as therapy to help educate and motivate the child. Strategies to reduce the exposure to social networks and stress management treatments are also recommended. Furthermore, focusing on the associated anxiety and depression could produce effective outcomes. Cognitive Behavioral Therapies, including Comprehensive Behavioural Intervention for Tics (CBIT) may be used to treat this type of repetitive behavior.