

Tourette Syndrome

Tourette Syndrome (TS) was first described by Georges Gilles de la Tourette in 1885. It is a neurological behavioral disorder characterized by motor and vocal tics, which occur suddenly and are usually fast and repetitive. Examples of motor tics include blinking, shoulder shrugging, nose twitching, eye rolling and head jerking. Vocal tics include sniffing, throat clearing, blowing, coughing and in some cases, repeating other people's words and in a minority of cases, excessive cursing.

The first tics usually occur around the face and neck. Usually, motor tics start appearing before vocal tics. A patient's tics may vary with time, with some tics disappearing and new ones developing, while other tics may persist. Even though these tics are involuntary, some people are able to temporarily suppress their tics, but this suppression causes tension and mental discomfort. The frequency and severity of tics may affect various aspects related to the quality of life (psychological, social, school, work). Additionally, in most patients, TS commonly occurs along with other disorders such as Obsessive Compulsive Disorder (OCD), Attention-Deficit Hyperactive Disorder (ADHD), and migraine.

TS is a childhood-onset disorder and symptoms typically start before or by the age of 10-years. In most cases, symptoms disappear around the age of 18, but in some cases, they persist into adulthood. The majority of patients exhibit the highest tic severity around the age of 12. In a minority (5%) of cases however, symptoms become the most severe during adult life, possibly causing self-injury.

TS used to be considered a rare disorder, but with

increased awareness and improved diagnosis it has been shown that TS affects close to one in every 100 children and is thus more prevalent than was originally thought. The disorder is three times more likely to be found in males than females. Studies from different countries suggest that clinical characteristics are similar between cultures and ethnicities.

Risk factors

TS is a complex multifactorial disorder and its exact cause is unknown. Several studies have suggested that immune and environmental factors (such as maternal smoking during pregnancy and oxygen deprivation at birth) may play a role in the emergence of TS as well as in the severity of the tics exhibited. Importantly, family and twin studies have proved that this disorder is genetic. TS occurs even if only one of the two copies of the inherited gene is defective. Genetic studies have associated TS with mutations and variations in several genes. However, no definitive genetic risk factor has been identified yet. The interplay between the genetic and the environmental components causes the variations in the clinical features seen among individuals.

Diagnosis and Management

According to the American Psychiatric Association, the diagnostic criterion for TS is having both multiple motor and vocal tics that have persisted for more than 1 year. Several clinical rating systems have been put in place for diagnosing TS, thus making it possible to assess the severity of symptoms. The most widely used, "Yale Global Tic Severity Rating

Scale”, developed in 1989, is a questionnaire filled out by the parents. Brain imaging studies suggest that patients with TS exhibit an overactivity of dopamine (a chemical that relays messages between different brain cells) in an area of the brain that controls movements. Other brain areas, including the cortex and thalamus, and other brain chemicals, might be implicated in TS as well.

There is no cure for TS. However, there are treatments and management methods to help alleviate the clinical symptoms. Supportive therapy is mostly used to help patients cope with their tics and the social/psychological problems that may accompany TS. Behavioral therapy is used to help patients learn to suppress their tics. Some behavioral techniques address all tics simultaneously, while others focus on suppressing one type of tic at a time. Medications used in TS include anti-psychotics, anti-depressants and anti-hyperactivity drugs. These medications are not specific for TS treatment and may have adverse side

effects. Some studies suggest that behavioral therapy is more effective than such medications at reducing tics. Medications are usually only recommended if the tics are severe or injurious and if behavioral therapy is ineffective. Recently, deep brain stimulation has been adopted as a treatment option for TS.

TS in the Arab World

In general, there is low awareness about TS in the Arab world. There are reported cases of TS in various Arab countries including Bahrain, Egypt, Kuwait, Lebanon, Saudi Arabia, and UAE. A recent study examined the prevalence of TS in the UAE and found that it is similar to the worldwide prevalence, with the condition being two and a half times more likely to be found in males than in females. The age of onset of TS in UAE was found to be 6.4 years. In accordance with worldwide studies, similar occurrence rates of OCD and ADHD in TS patients were seen in the UAE.

Famous people diagnosed with TS

David Beckham

English football star

Wolfgang Mozart

Pianist and composer

Leo Tolstoy

Russian writer

Mahmoud Abdul-Rauf

Professional Basketball Player

Howard Hughes

Billionaire businessman and engineer

Napoleon Bonaparte

French military and political leader