# Tourette Syndrome: Not Just a Tic Disorder

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Although tics are considered the hallmark of Tourette syndrome, arguably tics may not be the only or primary presenting symptom. For many children diagnosed with Tourette syndrome irritability, frustration intolerance, hyperactivity, inattention, ritual behavior or other difficulties may have been present a number of years before the appearance of tics. Children with Tourette syndrome are often highly co-morbid with attention deficit-hyperactivity disorder, obsessive compulsive symptoms, and other related behavioral problems that should be detected and treated effectively. Therefore tics should not be the sole indicator or receive over emphasis in the detection and treatment of Tourette syndrome. *(Chang Gung Med J 2005;28:527-9)*

**Key words: attention deficit-hyperactivity disorder, obsessive compulsive symptoms, tic, Tourette syndrome.**

Tics hallmark the diagnosis of Tourette syndrome (TS).[1,2] However, tics may not be the only or primary presenting symptom. For many children with Tourette syndrome, behavioral difficulties, such as irritability, frustration, intolerance, hyperactivity or inattention, may have been present a number of years before the onset or appearance of tics.[1] These difficulties may reflect the early manifestations of the underlying diathesis in behavior regulation. Early behavioral symptoms may be accompanied by tics that are easily overlooked until the onset of full-blown TS. Children with TS have a 8.3% to 75% co-morbidity with attention deficit-hyperactivity disorder (ADHD), 3% to 85% with obsessive compulsive symptoms (OCS), and other behavior problems.[3]

Families with children who suffer from ADHD, oppositional disorder, or aggression in preschool years, are often part of an already tense, ambivalent, concerned and angered milieu, which is often present before the onset of tics.[4] These stressors set the stage for an escalation of familial anxiety, discord, and negative emotion. Tics may be observed by families and teachers, and experienced by the child, within the child's framework of already problematic self-control and consequently be interpreted as willful acts of rude behavior.

For children with no previous difficulties, the first few episodes of transient tics may be treated as merely bad habits.[5] They may elicit passing concerns or none at all. Young children are less likely to be aware of tics, their ultimate outcome may be appreciated only much later, when more noticeable and severe tics emerge. Some children are also aware of oddities in their sensory processing. They may be unusually sensitive to touch, the feel of clothes, or to particular bodily internal or external sensory experiences.[6,7]

When tics take increasingly odd forms, children may feel that their minds have been invaded by demons they cannot defeat. No matter how much their parents explain, plead, or punish, they know that they cannot control the tics for long, if at all. Yet they know, in a self-reflecting and often guilty fashion, that the urges and actions are theirs, and that there are moments when they can suppress them. As their parents also do not understand what TS chil-

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Received: May 24, 2005; Accepted: Jun. 27, 2005
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dren are experiencing, they may scold and cajole; they may punish or deprive the children of treats; they may try to ignore the tics or TS children themselves; and may berate or isolate the child intensly. The major result of this negative, intrusive interaction between parents and children results in mutual feelings of shame and estrangement.[8-12]

After a few years, patients may increase the time and energy they take to focus more intensely on their urges. Their inward focus of attention will increase with the progressive awareness experienced by most patients of bodily sensations that precede the tic actions. The premonitory urges are unpleasant sensations located in particular bodily sites.[1] These feelings tend to start as a mild tension and build upto crescendos of tension, which are reduced only when patients manifest particular tics. As they mature, they work, to a greater or lesser degree, on holding back tics. They become experts on recognizing their influence on others and attempt to find safe areas of no restraint to avoid prejudice.

They develop a sensitivity to how others react to them. Through the reactions of others and their own self-criticism, they may feel that they are conspiring with the compelling urges of tics, surrendering to their demands rather than bravely resisting, and satisfying themselves rather than choosing the moral high road of abstinence. Children may feel not only burdened but guilty, as they recapitulate many times a day, the cycle of impulses, tics, OCS, self injurious behavior, trichotillomania, or other actions that reduce the tension, remorse, and return of the internal tension.[13] Through all these processes, their self-images become blemished by what they suffer in the privacy of their minds and in the overly public displays of their bodies.

As with children who have chronic illnesses, children with TS may feel as if they bring tics on themselves by something they thought or did, and thereby generate problematic family interactions. In contrast to children with chronic illnesses, children with TS may feel additional guilt accompanied by the sense that they could ideally control the tics but fail to do so.[14-16] Bodily sensory experiences and attempts to understand or control their symptoms, may make them more introspective in general, in comparison to other children of the same age. While healthy children take their bodies for granted, and are called upon to describe their inner states only in relation to the ordinary events of daily life or when occasionally ill, children with TS are constantly analyzing their thoughts, feelings, and actions, trying to discern small differences and convey them to their parents and physicians.

Recurrent and multiple tics may become a distorting influence on the patients' sense of their bodies as a source of pleasure and their mind as the agent for shaping and controlling instinctual urges.[3] In varied and individualized ways, tics become enmeshed in their relations with families and peers, in the inner world of fantasy, and in children's sense of themselves as autonomous individuals whose desires are balanced by values and controls. This formulation is consistent with empirical research that their peers see children with TS as more withdrawn, socially immature and less popular than others.

Thus, clinical manifestations of TS before adulthood are more variegated than what may be conveyed by the diagnostic criteria of tic disorders.[17] Most children with mild tics are never subjected to clinical diagnosis. For those who are diagnosed, the severity of tics typically peak early in the second decade with many patients showing a marked reduction in tic severity by the age of 20 years. Many children with severe tics may achieve adequate social adjustment in adult life. The factors that appear to be of importance with regard to social adaptation include the severity of not only tics but also all comorbidities. In fact, behavioral difficulties may contribute more than tics to poor social adaptation. While the majority of patients with TS have little or no impairment from their symptoms, TS often envelopes the entire lives of others.

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