

TICS AND TOURETTE SYNDROME

Clinical evaluation of 44 cases

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ABSTRACT – We evaluated 44 patients with tics and Tourette's syndrome (TS) emphasising the age of onset of symptoms, sex, classification and localization of tics, associated symptoms and signs and comorbidities. Thirty-three patients (75.2%) had TS defined criteria whereas 10 (22.7%) had chronic motor and/or vocal tics. Simple motor tics were found in 43 cases (97.7%), mainly affecting the eyes (43.2%), mouth (43.2%), face (34.1%). Simple vocal tics occurred in 33 (75%). Coprolalia was found in just 6 cases (13.6%) and copropraxia in just 2 (4.5%). Obsessive compulsive disorder and/or symptoms were found in 26 cases (59.1%) and attention deficit in 17 (38.6%). Eighteen patients (40.9%) had other disorders, such as alcoholism, tabagism, drug abuse, affective disorders, anxiety, sleep and learning disorders. The data obtained are similar to those found by other authors. We highlight the low frequency of coprolalia, as well as the associated neuropsychiatric disorders.

KEY WORDS: Tourette's Syndrome, obsessive compulsive disorder, attention deficit disorder.

Tiques e síndrome de Tourette: avaliação clínica de 44 casos

RESUMO – Avaliamos 44 pacientes com tiques e síndrome de Tourette (ST), enfatizando a idade de início dos sintomas, sexo, classificação e localização dos tiques, sinais e sintomas associados e presença de comorbidades. Trinta e três pacientes (75,2%) tinham TS definida, ao passo que 10 (22,7%) tinham tiques motores e/ou vocais crônicos. Tiques motores simples foram encontrados em 43 casos (97,7%), principalmente envolvendo os olhos (43,2%), boca (43,2%), face (34,1%). Tiques vocais simples ocorreram em 33 (75%). Coprolalia estava presente em apenas 6 casos (13,6%) e copropraxia em apenas 2 (4,5%). Sintomas e/ou transtorno obsessivo-compulsivo foi encontrado em 26 casos (59,1%) e déficit de atenção em 17 (38,6%). Dezoito pacientes (40,9%) tinham outras desordens, tais como alcoolismo, tabagismo, abuso de drogas. Os dados encontrados são semelhantes àqueles encontrados por outros autores. Nós enfatizamos a baixa incidência de coprolalia, assim como a presença de transtornos neuropsiquiátricos associados.

PALAVRAS-CHAVE: síndrome de Tourette, transtorno obsessivo-compulsivo, déficit de atenção.

Georges Gilles de La Tourette first described Tourette's Syndrome (TS) in 1885 as "a nervous affection characterised by lack of motor coordination accompanied by echolalia and coprolalia"; later Charcot named the condition as Tourette's Syndrome¹⁻³. Tics are fast, repetitive and stereotyped involuntary movements of individual muscle groups. Tic disorders are commonly categorised according to age of onset, duration of symptoms, severity of symptoms and findings of vocal and/or motor tics⁴⁻¹⁰.

Chief among the tic disorders is TS, which is the most severe and is frequently accompanied by neuropsychiatric disorders such as obsessive compulsive disorder (OCD), attention deficit disorder with or without hyperactivity (ADHA) and others^{4,6,8,9,11,12}.

Transitory tic disorder: Tics usually start while the child is in primary school and can be found in up to 18% of all children. The most common tics are blinking, rubbing the nose and making funny faces. Transitory vocalisations are less common and include the sound one makes when "cleaning the throat", among others. Sometimes childhood tics can be bizarre; e.g. licking the palms of the hands or touching the genitalia. Transitory tics last only a few weeks or months and usually aren't related to any kind of behavioural disorder. They are best observed in fatigability or excitatory settings. Like other tic disorders, boys are affected 3 to 4 times more commonly than girls. Even though transitory tics do not last longer than a year by

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Table 1. Types and distribution of tics.

Simple motor tics		Complex motor tics		Simple vocal tics	
Eyes	19			Sniffing	9
Mouth	19			Throat Clearing	7
Face	15	Face	3	Guttural Sounds	3
Neck	13			Repetitive Sounds	3
Shoulders	13			Sighs	2
Head	7			Hiccups	1
Upper Limbs	4	Upper Limbs	3	Breathing Sounds	1
Jaw	3			No Description	13
Lower limbs	1	Lower limbs	1		
Total	43	Total	7	Total	33

definition, relapsing episodes of transitory tics can occur for several years.

Chronic Tic Disorder: It can be differentiated from transitory tic disorder not only by the persistence of symptoms for several years, but also by its clinical persistent features. Chronic tics can remain unchanged for years. Blinking and facial movements are two examples of tics found in chronic tic disorder.

Tourette Syndrome: According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) it's defined by: a) multiple motor tics and one or more vocal tics; b) tics occur several times a day, almost every day or intermittently for one year or more (there cannot be a period free of tics longer than 3 months); c) the disorder causes discomfort and severe social and work compromise; d) onset of tics must occur before the patient is 18 years-old and e) the disorder is not due to the use of drugs nor to another disease.

Chronic Motor/Vocal Tics Disorder: The patient presents with several chronic motor (or vocal) tics. The diagnostic criteria are the same as those for TS, except for a): either simple or multiple motor tics, or vocal tics (they can't be found at the same time)^{4,10,13-15}.

The aim of our study was to perform a clinical evaluation of 44 patients with either TS or other tic disorder and to see whether there were other co-morbid disorders.

METHOD

We retrospectively reviewed the files of 44 outpatients from the Movement Disorder Service of the Hospital de

Clínicas da Universidade Federal do Paraná. Age of onset, sex, classification and localisation of tics, associated signs and symptoms, concomitant OCD, ADHA and other neuropsychiatric disorders were evaluated. Classification of all disorders followed the guidelines of the DSM-IV⁶.

RESULTS

The patients' age ranged from 3 to 60 years (mean age of 13.5 years at the time of our evaluation). 75% (n=33) of all patients fulfilled the diagnostic criteria for TS, 22.7% (n=10) for Chronic Motor/Vocal Tics and 2.3% (n=1) for transitory tics. Sixty-three percent (n=28) of our patients were male and 36.4% (n=16) were female. Most patients had onset of symptoms in the first or second decade (prior to ten years in 56.8% and from 10 to 20 in 15.9%). Seven percent had onset of symptoms after twenty years and 20% could not recall when they first manifested their symptoms.

Simple motor tics could be found in 97.7% (n=43), complex motor tics in 15.9% (n=7) and simple vocal tics in 75% (n=33) of our cases. Simple motor tics had a distribution that compromised mostly the head and upper limbs. Thus, nineteen patients had eyes tics, tics involving the mouth muscles were found in 19 patients, 15 had facial tics other than eye or mouth tics, neck and shoulders tics were found in 13 patients each, 7 patients had head tics, 4 had distal upper limbs tics (hands only), 3 had tics of the lower limbs and one patient had jaw tics (Table 1). Complex motor tics occurred in fewer patients, with the following distribution: upper limbs in 3 patients, facial tics in another three and lower limbs in one (Table 1).

Simple vocal tics comprised a complex and varied group of tics. Nine patients presented with sniff-

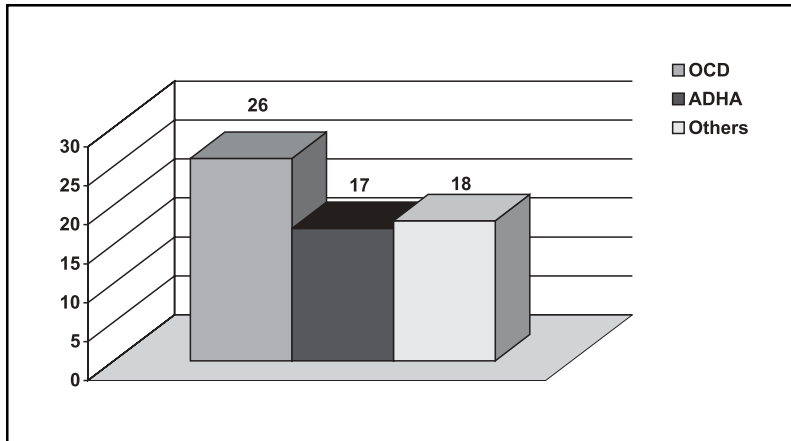


Fig 1. TS Associated disorders.

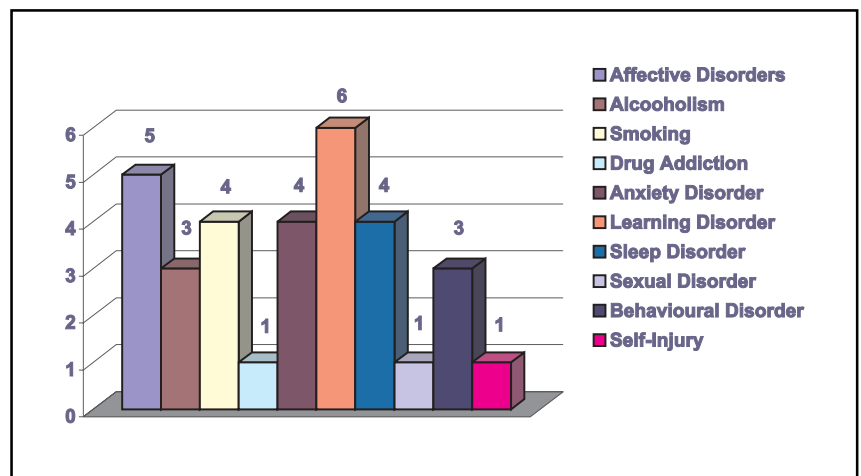


Fig 2. Other disorders.

ing sounds, 7 with “throat clearing” sounds, 3 with guttural sounds, 2 with sighs, one with hiccups and one with breathing sounds. Three patients had repetitive sounds that were hard to classify and 13 had no clear description of their simple vocal tics. Only 13.6% (n=6) of patients had coprolalia (Table 1).

Obsessive Compulsive symptoms/disorder was observed in 59.1% (n=26) and ADHA in 38.6% (n=17) as seen in Figure 1. Other disorders (affective disorders, anxiety disorder, alcoholism, smoking, sleep disorders and learning disorder) were found in 40.9% (n=18) (Fig 2).

DISCUSSION

We evaluated the files of 44 patients and classified the patients according to the diagnostic criteria found in the DSM-IV. Seventy-five percent of all patients fulfilled the criteria for TS while 22.7% had chronic motor/vocal tics. Onset of symptoms prior to the patients being 20 years old could be found in 72.7% of our patients, a result similar to those found in other studies^{2,7,8,14,16,17}.

We were more flexible than other authors and classified patients as having TS as long as they were younger than 20 when they had the onset of their symptoms. This criterion was based on the fact that some authors propose a limit age of onset before the patient is 21 years old, instead of 18, which is the usual time of onset of tics in both TS and chronic motor/vocal tics^{2,6-9,13-15,17}.

In our group the male/female ratio was 1.75:1 (the ratio is usually 3 or 4 men for every woman).

Simple and complex motor tics occurred more commonly in the upper segment, while simple vocal tics could be found in 75% (n=33). Similar results were found in other studies, such as the Tolosa and Bayes, cited by Lees and Tolosa⁷ and by Cardoso et al.¹⁷. In that study the authors found that blinking, grimacing and shoulder elevation were the most common motor tics. The types of simple vocal tics found in their study were mostly sniffing, throat clearing and grunting sounds¹⁷.

Even tough it is the mostly well-known symptom

of TS (see original description), coprolalia is found in only a minority of patients (5 to 30%). In our study coprolalia was rather uncommon (13.6%, n=6) and was not an obligatory criterion for the diagnosis of TS. In their study, Cardoso et al. found 9 patients (28%) out of 32 with coprolalia¹⁷. Only two of our patients (4.5%) had copropraxia and none had echolalia, ecopraxia or palilalia.

Coprophenomena occurred in about one third of the patients in the series by Shapiro et al.², but are much rarer in Japanese patients with TS according to Lees. This is probably due to the extreme courtesy and decorum of the Japanese culture⁷.

Ever since Gilles de La Tourette first described it, a clear association between tics and obsessive-compulsive symptoms is usually found. In our group 59.1% of TS patients had OCD (or obsessive-compulsive symptoms), which is similar to the rates found in the literature (28% to 67%)^{2,4,7,8,11,12,15,17}. Even though ADHA affects up to 50 or 80% of TS patients^{4,7-9,11,15,16}, in our group it could only be found in 38.6%, probably due to the small size of our study population. Another study with a group of Brazilian patients had an incidence of 63% for ADHD and 44% for OCD¹⁷.

TS and other tic disorders seem to be part of the same phenomenological continuum, and some clinical features of tics, OCD and ADHA can occur in any given person during childhood as part of the normal development^{18,19}. In addition, other studies highlight the role of both genetic and environmental factors in the genesis of tic disorders^{7-9,13-15,18,20,21}.

The data found in our study are similar to the findings of other authors worldwide. We highlight the low occurrence of coprolalia in our patients and emphasise the concomitant neuropsychiatric disorders.

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