

## Case report

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# Tourette's disorder and obsessive compulsive disorder: a case report

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### Summary:

Tourette's disorder is a childhood onset neuropsychiatric disorder characterized by multiple motor and vocal tics for at least one year in duration. Occasionally this disorder may be associated with obsessive compulsive disorder. This case was presented here to demonstrate the co occurrence of these two disorders as well as the effectiveness of pharmacological treatment for the improvement of the condition. The case report described the history of a 21 years old male patient with 7 years history of Tourette's disorder and obsessive compulsive disorder. He was seriously disabled by his symptoms that necessitated thorough evaluation to exclude causes, differential diagnoses and or any other co morbidities. Treatment with fluoxetine 60 mg daily and quetiapine 100 mg daily in divided dose improved his symptoms and he was able to return his functional life, that he had been mislaid because of his illness.

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### Introduction

Tourette's Disorder (TD) is a childhood onset neuropsychiatric disorder affecting the brain and nervous system. It is characterized by the presence of multiple motor tics which are involuntary, non rhythmic, repetitive movements and at least one vocal tics of at least one year in duration. Motor tics typically progress in a rostral-caudal fashion and over time they have a tendency to become more complex, involving contractions of groups of muscles in a stereotyped and repetitive way. Approximately 95% of signs of TD show up between the age group of 4 to 13 years. Simple motor tics involving the eyes or face are usually the first to appear in a child with TD.<sup>1</sup>

In about half of the patients with TD decline during the adolescence period and get better by the age 18. While it is possible for tics to persist into adulthood, in 40 to 45% of the cases, tics' severity gradually declines.<sup>2</sup> Sometimes this disorder may be associated with obsessive compulsive disorder (OCD) or an impulse control disorder.<sup>2</sup> The earliest descriptions of TD included obsessive thinking as a part of the symptom complex. Recent studies suggest that, OCD may occur in as many as 7% of patients with TD and that both of these disorders share a similar clinical phenomenology and familial patterns of transmission.<sup>3</sup>

The management of the patients with TD is an important clinical issue. To avoid misdiagnosis, it is considered that, TD is

characterized by three significant components. First is the presence of both motor and vocal tics for more than a year, though they do not need to occur simultaneously. Second, the tic onset must be before age 18 years. Third, tics must not be caused by substance intake or another medical condition. A family history of similar neurological symptoms supports the diagnosis of TD.<sup>4</sup> Antipsychotic medications are the most effective treatment for tics where as selective serotonin reuptake inhibitors (SSRIs) are commonly used for the treatment of OCD.<sup>5</sup> This case demonstrated, the co occurrence of the two conditions as well as the effectiveness of combination of antipsychotic and antidepressant drugs for the treatment of the conditions.

### Case report

This case report described the history of a 21 years old male residing in akhalia, Sylhet, presented to the chamber of a psychiatrist with 7 years history of repetitive involuntary eye blinking, shoulder shrugging, sniffing, vocalization and whistling or throat clearing. The intensity and duration of these motor and vocal tics varied with no single episode lasting more than a few seconds. The frequency of his tics' ranged from many times a day to once every few days. These tics' were more severe when the patient was fatigued, stressed or sitting idle and less severe when the patient was mentally focused and engaged in physical activity. He could only voluntarily suppress the tics for a few minutes at a time but this was associated with severe

stress and restlessness. He was seriously disabled by his symptoms. The patient also complained of recurrent intrusive thoughts which were resisted by him for the equal duration of the tics'.

The patient had no history of birth complications and experienced no developmental problems. He had no history of any psychotic symptom, any seizure, hyperactivity or substance abuse. There was no family history of psychiatric disorder. No triggering factors could be identified. His father reported that, prior to displaying symptoms of TD, he had a pleasant personality and possesses a sunny disposition. He excelled in his academic endeavors and maintained friendly relationships with his peers. He was in 10<sup>th</sup> class and had never failed and was an average student in school. But after developing the tics, he felt increasingly embarrassed in public place and school as his symptoms drew the attention of others. His school grades had been deteriorating and he was irritable throughout the day. Due to his loss of self-esteem he had not been attending school regularly. His teachers attributed the symptoms to typical disruptive classroom behavior and relayed their observations to the patient's family. When the behavior persisted for more than a month, the teachers recommended the parents to seek professional assistance. The patient's family sought medical expertise two months after the onset of symptoms when the patient was fourteen. The patient's family had sought treatment 4 years previously. At that time he was treated with haloperidol (10 mg/day) followed by risperidone (12 mg/day) in divided doses. This treatment resolved the symptoms partially but full remission was not obtained. However, he stopped the medication because of side effects (restlessness, tremors, slurred speech, and motor retardation) and the symptoms re-emerged three months later.

The mental state examination revealed that, the patient had an anxious and irritable mood. Behavioral symptoms revealed excessive eye blinking, neck jerks, nasal sniffing, grunting, throat clearing, shoulder shrugging, grimacing, feet tapping, production of abnormal sounds and whistling. He had an obsessional thought of being contaminated with germs and had repetitive cleaning rituals. His cognitive function was intact with average intelligence, good judgment and intact insight. Physical examination revealed no other abnormalities. Laboratory tests including complete blood count, liver function tests, kidney function tests, thyroid function tests, urine analysis and test for syphilis were normal. A contrast enhanced computed tomography scan of the brain and electroencephalography were also normal.

Treatment starting with fluoxetine at 20 mg and quetiapine 25 mg daily (but there was minimal improvement in 3 weeks) followed by fluoxetine 40 mg and quetiapine 75 mg daily resolved his symptoms, allowing him to return to the life that he had been missing because of his illness. After 3 weeks at this dose there

was a significant reduction in his symptoms, his vocal tic had disappeared but some motor tics and occasional grimacing remained. After an additional 4 weeks at the 60 mg/day fluoxetine and quetiapine 100 mg daily dosage his symptoms had reduced. Some behaviour therapy was given to the patient simultaneously. There was significant improvement of intrusive thoughts also. After that, the patient exhibited these symptoms at a frequency of a few tic episodes per week, each lasting one to three seconds. The psychiatrist educated the patient and his family about TD and recommended that, they would speak with the patient's teachers about his condition so that, individualized support and supervision could be provided. With a newfound understanding of TD, the patient was able to better cope with his symptoms and his negative emotional responses to the disorder declined. His confidence was gradually restored with the support of his family, friends and teachers. Subsequently his self confidence improved and he was able to return to school two months after starting the treatment. The family reported no side effects and improvement of compulsive behavior. The medication was continued for six months with the same dosage and then gradually stopped. He was advised to follow up regularly for at least one year.

## Discussion

TD was one of the three tic disorders recognized by the Diagnostic and Statistical Manual of Mental Disorders under neuro developmental disorders.<sup>4</sup> TD was characterized by sudden, involuntary, repetitive, non-rhythmic movements such as blinking, grimacing, head jerking or shoulder shrugs. Complex motor tics consisted of several simple motor acts occurring in an orchestrated sequence or semi purposeful movements, such as touching or tapping. Simple phonic tics consisted of simple, unarticulated sounds such as throat clearing, sniffing, grunting, and coughing.<sup>6</sup> Tic episodes occurred in bouts, which could be exacerbated by stress, fatigue, extremes of temperature and external stimuli. Intentional movements attenuated tic occurrence over the affected area and concentration in activities tended to diminish tic symptoms.<sup>7</sup> The tics' of our patient were also more severe when he was fatigued or stressed and less severe when the patient was mentally focused and engaged in physical activity. Furthermore, the other patterns of symptoms also met the diagnostic criteria for TD, a condition that was more prevalent in males and usually affected the face more than other parts of the body.<sup>8-11</sup> The exact cause of TD was unknown. But it was well established that, both genetic and environmental factors were involved.<sup>12</sup> In 1998, a team at the US National Institute of Mental Health proposed a hypothesis based on observation of 50 children that, both OCD and TD might arise in a subset of children as a result of a post streptococcal autoimmune process.<sup>13</sup>

Antipsychotic medications were the most effective treatment for tics but the common occurrence of weight gain and the increased risk of metabolic syndrome with chronic use had relegated them to a second-line medication, particularly in children.<sup>5</sup> Alpha 2 agonists were currently considered first line treatments. Several randomized controlled trials over the last decade had demonstrated the effectiveness of pergolide, tetrabenazine and topiramate.<sup>14</sup> We chose to use fluoxetine and quetiapine in this case because of its relatively benign side effect profile and the fact that, previously the patient had not properly responded to haloperidol and risperidone. Furthermore, some hypotheses about the etiology of TD focused on abnormalities in dopaminergic and noradrenergic neurotransmission in the frontoparietal network.<sup>15,16</sup> So quetiapine's unique mechanism of action as a partial agonist on the D<sub>2</sub>, 5HT<sub>2C</sub>, and 5HT<sub>1A</sub> receptors and as an antagonist of the 5HT<sub>2A</sub> receptors might help to explain its effectiveness in TD. On the other hand, to treat symptoms of OCD, psychiatrists often prescribed a SSRI such as fluoxetine starting at 20 mg daily.<sup>5</sup>

Education about TD to people who interacted with the patient was key role to managing the disorder. Only when symptoms of TD interfered with social, academic or occupational performance, intervention was warranted. When tics were mild and no disabling, education and counseling presented an effective plan to treat TD. But when tics became troublesome, medications such as tetrabenazine, fluphenazine and or risperidone are prescribed to alleviate the symptoms. Fluphenazine and tetrabenazine, both drugs worked to reduce tics' frequency and intensity by approximately 60 to 80%.<sup>11</sup> It was advantageous to use newer anti dopaminergic drug because it provided the same benefits without the harmful side effect like tardive dyskinesias, a disorder leading to involuntary, repetitive body movements. For patients who were intolerant or unresponsive to the pharmacologic approach, behavioral therapy was also recommended as an alternative intervention strategy. More specifically, habit reversal training (HRT) was implemented to control tics. There were two components of HRT like tic awareness training, which focused on recognizing early signs of tic onset and competing response training, which developed a voluntary movement that opposed the tic.<sup>17</sup>

### Conclusion

In this case the use of fluoxetine and quetiapine were the life changing drugs for the patient. Given ongoing concerns about the chronic use of antipsychotic medication, even those with limited side effects, long term follow up studies are needed to assess the relative cost benefits of different strategies including the use of low dose antipsychotic medications for treating this disabling condition.

### References

1. Leckman JF, Zhang H. Course of tic severity in Tourette syndrome: the first two decades. *Pediatrics* 1998;102(1):14-9.
2. Singer HS. Tourette syndrome and other tic disorders. *Handb Clin Neurol* 2011;100:641-57.
3. Steingard R, Dillon-Stout D. Tourette's Syndrome and Obsessive Compulsive Disorder: Clinical Aspects. *Psychiatr Clin N Am* 1992;15(4):849-60.
4. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 5<sup>th</sup> ed. Arlington, VA: American Psychiatric Association;2013.
5. Hassan N, Cavanna AE. The prognosis of Tourette syndrome: implications for clinical practice. *Funct Neurol* 2012;27(1):23-7. Case report on Tourette syndrome treated successfully with aripiprazole
6. Lawden M. Gilles de la Tourette syndrome: a review. *J R Soc Med* 1986;79:282-7.
7. Leckman JF. Phenomenology of tics and natural history of tic disorders. *Brain Dev* 2003;25(1):24 -8.
8. Leckman JF, Bloch MH, Scahill L, King RA. Tourette syndrome: the self under siege. *J Child Neurol* 2006;21:642-9.
9. Tanner CM, Goldman SM. Epidemiology of Tourette syndrome. *Neurol Clin* 1997;15:395- 402.
10. Apter A, Pauls DL, Bleich A, Zohar AH, Kron S, Ratzoni G, et al. An epidemiologic study of Gilles de la Tourette's disorder in Israel. *Arch Gen Psychiatry* 1993;50:734-8.
11. Lees AJ, Robertson M, Trimble MR, Murray NMF. A clinical study of Gilles de la Tourette's disorder in the United Kingdom. *J Neurol Neurosurg Psychiatry* 1984; 47:1-8.
12. Bloch M, State M, Pittenger C. Recent advances in Tourette syndrome. *Curr Opin Neurol* 2011;24(2):119-25.
13. Robertson MM. Gilles de la Tourette syndrome: the complexities of phenotype and treatment. *Br J Hosp Med* 2011;72(2):100-7.
1. Case report on Tourette syndrome treated successfully with aripiprazole
2. Case report on Tourette syndrome treated successfully with aripiprazole
14. Bloch MH, State M, Pittenger C. Recent advances in Tourette syndrome. *Curr Opin Neurol* 2011;24:119-25. Case report on Tourette syndrome treated successfully with aripiprazole
15. Ben Dejabra M, Worbe Y, Schopbach M, Hartmann A. Aripiprazole: a treatment for severe coprolalia in "refractory" Gilles de la Tourette syndrome. *Mov Disord* 2008;15(23):438-40.
16. Leckman JF, Bloch MH, Smith ME, Larabi D, Hampson M. Neurobiological substrates for Tourette's disorder. *J Child Adolesc Psychopharmacol* 2010;20:237-47.
17. Dutta N, Cavanna AE. The effectiveness of habit reversal therapy in the treatment of Tourette syndrome and other chronic tic disorders: a systematic review. *Functional Neurology* 2013 ;28(1):7-12.