

Management of Gilles De La Tourette Syndrome with Co-Morbid Obsessive Compulsive Disorder At A Tertiary Hospital in South West, Nigeria: A Case Report

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INTRODUCTION

Gilles de la Tourette syndrome (GTS) is a neurodevelopmental disorder characterized by multiple motor tics and one or more vocal tics occurring over a period of more than a year and usually running a chronic course.^[1] Tics are neuropsychiatric conditions characterized by brief rapid non-rhythmic motor movements or vocalizations that are typically performed in response to irresistible premonitory urges. Although frequently rapid, tics may involve more complex patterns of movements and longer vocalizations. Evidence from many lines of research suggests that tics result from abnormalities in the basal ganglia of the brain, especially those involving dopamine transmission in the cortico-striatothalamic pathway.^[2]

This syndrome was first described by Jean Itard in 1825 and then by Georges Gilles de la Tourette in 1885. It is the most common tic disorder and defined by onset in childhood by both motor and vocal tics (e.g. grunting, snarling) and lasts for at least one year. About one third of affected individuals exhibit coprolalia (involuntary uttering of obscenities) and about 10-40% of them exhibit echolalia and echopraxia.^[3] The average age of onset for motor tic is 7 years, while that of the vocal tic is 10 years.^[2]

Gilles de la Tourette syndrome is a hereditary neuropsychiatric movement disorder with reported abnormalities in the neurotransmission of dopamine and gamma aminobutyric acid (GABA). Such alterations may lead to the exhibition of different motor and non-motor features manifested by various psychiatric and movement disorders, a notable example of which is Gilles de la Tourette syndrome.^[4] Pre-natal maternal smoking, perinatal hypoxia and autoimmune abnormalities have also been implicated in its aetiology.^[3]

The prevalence of GTS in children is about 0.5% - 1% and it is three to four times commoner in boys than girls. In terms of treatments, antipsychotics, because of their ability to block dopamine receptors are used for biological treatment. Other agents that have been tried are clonidine, an alpha adrenergic agonist. Psychological treatments that are employed are habit reversal and cognitive behavioural therapy.^[3]

Obsessive compulsive disorder is characterized by persistent, recurrent, intrusive and distressing thoughts with the irresistible urge to carry out corresponding actions. According to the 9th edition of the International Classification of Diseases and Related Health Problems (ICD-9), it is a feeling of subjective compulsion which must be resisted to carry out some actions, to dwell on an idea, to recall an experience or to ruminate on an abstract topic. Unwanted thoughts, which include the insistency of words or ideas, ruminations or trains of thoughts are perceived by the patient to be inappropriate or nonsensical. The obsessional urge or idea is recognized as alien to the personality, but as coming from within the self.^[3] Examples of obsessional symptoms are thoughts, impulses, ruminations, slowness and phobias. Obsessions are intrusives thoughts or ideas, while compulsions are behavioural tendencies.^[3]

A compulsion is a conscious, recurrent standardized behaviour such as counting, checking, cleaning, dressing or avoiding. A patient with OCD recognizes the irrationality of the obsession and compulsive acts as ego dystonic i.e. unwanted behaviour. Although the compulsion is usually carried out to reduce the anxiety associated with the obsession, this is not always the case as it may have nothing to do with the latter or it may even aggravate it.^[2]

OCD affects 2 to 4% of children and adolescents and 2 to 3% of adults in the general population.^[5] OCD is treated biologically with antidepressants, the selective serotonin reuptake inhibitor (SSRI) being the first line while clomipramine, a tricyclic antidepressant with SSRI properties is the medication of choice. Psychologically, there's documented evidence that patients with OCD respond well to cognitive behavioural therapy.^{[2],[3]}

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There is a substantial genetic contribution to Gilles de la Tourette syndrome and an overlap with the genetic predisposition to obsessive-compulsive disorder.^[3] The incidence of GTS in OCD is 5-7% and 20-30% of patients with OCD have a history of tics.^[2] About 85% of patients with GTS have co-morbid psychiatric disorders and OCD can be found in about 30% of patients with GTS.^[6] The link between GTS and OCD has also been largely explored using the immunological response to the Paediatric Autoimmune Neuropsychiatric Disorders associated with Streptococcal A infection (PANDAS). Studies have shown that following an infection with streptococcal A, antidopamine receptor antibodies are deposited in the basal ganglia, particularly the caudate nucleus and that immunological reaction to this may precipitate the onset of tics and obsessive-compulsive disorder.^[7]

METHODS

An ethical clearance and approval for this case report was obtained from the Human Research and Ethics Committee of the Federal Teaching Hospital, Ido-Ekiti, Ekiti state.

RESULTS: CASE REPORT

The patient is a 23-year old single unemployed male who presented at the psychiatry outpatient department of the Federal Teaching Hospital, Ido-Ekiti with an 11-year history of sudden rapid body movement, 11-year history of uncontrollable thoughts and behaviour and 11-year history of restlessness. The information was provided by the patient and his father and the information was reliable.

Patient was at the age of 12 years, when he first noticed that he had sudden body movements that involved both of his hands and upper part of his body, described as "shock like" movement. Movement usually lasts for about a second, with multiple episodes in a day such that the patient said he could not count the number per day. He was conscious and was aware of what happened during each movement. This led to him breaking his phones during some of the episodes. Also, he noticed that he would shout intermittently without cause and he couldn't control it. This happened multiple times and only resolved whenever he was asleep. Father also said patient usually made sounds from his throat like he's clearing his throat multiple times in a day, and spits uncontrollably multiple times in a day. He would be observed screaming abusive words at himself most times, such as 'I am mad' 'I am crazy', while father said he also shouts inappropriate words in the public.

At about the same time, patient started to have intrusive thoughts, which he recognized as his own, not perceived in external space, not due to any external event and occurred multiple times. These thoughts often tell him to do multiple repetitive actions like pouring water on his head like 3 times or in multiples of 3, or that he should clean his footwear multiple times and check multiple times to see if it was clean. He feels distressed if he doesn't complete the tasks and the distress is resolved once he follows through with the tasks.

There was a history of measles and febrile convulsions on multiple occasions in the patient as a child.

Since onset of symptoms, his father had taken him to various churches where he was prayed for and had several fasting sessions with no improvement. He had also visited numerous traditional diviners and healers who have tried different local remedies (herbs and divination) with no improvement. Due to symptoms, patient had to drop out from senior secondary school at the beginning of his SS2 class.

The mental state examination revealed a well-groomed and kempt young man with sudden non-rhythmic involuntary movements of his upper limbs and upper trunk who was observed spitting multiple times in the course of the clinical interview. Speech was spontaneous, high rate, high volume, coherent, relevant and informative. There were obsessions in the content of thought, mood was euthymic, affect was reactive and insight was partial. A diagnosis of Gilles de la Tourette syndrome with co-morbid obsessive-compulsive disorder was made based on the symptoms profile, using the tenth edition of the international classification of diseases and related health problems (ICD-10).

He subsequently had Risperidone, 1mg b.d prescribed for Gilles de la Tourette syndrome and Fluoxetine 20mg daily (am) for obsessive-compulsive disorder. Psychological treatments, habit reversal for the tics and cognitive behavioural therapy for OCD were also recommended for the patient at the psychology unit of the hospital. A follow up on the patient about four weeks after presentation revealed that patient had improvement of symptoms.

DISCUSSION

We feel this is worth reporting because of the rarity of tic disorders and particularly Gilles de la Tourette syndrome generally and especially in this environment as the general prevalence is about 1%. Since this condition is not usually reported in this environment, it would be good to properly explore this case.

Also, the patient had co-morbid obsessive compulsive disorder which has been shown to have some shared biological aetiology with tic disorders. Apart from being seen as co-morbidities, studies have shown that these disorders can be seen as part of a spectrum

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of disorders with overlapping aetiologies, with a convergence in dysfunctional cortico-striatal circuitry and activities. It has also been postulated that both GTS and OCD are different phenotypic expressions of the same underlying genetic aetiology.^[8]

In addition, the patient had a history of recurrent febrile convulsion as a child, which suggests he might have had suffered from infections from streptococcal A from which immunologic reactions may have set the pace for a neuroimmunologic predisposition for the conditions in him. Recently, the concept of PANDAS has been extended to microbes other than streptococcus and the term Paediatric Acute Neuropsychiatric Syndrome (PANS) was coined. In this regards, other pathogens like *Mycoplasma pneumoniae* and *Toxoplasma gondii* have been identified as probable causes of immune-related PANS. With the advent of COVID-19, some studies have reported immunological reactions from neuronal antibodies triggered by COVID-19 infection in some patients manifesting with neurological symptoms.^[7]

Patient has had poor quality of life as a result of the conditions and he was unable to complete his secondary education and he is currently unemployed. Studies have shown that patients with Gilles de la Tourette syndrome usually have poorer quality of life when compared with the general healthy population. This may be due to the chronicity and debilitating effects of the condition as it significantly impairs their social and occupational functioning.^[1]

Furthermore, patient initially presented at some traditional treatment centres where no orthodox treatment was given to him, and which led to a prolonged history of untreated symptoms. This typically underscores the pathway to mental health care in most rural areas in Nigeria. This can be adequately addressed by integrating mental health care into primary health care in Nigeria.^[9]

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