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CASE REPORT

Gilles de la Tourette syndrome in Central Africa: A case report

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Abstract: Gilles de la Tourette syndrome (GTS), also known as Tourette disorder or Tourette syndrome, is a neurodevelopmental disorder that is characterized by the presence of multiple motor and one or more vocal/phonic tics. These tics are generally more common during childhood and reach a maximum severity between 10 and 12 years. Ticks tend to decrease during late adolescence and adulthood in a majority of patients. We report an observation of GTS diagnosed in a 12-year-old child who was taken care of by clonazepam with a good improvement in its symptomatology. This condition has been reported only very rarely in black sub-Saharan Africans and this is probably the first case of GTS reported in Central Africa.

Keywords: Gilles de la Tourette syndrome, convulsive tic disorder, clonazepam, Central Africa

1 Introduction

Gilles de la Tourette syndrome (GTS) is a neuro-developmental disorder characterized by the chronic presence of multiple motor and one or more vocal/phonic tics [1, 2]. Psychiatric symptoms, repetitive behaviors, attention deficit disorder, hyperactivity, impulsivity are very often associated [3], but are not part of the official definition of the GTS [2]. Georges Gilles de la Tourette in 1885, while working with Charcot, described a disorder that manifests itself in the presence of multiple facial tics, gesticulations, impulsive behavior and the production of unusual vocalizations that he called "Convulsive tic disorder" [4]. Tics remain the sine qua non for diagnosis of GTS and are generally the reason why people with tics seek appropriate diagnosis and treatment [5]. Less common in practice, the prevalence of GTS is in the range of 0.1-1% in the general population [6]. This condition is more common in the male population, more prevalent in childhood, and generally improves, but does not disappear with age. Its prevalence ranges from 0.4% to 3.8% among youth aged 5 to 18 years [3, 7]. GTS appears to be much rarer among African-Americans and has been reported very rarely among black sub-Saharan Africans [7].

We report the case of a black sub-Saharan African child with motor and vocal tics in whom the diagnosis of Tourette's syndrome was made and treated with clonazepam with clinical improvement.

2 Case report

We report a case of a 12-year-old boy presented at the University Clinics of Lubumbashi on January 2020, for abnormal involuntary movements repeated a month before admission in a brutal manner without any particular context. These gestural movements were multiple, sudden, brief, intermittent, recurrent, non-rhythmic and stereotyped, accompanied by vocal tics that appeared simultaneously. No treatment had been initiated since the onset of the symptomatology. Our patient was born in Lubumbashi after a normal pregnancy and had no perinatal trauma. He was of sub-Saharan black African origin. He had no significant childhood diseases or traumas. In terms of education, our patient was evolving normally. There were no similar cases in family history.

Neurological examination shows blinks, eyebrow uplift, nasal contractions, shrug, abdominal contractions, finger beats, flexion and extension of leg and toes. These movements were accompanied by sniffles, grunts and tongue claps. Seven to eight tics could be noted within 10

minutes. The child had no intellectual deficit or hyperactivity, but was anxious. He showed no signs of psychosis or cognitive impairment. The Tourette syndrome diagnostic confidence index was rated at 61. Examination of other systems was unremarkable.

Laboratory investigations including complete blood count, erythrocyte sedimentation rate, fasting blood sugar, renal and liver functions, serum copper, and caeruloplasmin testing were either normal. An electroencephalogram and magnetic resonance imaging done were within normal limits. The diagnosis of GTS had been definitively made.

The patient had received a treatment with a benzodiazepine (clonazepam 2 mg daily) combined with a neuroleptic (haloperidol 2.5 mg per day orally). After three weeks of treatment, the regression of tics in intensity and frequency was noted. After two months of treatment, the clinical course was marked by an even more marked decrease in motor tics as well as the disappearance of vocal tics.

3 Discussion

We present the first case of GTS from Central Africa, demonstrating that it occurs on this continent. This case is similar to those documented in the literature [8]. This syndrome has two important characteristics: the presence of tics, mainly facial, and the production of uncontrolled sounds. This disorder usually develops between two and thirteen years of age and is more common in men [2, 9].

Our patient was being treated with clonazepam and there was a marked reduction in these symptoms. This remarkable improvement under clonazepam has been demonstrated by several other authors [9, 10]. The goal of treatment is not to completely suppress tics, but rather to reduce them to a level where they no longer cause psychosocial or physical disturbances [11, 12]. The mechanism of clonazepam in GTS is unclear. It is known that clonazepam, like all other benzodiazepines, effectively has an inhibitory effect on the nervous system by facilitating the activity of gamma aminobutyric acid (GABA) and by increasing the conductance of the chloride produced by GABA [9]. Treatment is usually prolonged for several months, although there is no consensus [13]. It is recommended to keep it at least three months after the tics disappear, before considering a gradual decrease and then a stop [10].

4 Conclusion

Although GTS is a very rare entity in the population of sub-Saharan Africa, this first case of Central Africa that we describe supports the argument that GTS can also occur among black sub-Saharan Africans.

Data availability

The datasheet used to support the findings of this study are available from the corresponding author upon request.

Competing interests

The authors declare that they have no competing interests.

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