GILLES DE LA TOURETTE SYNDROME : A MOROCCAN EXPERIENCE

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Introduction:

- ***Gilles de la Tourette syndrome (GTS)*** is a neurodevelopmental disorder characterized by the presence of **motor and vocal tics**, often accompanied by other conditions such as Attention Deficit Hyperactivity Disorder (**ADHD**) and Obsessive-Compulsive Disorder (**OCD**). It typically manifests during childhood, with symptoms appearing between the ages of 2 and 15 years.
- GTS is more common in males, with a prevalence of about 1% among children .
- Motor tics are sudden, repetitive movements, while vocal tics involve involuntary sounds or words. The severity and frequency of tics can vary widely among individuals, and they may change over time. GTS can have a significant impact on daily functioning and quality of life, particularly if tics are severe or if the individual experiences associated behavioral or emotional difficulties.
- ***Objectif :***This review focuses on **the clinical profile** and **progression of GTS** among **Moroccan patients**, with particular attention to cultural influences on symptoms. Cultural factors can play a significant role in how GTS is experienced and expressed..

Matériels et Méthodes:

- The study draws on **15 years of data from patients** with Gilles de la Tourette syndrome (GTS) at Casablanca's Ibn Rochd and Tangier's Al Kortobi hospitals.
- It analyzes **demographic, clinical, and treatmentrelated information, assessing severity** via the Hopkins scale, and adheres to DSM criteria,excluding tics from other sources.

Résultats:

The study involved ***27 patients diagnosed with (GTS)*****,** with a majority being *male* (80%). The average age at diagnosis was 19 years, while symptoms typically began around the age of 8. Many patients had a history of familial tics, and one case showed worsened GTS symptoms after receiving androgen injections. Both simple and complex tics were common among the patients, with behaviors such as self-harm, arithmomania (an obsession with counting), and touching behaviors being observed.

The severity of symptoms varied, with approximately 30% of patients exhibiting coprolalia (involuntary swearing) or copropraxia (involuntary obscene gestures).

Treatment approaches typically involved a combination of medications, including selective serotonin reuptake inhibitors (SSRIs), benzodiazepines, haloperidol, risperidone, and aripiprazole, which generally led to improvement in symptoms. Additionally, three cases received botulinum toxin injections, and three patients underwent psychoeducation sessions.

Discussion :

Gilles de la Tourette syndrome (GTS) is a neurodevelopmental disorder characterized by involuntary motor and vocal tics. It has been associated with a genetic predisposition and disruptions in specific neural circuits, influenced by sex hormones. Research suggests a ***male predominance*** in GTS, with symptoms often evolving during puberty and being influenced by sex hormones. This was evident in a patient in our study whose symptoms worsened following androgen injections, indicating a link between hormonal changes and symptom exacerbation. ***Cultural factors*** also play a role in the expression of GTS symptoms, with variations observed in different populations. For example, coprolalia, the involuntary use of obscene language, may be more prevalent in certain cultural contexts. Understanding these cultural influences is essential for accurate diagnosis and effective management. ***Treatment of GTS*** typically involves a ***multidisciplinary approach***, combining behavioral interventions and pharmacotherapy. Behavioral interventions may include cognitive-behavioral therapy (CBT) and habit reversal training to help patients manage their tics. Pharmacological interventions often include medications that target dopamine and serotonin levels in the brain.

In our study, we found aripiprazole to be particularly successful in managing GTS symptoms. Aripiprazole is an atypical antipsychotic medication that acts as a partial dopamine agonist and serotonin antagonist. Its unique mechanism of action makes it effective in reducing both motor and vocal tics associated with GTS while minimizing side effects commonly associated with other antipsychotic medications.

Conclusion :

- This work focused on the phenomenology and treatment of tics in GTS, is not intended to study the psycho-behavioral aspects during this condition. Nevertheless, it has the advantage of being the first to report characteristics of GTS in Morocco

Références :

1. Robertson MM, Eapen V, Singer HS, Martino D, Scharf JM, Paschou P, et al. ***Gilles de la Tourette syndrome.*** Nat Rev Dis Primers. 2 févr 2017;3(1):16097
2. Houeto JL, Giré P. ***Tics et syndrome de Gilles de la Tourette : diagnostic, évolution et principes de traitement.*** La PresseMédicale. févr 2008;37(2):263-70.
3. Peterson BS, Leckman JF, Scahill L, Naftolin F, Keefe D, Charest NJ, et al. ***Steroid hormones and CNS sexual dimorphisms modulate symptom expression in Tourette's syndrome.*** Psychoneuroendocrinology. nov 1992;17(6):553-63.