

Obsessive-compulsive disorder and Tourette Syndrome: is there a relationship?

The authors describe the main characteristics of Obsessive-Compulsive Disorder, the fourth most frequent psychiatric disease, and Tourette Syndrome. Considered completely separate disorders, there is growing scientific evidence that there is a connection between them. The authors present clinical, genetic and neuroimaging data reinforcing this idea, and call attention to the importance of research in this area, as they believe that the definition of more homogenous subgroups will facilitate the identification of biological markers and predictors of treatment response.

Obsessive-Compulsive Disorder (OCD) has a lifetime prevalence of three percent in the general population and is now considered as the fourth most frequent psychiatric disease. OCD is diagnosed based on the patient's clinical history and its essential features, include recurrent obsessions and/or compulsions.

According to the newest classification of the American Psychiatric Association, the DSM-IV,¹ obsessions are persistent ideas, thoughts, impulses, or images that are experienced as intrusive and inappropriate. Fear of contamination is the most frequent obsession, followed by repeated doubts, and a need to have things in a particular order or symmetry. These repetitive and unwanted thoughts are time consuming (at least one hour a day) and cause distress or significant impairment.

Compulsions are repetitive behaviors (e.g. hand washing, checking, ordering) or mental acts (e.g. praying,

counting, repeating words silently). They are usually performed in order to prevent or reduce anxiety or distress, caused most of the time by an obsession.

Tourette Syndrome (TS) is characterized by multiple motor tics and one or more vocal tics, with onset in childhood and a waxing and waning course. Tics are sudden, repetitive, involuntary, stereotyped movements or vocalizations. They are classified according to their complexity as simple (involving a single muscle) or complex (involving multiple muscle groups), and to their duration and frequency as transient (lasting at least two weeks but less than 12 months) or chronic (lasting more than a year).²

For a long time considered completely separate disorders, recent clinical, genetic and neuroimaging studies have suggested that there is a relationship between OCD and TS. Clinical studies have demonstrated a higher incidence of tics and TS in OCD patients when compared to the general population. Likewise, patients with TS also have an increased rate of obsessive-compulsive symptoms and OCD when compared to a normal control group.³ Furthermore, family genetic studies developed by the Yale

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Child Study Center have shown that first-degree relatives of TS patients have a higher prevalence of TS, chronic motor tics, and OCD than do normal controls.³

As for neuroimaging, studies with OCD and TS patients have pointed to an abnormal function of multiple parallel segregated corticostriatal circuits in the basal ganglia. Studies with MRI in TS patients have yielded data consistent with an alteration on the normal asymmetry (L > R) of the lenticular nucleus (putamen and globus pallidus), probably secondary to alterations of the putamen. The normal asymmetry of the caudate nucleus and its volume are also altered in OCD patients. These findings

reinforce Baxter's theory suggesting that there is an OCD-TS spectrum, with the putamen being more affected in TS and the caudate in OCD.²

Based on the studies described above, OCD is heterogeneous, with some forms related to TS. Thus, the knowledge of an association between OCD and TS is important for future research in the pathophysiology of these two disorders. By defining homogenous subgroups, we may contribute to the identification of biological markers and predictors of prognosis and treatment response, helping clinicians to develop more effective management strategies.

RESUMO

Os autores descrevem as características principais do Transtorno Obsessivo-Compulsivo, o quarto diagnóstico psiquiátrico mais frequente atualmente, é a Síndrome de Tourette. Considerados como doenças completamente distintas, existem evidências científicas de que há uma ligação entre elas. Os autores fornecem alguns estudos clínicos, genéticos e de neuroimagem que reforçam essa idéia e apontam a importância de pesquisas nessa área, já que eles acreditam que a definição de subgrupos mais homogêneos vai propiciar a identificação de marcadores biológicos e fatores preditivos de resposta ao tratamento.

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