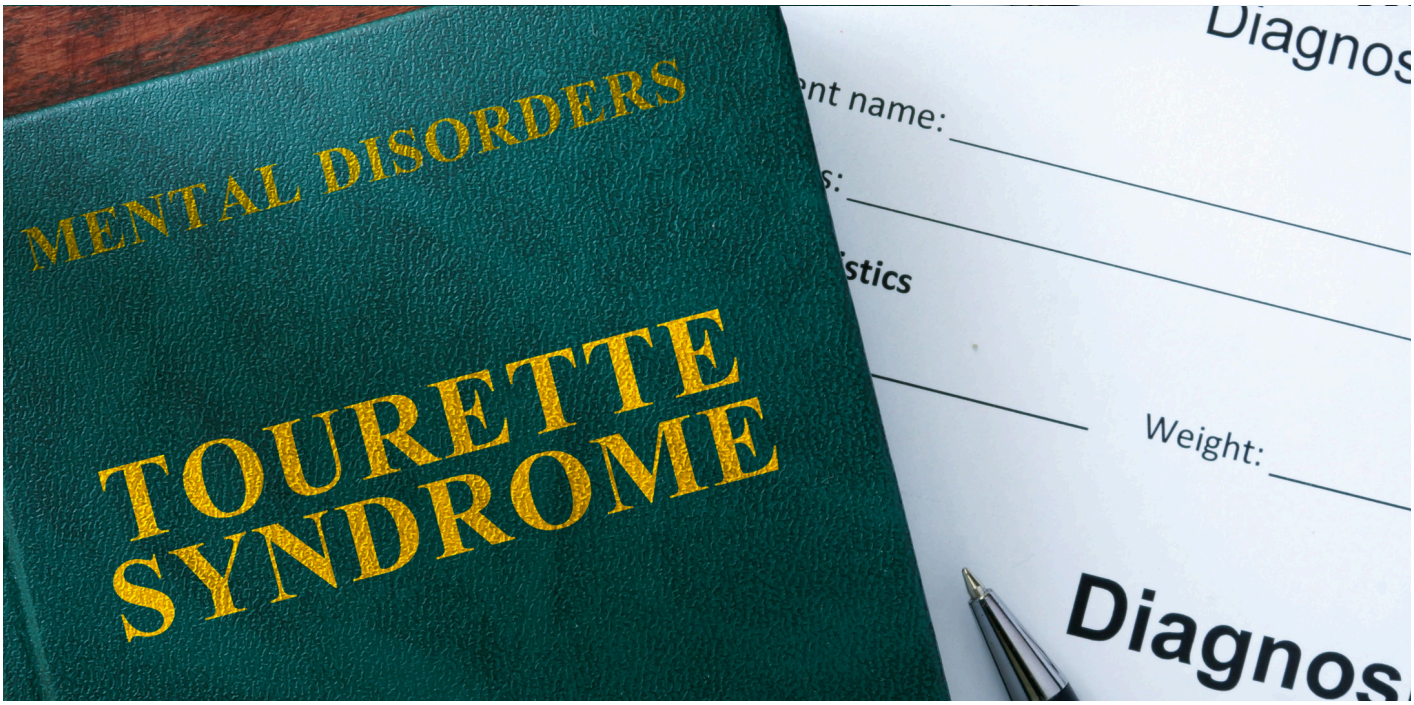

Journal Club Neurology

Tourette Syndrome: Clinical Features, Pathophysiology, and Treatment

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Background

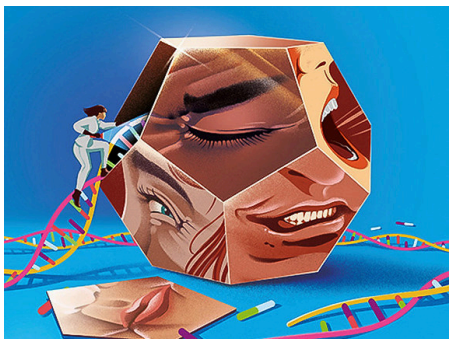
Tourette syndrome is a chronic disorder of the nervous system characterized by motor and phonic tics that can substantially diminish the quality of life of affected individuals. It was first described by and named after the French neuropsychiatrist Georges Gilles de la Tourette in 1885. Sadly, he was admitted to the psychiatric hospital Cery near Lausanne in 1901, reportedly suffering from general paralysis. He died there in 1904 aged only 46 years. Evaluating and treating the Tourette syndrome is difficult due to the heterogeneity of symptoms, associated comorbidities, and the complexity of the underlying pathophysiology.

Pathophysiology

Evidence drawn from both genetic and neuroimaging studies supports the hypothesis that Tourette syndrome is a neurodevelopmental disorder. On a network level, tics might be a product of inhibitory dysfunction within the sensorimotor cortico-basal ganglia network, namely from alterations of inhibitory striatal microcircuitry. However, the disinhibition model does not explain some fundamental features of tic disorders, such as the waxing and waning character or the premonitory urges. Alternative hypotheses include Tourette syndrome being a disorder of social behavioral networks, explaining the common predominant face and head distribution of tics.

Treatments

Treatment includes behavioral and pharmacological therapies. Interested readers will find a timely review on the different therapeutic options, including non-invasive brain stimulation, in the referenced publication. To best serve the needs of individuals with Tourette syndrome, patient's organizations and advocacy groups should be included in defining effective treatments for this complex disorder.



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