

Othello-like syndrome induced by subthalamic deep brain stimulation

Emilia Sołtan¹, Anna Antosik-Wójcińska², Piotr Janik³, Łukasz Święcicki², Henryk Koziara^{1,4},
Bartosz Krolicki¹, Krzysztof Szalecki¹, Paweł Nauman¹, Wiesław Bonicki^{1,4}, Tomasz Mandat^{1,4}

¹Department of Neurosurgery, Institute of Psychiatry and Neurology, Warsaw

²Department of Psychiatry, Institute of Psychiatry and Neurology, Warsaw

³Department of Neurology, Medical University of Warsaw

⁴Department of Neurosurgery, Maria Skłodowska-Curie Memorial Oncology Center, Warsaw

Objective: The aim of this study was to present the psychogenic adverse effect presented as the Othello syndrome (OS) of subthalamic deep brain stimulation (STN DBS) for Parkinson's Disease (PD).

Background: STN DBS is widely used for selected groups of PD patients.

Methods: A 36-year-old PD patient underwent bilateral STN DBS and demonstrated significant improvement of motor symptoms after surgery. 3 months after implantation with the stimulation set: L and R: 2.4 V, 130 Hz, 60 μ s, 0-, 1-, C+, some psychiatric symptoms appeared: delusions of reference and delusions of marital infidelity as well as aggressive behavior, irritability and dysphoria that occurred periodically. The stimulation settings were changed to: L and R:

2.0 V, 130 Hz, 60 μ s, 1-, 2-, C+ with satisfying motor symptoms control. The patient was treated psychiatrically with quetiapine whose dose titrated from 25 to 100 mg daily. The psychotic symptoms vanished in BPRS and PANSS.

Results: After readjustment of the DBS and pharmacological treatment, the psychogenic symptoms were no longer present.

Conclusions: Adverse psychogenic effects of STN DBS in PD patients are not frequent. Combined treatment with DBS settings readjustment and psychopharmacological treatment is optimal.

Key words: subthalamic nucleus, deep brain stimulation, Parkinson's disease