THE DYNAMICS OF PHARMACOTHERAPY ON THE BACKGROUND OF DEEP BRAIN STIMULATION OF THE SUBTHALAMIC NUCLEUS IN PATIENTS WITH PARKINSON’S DISEASE

S. Omarova1,2, N. Fedorova1, E. Bril1,3, A. Tomskiy2, Gubareva1,2, A. Poddubskaya2, A. Dekopov2, A. Gamaleya2

1Neurology Department of Russian Medical Academy of continuous professional Education
2Burdenko Neurosurgical Institute, Moscow, Russian Federation
3State Scientific Research Center A. I. Burnasyan

OBJECTIVE

To analyze pharmacotherapy accompanied by deep brain stimulation of the subthalamic nucleus.

BACKGROUND

Deep brain stimulation of the subthalamic nucleus can reduce the severity of not only tremors, rigidity and hypokinesia, but also reduce the severity of motor fluctuations and dyskinesias and reduce doses of dopaminergic drugs in patients with Parkinson’s disease.

METHODS

A total of 64 patients with implanted STN stimulation systems (Medtronic) were investigated from 2003 to 2014. The severity of motor disorders, daily activity, and complications of pharmacotherapy were evaluated using parts II, III, and IV of the Unified Parkinson’s Disease Rating Scale before surgery and at one, three, and four years of continuing stimulation. The analysis of pharmacotherapy overall was evaluated.

RESULTS

The severity of motor impairments in off periods decreased by 54.5% by one year of observation and remained stable for three years (52.8%). The severity of motor fluctuations and iatrogenic dyskinesia decreased by 66.7%, 71.4%, and 44.5% at the ends of years 1, 3, and 4, respectively. The levodopa equivalent dose was decreased by one year (56.4%), with decreases by 53.6% and 37.4% at three and four years, respectively. During the first year, 18.7% of patients took no levodopa. The levodopa dose decreased by 66.6% at one year and then by 57.6% and 45.6% at three and four years, respectively.

CONCLUSIONS

The results of our study showed a reduction the severity of motor fluctuations and dyskinesias and reduction doses of dopaminergic drugs in patients with Parkinson’s disease on the background of deep brain stimulation of the subthalamic nucleus.

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