

ABSTRACT

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Form: Bachelor thesis

Field of study: Medical Bioanalytics

Title: Advances in the diagnosis and treatment of Parkinson's diseases

The aim of the work: The aim is to clearly write current and developed diagnostic and treatment procedures for Parkinson's disease. The retrieved and collected information is analyzed and summarized.

Main goals: The topic of this bachelor thesis is Parkinson's disease, especially its diagnosis and therapy. The introductory chapters deal with Parkinsonism, the epidemiology and etiopathogenesis of Parkinson's diseases, as well as the clinical symptoms. Diagnosis and therapy occupy the largest part of this bachelor thesis. Clinical diagnostics no longer focuses only on motor symptoms, but also includes non-motor ones. Various diagnostic criteria, scales and tests that are currently used will be mentioned. This bachelor thesis also includes a chapter on biomarkers of Parkinson's disease, because there is great potential. The chapters about therapy mention current pharmacotherapies, their development, neurosurgical treatment and the effects of immunotherapy and gene therapy.

Conclusion: From the point of view of clinical diagnostics, I mention the introduction of a new diagnostic criterion MDS–PD in 2015 as a fundamental progress. The constant development in neuroimaging brings better and better radioligands for the imaging of the dopaminergic system by SPECT, and the use of MRI for differential diagnosis. The treatment of Parkinson's disease is gradually disengaging from levodopa in favor of dopamine agonists as well deep brain stimulation therapy.

Key words: differential diagnosis, motor features, non-motor features, parkinsonian syndrome