

Abstract

The dissertation deals with neurodegenerative diseases from a neuropathological point of view, however, it correlates all micromorphological findings with the results of genetic and immunological examinations, as well as with clinical findings and possibly the results of auxiliary methods (mainly EEG and MRI). The first part of the thesis is devoted to a classification of currently recognized neurodegenerative diseases with notes on the typical neuropathological findings, clinical symptomatology and possible genetic burdens. In the next part, the aims, methods and results of seven first-author publications, in which we focused on Alzheimer's disease, prionopathy, synucleinopathy, amyotrophic lateral sclerosis and comorbid neurodegenerative diseases, are discussed. The conclusion summarizes important findings from the publications and informs about their possible applicability in the diagnostic process of neurodegenerative diseases ante mortem.

Keywords: neurodegenerative diseases; comorbid neurodegeneration; Alzheimer's disease; prionopathy; Creutzfeldt–Jakob disease, Gerstmann–Sträussler–Scheinker syndrome; synucleinopathies; tauopathy.