

Abstract

Alzheimer's disease is a neurodegenerative disorder, affecting mostly elderly people. It causes memory impairment and modifies the ability to talk, learn and make decisions. These are gradually getting worse until the patient loses them completely. Alzheimer's is the most common form of dementia worldwide, however until these days there is no cure. The main reason for this is that mechanisms and causes of this disease are still not utterly understood. Besides the neurodegeneration caused by aggregation of β amyloid protein and hyperphosphorylated tau protein, glial cells of central nervous system play also important role in the Alzheimer's disease. Astrocytes, microglia, oligodendrocytes and recently discovered synantocytes ensure various functions necessary for correct functioning of the brain and damage of these cells can be fatal. During a neurodegenerative disorder such as Alzheimer's, they are able to improve the course of the disease but also do the contrary and aggravate it by malfunctioning or losing one or even more of their functions.

Key words: Alzheimer's disease, β amyloid, tau protein, astrocytes, microglia, oligodendrocytes, synantocytes