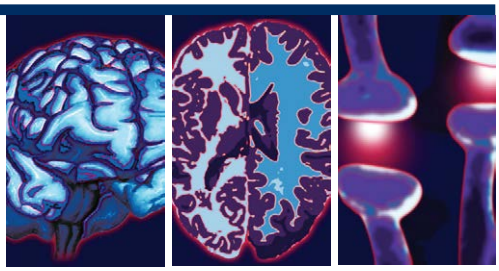
Review



# Effect and Disease Indicative Role of Inflammation in Neurodegenerative Pathology: A Mechanistic Crosstalk of Promise and Dilemma

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## Abstract

The pathobiology of neuronal cell loss due to various endogenous or exogenous influences is clinically termed as neurodegeneration. Neurodegeneration has been reported to be the major contributor to aging and central nervous system diseases. Apart from aging and endogenous involvement, neurodegeneration also has been reported from viral infection and prion diseases. Studies have shown that, chronic degeneration of neuronal cells initiate the pathology of Alzheimer's disease-the most prevalent neurodegenerative disorder in the world. Similar neurodegenerative pathology is also evident in Parkinson's disease, multiple sclerosis, and Amyotrophic Lateral Sclerosis. Neurodegeneration negatively affects the mental and physical functioning of the patient. Intriguingly, the involvement of inflammation has been linked as the most crucial entity in the mechanistic progress of neurodegeneration. Moreover, recent data also have shown that inflammatory biomarkers can prognosticate the silent progress of neurodegeneration through low-cost diagnostic approach. Mainly, Th17 and MDSCs are the particular immune cells, which have been reported to assist adequately to get a detailed insight into the underlying pathological process in neurodegeneration. Similarly, depression and dementia are also having a crucial association with pro-inflammatory cytokines, which in chronic spectrum indicates the degenerative pathology. Together, available literatures are depicting a direct association between neuroinflammation and neurodegeneration. In the present review, we have summed up all the neuropathologies in light of inflammation and emphasized the possible diagnostic measures by using inflammatory cells and mediators as biomarkers for neurodegenerative diseases.

**Keywords:**

Neuroinflammation, Neurodegeneration, Inflammatory mediators, MDSC, Th17

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