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Peripheral Inflammation and Neurodegeneration; A Potential for Therapeutic Intervention in Alzheimer's Disease, Parkinson's Disease, and Amyotrophic Lateral Sclerosis

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Abstract : Background: Degeneration of the central nervous system (CNS), also known as neurodegeneration, describes an age-associated progressive loss of the structure and function of neuronal materials, leading to functional and mental impairments. Main body: Neuroinflammation contributes to the continuous worsening of neurodegenerative states which are characterised by functional and mental impairments due to the progressive loss of the structure and function of neu-ronal materials. Some of the most common neurodegenerative diseases include Alzheimer's disease (AD), Parkinson's disease (PD) and amyotrophic lateral sclerosis (ALS). Whilst neuroinflammation is a key contributor to the progression of such disease states, it is not the single cause as there are multiple factors which contribute. Theoretically, non-steroidal anti-inflammatory drugs (NSAIDs) have potential to target neuroinflammation to reduce the severity of disease states. Whilst some animal models investigating the effects of NSAIDs on the risk of neurodegenerative diseases have shown a beneficial effect, this is not the same finding. Conclusion: Further investigation using more advanced research methods is required to better understand neuroinflammatory pathways and understand if there is still a potential window for NSAID efficacy.

Keywords : intervention, central nervous system, neurodegeneration, neuroinflammation
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