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Licofelone, a potent COX/5-LOX inhibitor and a novel option for treatment of neurological disorders

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Abstract

Neurological disorders result in disability and morbidity. Neuroinflammation is a key factor involved in progression or resolution of a series of neurological disorders like Huntington disease (HD), Parkinson's disease (PD), Alzheimer's disease (AD), Spinal Cord Injury (SCI), and Seizure. Thereby, anti-inflammatory drugs have been developed to improve the neurodegenerative impairments. Licofelone is an approved osteoarthritis drug that inhibits both the COX (cyclooxygenase) and 5-LOX (lipoxygenase) pathways. Licofelone has pain-relieving and anti-inflammatory effects and it was shown to have neuroprotective properties in the central nervous system, which is implicated in its regulatory effect on the COX/5-LOX pathway, inflammatory cytokines, and immune responses. In this study, we briefly review the various features of neurological disorders and the function of COX/LOX in their flare up and current pharmacological products for their management. Moreover, this review attempts to summarize potential therapeutics that target the immune responses within the central nervous system. A better understanding of the interactions between Licofelone and the nervous systems will be crucial to demonstrate the possible efficacy of Licofelone in neurological disorders.

Keywords: COX/5-LOX pathway; Inflammatory cytokines; Licofelone; Neuroinflammation; Neurological disorders.

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