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Poster Presentation Review

The Role of Mast Cells in the Pathogenesis of Anxiety Disorders

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Abstract

Mast cells are a heterogeneous population of granulocytic cells in the immune system. Mast cell granules contain numerous mediators, including neurotransmitters, cytokines, chemokines and lipid-derived factors. In addition to their well-known role in immune inflammation, the presence of mast cells in the meninges and perivascular space in the central nervous system points to their role in brain physiology and their potential involvement in the development of neurological disorders. Of interest, activation of mast cells and their interaction with glial cells have been shown to be involved in altering the permeability of blood brain barrier, a phenomenon which is a key part of neuroinflammatory/degenerative processes. Mast cells have also been reported to exert protective effects against neuroinflammation likely through releasing anti-inflammatory compounds or degrading inflammatory mediators. While diseases like multiple sclerosis, Alzheimer's disease and stroke are considered as classical examples of neuroinflammation, the role of low-grade inflammation in the pathogenesis of psychiatric disorders has recently attracted the attention of investigators. Herein, we summarize some of the findings about the role of mast cells in the pathogenesis of psychiatric disorders including anxiety disorders.

Keywords: Mast Cells, Immune System, Neuroinflammation, Anxiety.

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