SUMMARY & RECOMMENDATIONS

Inflammation is a complex reaction to injurious agents such as microbes and damaged usually necrotic, cells that consist of vascular responses, migration and activation of leukocytes, and systemic reactions. Inflammation is fundamentally a protective response, the ultimate goal of which is to rid the organism of both the initial cause of cell injury (e.g., microbes, toxins) and the consequences of such injury (e.g., necrotic cells and tissues).

Inflammation is mediated through inflammatory mediators which are chemical substances that regulate local and systemic immune and inflammatory response as well as wound healing, hematopoiesis and many other biological processes. Theoretically, no substances should be labeled a chemical mediator of inflammation unless, when given in a concentration, likely to be found in human disease, it can reproduce the features of inflammation, and unless it can always be identified at sites of inflammatory reactions.

Numerous structurally dissimilar and genetically unrelated inflammatory mediators have been identified. They are extremely potent compounds that act in small concentrations by binding to specific surface receptors on target cells.

Over the last 10–15 years, there have been over 1,000 published articles concerning the activation of the HPA axis by cytokines. This relative abundance of work is due to the large number of cytokines discovered, the complexity of the organization of the HPA axis and the functional importance of activation of the HPA axis during stressful situations.

The nervous system is the site of a wide variety of inflammatory diseases, and the cellular response of the nervous system to invading pathogens, is basically similar to inflammation elsewhere in the body. However, the unique position of the brain appears to result from the blood brain barrier.

The Pathophysiology of neurological disorders such as strokes, trauma, infections, demyelinating and degenerative disorders based on the role of proinflammatory mediators was discussed.

The proinflammatory mediators play a very important role as a tool in diagnosis & prognosis of neurological disorders.

The proinflammatory mediators being involved in the pathogenesis of different neurological disorders made it possible to get benefit in future management of neurological disorders.