Seminar 1

The role of β-endorphin; an endogenous opioid neuropeptide

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Abstract

- Endorphins are endogenous opioid peptides that are naturally produced in mammalian bodies with opioid-like effects. The term "endorphins" consists of two parts: "*endo*-" and "-*orphin,* "meaning "a morphine-like substance originating from within the body." Endorphins are opioid neuropeptides that serve a primary function as an agent blocking the perception of pain and, additionally, present in the case of pleasure. Endorphins have been found to not only show roles in the central nervous system as neurotransmitters but also as peptide hormones produced by the pituitary gland into the circulatory system. There are four main types of endorphins: Alpha (α) endorphin, Beta (β) endorphin, Gamma (γ) endorphin and Sigma (σ) endorphin. Among them, β-endorphins have been the most studied and prevalent, accounting for the majority of the functional properties of endorphins as generalized and understood as whole. In this seminar, the various roles of β-endorphins in immune-stimulatory activity, stress buster, anti-inflammatory and analgesic activity used for therapeutic, preventive, holistic approach of treating diseases such as infectious diseases, cancer, auto-immune diseases are discussed. Additionally, the efficacy of acupuncture in treating pain diseases through increase in β-endorphins content is highlighted.

Keywords: β-endorphins, Opioids, Analgesic, Anti-inflammatory activity, Acupuncture