

Melatonin and its neuroimmunological actions.

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Abstract

Introduction: Melatonin is a neurohormone, synthesized mainly in the pineal gland, which regulates the circadian rhythm.

Objective: To describe the neuroimmunological actions produced by melatonin.

Materials and methods: A review on the subject was carried out using articles of free access in the Pubmed database from 2015 to January 2019.

Results: The effects of melatonin on the wake-sleep cycle are known. Recently it has been shown that this neurohormone can modulate the immune response and reduce seizures in autoimmune and rheumatologic diseases. It induces the pattern of regulatory T lymphocytes and immunomodulatory cytokines maintaining the homeostasis of the internal environment. In the Central Nervous System inhibits the formation of free radicals, has antioxidant functions and can slow neurodegenerative processes. In the peripheral nerves decreases oxidative stress and cellular apoptosis. There are drugs that use melatonin as an active ingredient for its beneficial effects. In Cuba, only the history of a publication on this hormone is collected.

Conclusions: Melatonin can be a very useful element in the management of inflammatory and neurological diseases.

Key words: melatonin, inflammation, neurological diseases, immunological diseases.