Melatonin

Melatonin is gaining importance in many fields of medicine because of its potential. Research has shown beneficial effects of melatonin in a wide spectrum of diseases and health parameters. It received a justified attention from many researchers around the world.

Melatonin is a hormone produced by the pineal gland. Its production and release is stimulated during the night and inhibited during the daytime. This hormone is believed to be involved in circadian rhythm. It is found in humans, animals, plants, and microbes.[1-3]

The melatonin biological effects are regulated by stimulation of its receptors. The Food and Drug Administration has categorized melatonin as a dietary supplement combined with other ingredients such as vitamins and herbal extracts, and it is not regulated as a pharmaceutical drug.

This hormone has various medical uses, namely; it might be beneficial in the treatment of gastroesophageal reflux disease, irritable bowel syndrome, malignancy, immune disorders, cardiovascular diseases, depression, seasonal affected disorders, sexual dysfunction, jet-lag and in other conditions. It can also be used as premedication for laparoscopic surgery.[4-6]

The antioxidant property is an important function of this hormone. It is a direct scavenger of radical oxygen and nitrogen species. Melatonin has few side-effects if taken for a short period up to 3 months; these include somnolence, headache, mild anxiety, and abdominal discomfort.[7]

In this issue, Prof. Hani Mowafi is reviewing this hormone; its physiology, pharmacology and its uses in anesthesia and surgery.

Abdulaziz A. Al-Quorain
Department of Internal Medicine, College of Medicine, University of Dammam, Dammam, Kingdom of Saudi Arabia

Correspondence: Prof. Abdulaziz A. Al-Quorain, P.O. Box 40001, Al-Khobar 31952, Kingdom of Saudi Arabia.
E-mail: sjmms@ud.edu.sa

REFERENCES