البحث الثاني.

The possible ameliorative effect of propolis on the testes of male albino rats with sub-chronic tramadol administration.

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Abstract

Background: Tramadol is an opioid analgesic which is utilized as a sexual stimulant and is consumed to manage severe pain. Tramadol usage is on the rise among Egyptian teenagers, it is one of the popular drugs of misuse. Abuse of tramadol can impact a number of bodily processes by causing oxidative stress. Propolis is a resinous compound that honey bees naturally create and has antioxidant benefits.

Aim of the work: Studying the testicular effectiveness of sub-chronic tramadol use in male albino rats and the defensive function of Propolis.

Material and Methods: Forty male albino rats were separated into four groups; GP I: negative control, GP II: Propolis treated, GP III: Tramadol treated, and GP VI received Tramadol plus Propolis for six weeks. All rats were examined for levels of Testosterone, Luteinizing hormone, Follicle stimulating hormone, and testicular markers for oxidative stress (Glutathione, Malondialdehyde & Superoxide dismutase). Histopathology, morphometry of testicular tissue, and sperm count were performed.

Results: Tramadol treated group showed a considerable reduction in levels of gonadotrophic hormones, testicular Glutathione and Superoxide dismutase, while there was an increase in Malondialdehyde. Histopathology revealed normal histology of seminiferous tubules in GP I and II. At the same time, in GP III, the Vacuolation of Sertoli cells and atrophied seminiferous tubules. Administration of Propolis with Tramadol showed a worthy increase in levels of sexual hormones, Glutathione, Superoxide dismutase, and sperm count while a considerable lowering in Malondialdehyde with an improvement of the testicular histopathology.

Conclusion: Propolis can be used as a protective agent against Tramadol-induced testicular toxicity.

Keywords: Propolis; Tramadol; Testis; Seminiferous.