Mansoura Veterinary Medical Journal

# PHYSIOLOGICAL AND HISTOLOGICAL STUDIES ON THE EFFECT OF MYRTUS COMMUNIS EXTRACT ON RAT'S THYROID GLAND

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## ABSTRACT

*The aim of this study was to test the effect of the ethanolic extract of Myrtus communis leaves on the thyroid gland tissue in white rats . The animals were given a dose of 2 g/kg orally. 43 rats were divided into 3 groups. The first group was given the dose daily for 7 days . The second group was treated for 14 days. The third group was given the dose for different hours , and after the end of each treatment period , blood samples were taken and the levels of thyroid hormones (T3 , T4) and thyroid stimulating hormone (TSH) were determined . Each group included some animals as a control.*

*Some of the animals treated with the extract showed bleeding through mouth and nose , were lethargic , tired and lost appetite . Furthermore, the weight of these animals was significantly lower than those in the controls. The animals treated with the extract had a significant increase in the levels of TSH, T3 and T4.*

*Thyroid gland of treated rats showed an increase in the size of thyroid follicles especially those found at the periphery of the gland . These follicles became irregular and distended by an accumulation of heterogeneous colloid with an increase in the amount of vacuoles at the periphery of this colloid. Moreover, some inflammatory cells appeared inside the colloid of some follicles. However, follicular cells appeared compressed with flattened nuclei. Some follicles with ill-distinct boundaries were also appeared.*

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# EFFECTS OF MELATONIN ON TESTICULAR AND PITUITARY GLAND FUNCTIONS IN RATS

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## ABSTRACT

*The present investigation was desgined to evaluate the effects of melatonin on testosterone and pituitary hormones levels in mature male rats Twenty mature male rats were used in this study. Animal were divided into two groups each one consists of ten rats . The first group considers as contral group administrated soya oil (2ml / kg) , the second group treated with melatonin (0.5mg 1 kg) for one month . After the end of the experiment rats were sacrificed and blood was collected into heparinzed tubes to separate plasma and testicular tissue were collected to detect oxidive changes of the malenaldehyde (MDA) concentration and activities of superoxide dismutase (SOD) and catalase (CAT) . The results revealed that plasma level of testosterone and luteinzing hormones were significantly deceases (P ‹ 0.5) in melatonin treated group as compared with normal one , while reduces testicular concentration of MDA and increases the SOD and catalase activities . It was concluded that Melatonin has direct effects on testiculars and pituitary gland hormones and has antioxidant effects .*