



## **ANILINE INDUCED HISTOLOGICAL ALTERATIONS AND EVALUATION OF SERUM HORMONES IN THYROID GLAND OF MALE ALBINO RATS**

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### **Abstract:**

Aniline is a primary aryl amine in which an amino functional group is substituted for one of the benzene hydrogen. It is a primary aryl mine and a member of anilines appears as yellowish to brownish oily liquid with a musty odour. Aniline has diverse uses in industry and in pharmaceuticals. It is used in rubber accelerators and antioxidants dyes and pigments fibres, photographic chemicals. It is also used in herbicides and fungicides. The objective of the present study is to investigate the effect of aniline on thyroid gland in albino rats. Eighteen adults albino rats were divided into three groups A, B and C. Group A was control and provided with normal food and water as well as Group B and C were received 20 mg/kg bw of aniline daily for 15 and 30 days respectively. After the completion of treatment body and organs weight and histology of thyroid gland and evaluation of serum hormones were examined. Results showed that there is decrease in body weight and increase in organ weight in experimental group as compare to control group of animals. Histopathology of thyroid gland of treated rats showed increase in number of microfollicles, reduce colloid secretion, vacuolation in colloid, breakdown of capsular layer, follicular disruption, fusion of thyroid follicles and increase interfollicular space as compared to control. Hormonal analysis of thyroid gland of treated rats showed significant decreased in thyroid hormones Tri-iodothyronine (T<sub>3</sub>), Tetra-iodothyronine (T<sub>4</sub>) level and increase Thyroid stimulating hormone (TSH) level as compared to control. From the results, It can be conclude that the aniline has potential to exerts deleterious effect on structure and function of thyroid gland.

**Key words:** Aniline, thyroid gland, histology, hormones, albino rat.

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