PAPER ID: 036

PRELIMINARY STUDY ON THE EFFECT OF NIGELLA SATIVA (HABBATUS SAUDA) OIL ON TESTIS HISTOLOGICAL FEATURES


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ABSTRACT

*Nigella sativa*/
**Habbatus sauda** has been used in many Middle Eastern countries as a natural remedy. Its alcoholic extract has significant effect on spermatogenesis and gives higher concentration of mature sperm counts. This study was conducted to examine the effect of **Habbatus sauda** oil on testis histological features. Nineteen Sprague-Dawley male rats (5-6 weeks old) with initial average weight of 200-250 g were randomly divided into two groups. Rats in the treated group were force fed with **Habbatus sauda** oil (0.2 μl/100g) mixed with corn oil and the control group with only corn oil (0.1 ml/100g). The rats were force fed daily for 60 days. On day 61, the rats were sacrificed and the testis weight, length and width were measured. Testes were fixed in Bouin’s solution prior to histological processing followed with Haematoxylin and Eosin (H&E) staining technique. The results showed significant differences between **Habbatus sauda** and control groups for all testis parameters. **Habbatus sauda** group showed significantly smaller diameter of lumen (59.24±1.24 μm) and thicker width of spermatogonia (14.77±0.27 μm) and primary-secondary spermatocytes (30.84±0.61 μm) layers as compared to control group (P<0.05). Therefore, this study suggested that **Habbatus sauda** oil oral intake would increase spermatogenesis and hence fertility in rats.

Keywords: **Habbatus sauda**, rat, testis histology