

# Evaluation of histopathological changes of testicular and epididymal tissues in dogs treated with Stanozolol and Nandrolone decanoate

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## Abstract

Stanozolol and nandrolone decanoate hormones are mainly used in dogs and horses to strengthen muscle growth, increase of body weight, treatment of anemia and stimulation of appetite; nevertheless, some side effects have been reported, including testicular atrophy, and decrease of spermatozoid count in dogs. The aim of the present study is to evaluate the histopathological changes of testicular and epididymal tissues in dogs treated with stanozolol and nandrolone decanoate. The present survey was performed on sixteen male dogs. The studied animals were divided into two equal groups of eight. Stanozolol was administered to dogs in group A with dosage of 50 mg per dog intramuscularly for 6 continuous weeks. Group B was similar to group A, but instead of stanozolol, nandrolone decanoate was injected with dosage of 1 mg/kg. To evaluate the possible side effects on the testicles, one of them was surgically removed before the investigation and the second testicle was removed on days 28 (four dogs in each group) and 42 (the remaining four of each group). Before the testes were placed in 10% formalin buffer, sperm quality in the epididymis was evaluated for indicators such as motility, morphology and number in times zero, 28 and 42 days. The results showed that destructive effects were obtained such as hyperplasia of interstitial Leydig cells, vacuolation, the presence of multinucleated cells and different stages of spermatogonia in testicular tissue; also, the destruction of duct covering cells and the detachment of cilia in the epididymal epithelium was observed. These changes were significantly greater in the stanozolol group than nandrolone decanoate. The quantitative changes were more pronounced in the stanozolol group and the qualitative changes in the nandrolone decanoate group. Although both drugs had side effects on testicular and epididymal tissues; the side effects of stanozolol were greater than nandrolone decanoate; therefore, it is recommended minimum dose of nandrolone decanoate for therapeutic purposes.

**Key words:** Stanozolol, Nandrolone decanoate, Histopathology, Testes, Epididymis, Dog

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