

عنوان مقاله:

Histological Study of Alteration in Testes and Epididymis of Domestic Rabbits Caused by Tribulus Terrestris and Vitamin E

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خلاصه مقاله:

Tribulus Terrestris (TT) is a common herbal plant with different categories that grows in many countries of the world. Traditional Chinese and Indian therapies have used TT for infertility treatment and also as a powerful antioxidant agent. Therefore, this study aimed to use this plant supplemented with vitamin E to study their combined effects on the histological condition of the testicle and epididymis of rabbits. This study was performed on 28 healthy male rabbits (445-950 g, 2.0-3.0 months old) that were randomly divided into four groups (n=7). All animals were subjected to clinical examination to ensure that they were free of external and internal parasites with the use of some preventive treatments. The animals were housed individually (cage size: 50 cm×50 cm×40 cm) over the 60-day study period starting from January 2022, with an adaptation period of two weeks. Tribulus Terrestris and vitamin E treatments were as follows: the first group (G1) was daily fed on a standard diet and kept as the control group, the second group (G2) was daily fed on the same ration plus 1 g of TT (animal/daily), the third group (G3) was daily fed on the same ration plus 1 g of TT supplemented with 60 mg of vitamin E (orally) (animal /daily), and the fourth group (G4) was daily fed on the same ration, with the addition of 60 mg vitamin E per animal (orally). The morphometric investigation, macroscopic variables (including body weight, testicular weight, and volume), and the microscopic parameters of the testicular seminal tubule were measured. The histological section showed the absence of negative effects after the oral administration of TT at a dose of 1 g per day and 60 IU vitamin E for each animal. However, there was a positive effect on spermatogonia and spermatocytes in all animals, while the spermatogonia in the experimental groups were more dense, especially in the second and third groups, compared to the control group. The seminiferous tubules were significantly lined with spermatogonia, spermatocytes, and round spermatids ($P < 0.05$) in the experimental groups, compared to the control group. Nevertheless, the epididymis tissue did not show traces of histological changes, such as epididymal hyperplasia. Sperms were more frequent in the lumens of the epididymis as well as the lumens larger than those of the control. Based on the results of this study, it can be concluded that the pole plant and vitamin E have a positive effect on the epithelial lining of the seminiferous tubules and the epididymis with an increase in sperm formation and ... differentiation towards maturit

کلمات کلیدی:

epididymis, Histology, Rabbits, spermatogenesis, testis, Tartus tratus, Vitamin E

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