

Abstract of the DVM thesis No. Faculty of Veterinary Medicine, Urmia University.

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Title of thesis:

Investigating the effects of intra-testicular injection of dextrose and mannitol solutions regarding rabbit sterilization by histological method

Nowadays, controlling the population of stray animals is known as a problem. Sterilization of animals by surgical method is a common procedure that can lead to the risks of anesthesia and the possibility of infection of the surgical site. Also, the high costs of surgery and the large number of homeless animals make us look for a new solution for sterilization of animals that is cost-effective for the guardians, low-risk for the animal, and feasible for the veterinarian in the fastest time and with a small number of assistants. Therefore, the present study was conducted with the aim of testing the effect of 50% dextrose solution and 20% mannitol on male rabbit testicular tissue in the direction of sterilization. For this purpose, 9 male rabbits were divided into 3 equal groups and 50% dextrose, 20% mannitol or 0.9% saline (control group) with a volume of 1 ml was injected intratesticularly into each group. After 50 days, the testicles were surgically removed for histological examination

According to the results obtained from the histological investigations, the administration of normal saline caused a significant decrease in the quality and maturity of the spermatogenic tubes, the evaluation of the spermiogenesis index, and also a significant increase in the histopathological changes of the testicular tissue compared to the other two groups

Keywords: Rabbit; Intra-testicular Injection; Dextrose; Mannitol; Chemical sterilization