عنوان مقاله:

Unilateral orchidectomy in donkey (Equus asinus): Evaluation of different surgical techniques, histological and morphological changes on remaining testis

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خلاصه مقاله:

Unilateral orchidectomy (UO) is required when further breeding potential is important. It is sometimes necessary to remove a single testis in a matured stallion for therapeutic reasons. In this study, twelve donkeys were used to evaluate three techniques of unilateral castration, histological and morphological changes on the remaining testis. Results of the study showed that each of the surgical techniques used had its advantages and disadvantages in comparison with the other two techniques. Therefore the selection among the three techniques depends on the surgeon preferences and the environment in which the unilateral orchidectomy is performed. The volume of the remaining testis recorded at the end of the study was significantly greater than that estimated at the start of the study ($p < ۰.۰۵$). The percentage of sperm motility obtained from the remaining testis was significantly decreased ($p < ۰.۰۵$). Histological examination of the testis in open surgery (group I) (where the scrotum was left opened) revealed severe hemorrhages, edema and fibrosis. The testis showed degenerative changes in the seminiferous tubules and interstitial orchitis. Histological examination of the testes removed using a closed technique, (in groups II and III) where the scrotum wound was sutured, revealed hyperplasia of spermatogenic series and Leydig cells. In conclusion, unilateral orchidectomy had compensatory effects on the weight and volume of remaining testis. Adverse effects on sperm motility and viability can affect the fertility of the animal.

کلمات کلیدی:

Animal, Histology, Leydig cells, Testis, Unilateral orchidectomy