Orchiectomy versus Scrotal ablation as a surgical modality for Testicular Tumors in Dogs - A Case Study

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Abstract

Testicular tumors are more frequently found in the aged uncastrated dogs. Present paper records the seminoma in the six dogs and their surgical management. The dogs were divided into two groups –Group A and Group B. In group A Orchiectomy was done where as in B the scrotal ablation with orchiectomy was instituted. Scrotal ablation showed better results than conventional orchiectomy. No recurrence of swelling and eventful recovery was noticed in group B. Hence, scrotal ablation was effective in managing the cases of testicular tumors in older dogs under field conditions.

Keywords*: Dogs, Testicular tumors, Orchiectomy, Scrotal ablation.*

Introduction

Testicular tumors are the most common aliments in intact older dogs. Neoplasm in dogs are twice more frequent in comparison to man (Hahn *et al.,* 1994). Because of the widespread Animal Birth Control Programmes, the incidences of testicular tumors have gone down (Bonagura and Kisk, 1995). Exact cause of testicular tumor are still unknown, however male cryptorchid dogs are more likely to develop the tumor of testicles than normal dogs where the testicles descend in the scrotum. In one of the study it was found that 27% of the male dogs develop testicular tumors (Grieco *et al.,* 2008). Surgical management of the testicular tumors includes castration or scrotal ablation with orchiectomy. Scrotal ablation or removal of the entire scrotum with testes is necessary in cases of cancer, trauma, or infection or if the scrotum is extremely pendulous (Harvey 1973); McCauley and Charles (2009). Advanced age in dogs plays an important role in the occurrence of the disease. Most common testicular tumors reported in dogs are germinative cell, sertoli cell and interstitials cell types. Multiple and bilateral tumors are common, but metastases are rare. (Catoi *et al.,* 2008).

Materials and Method

Six intact male dogs aged between 7-9 years were presented to the Teaching Veterinary Clinical Complex, Apollo College of Veterinary Medicine, Jaipur for scrotal swelling. Five dogs were non-descript type where one was Dalmatian. On clinical examination the scrotal swelling was diagnosed as Testicular

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tumors. The biopsies from testes were subjected to histopathological examination to ascertain the type of growth. All the animals were divided into 2 groups- Group A and Group B, depending upon the extent of swelling and scrotal ulceration. Surgical modality was affixed for both the groups after declaring them fit for the surgery by subjected them to complete blood count, chest X-rays and USG of the testes. In Group A, the swelling was slight with no ulcerations on the scrotal skin. Surgical procedure adopted was Orchiectomy. In Group B, there was massive swelling with open wounds on the scrotal skin and presence of the maggots. Surgical treatment instituted was scrotal ablation with Orchiectomy. Both the groups were premedicated with atropine sulphate @ 0.02mg/kg bwt. intra-muscular before Xylazine injection @ 2mg/kg bwt. intra-muscular. The dogs were anaesthetized with Propofol @ 6mg/kg bwt. strict intra-venous. Duration of the surgery as well as the post-surgical complications if any were recorded. Routine antiseptic dressing with Povidone Iodine was done. Antibiotics (injection Cefotaxime @ 15mg/kg bwt. i/m) and analgesics (injections Meloxicam @ 0.5mg/kg bwt. i/m) support was given for 7 consecutive days.

Results and Discussion

Out of six dogs, 5 were local mongrel whereas the one was Dalmatian. All the dogs were between the age group of 7-9 years with both the testicle affected. Earlier various scientists reported testicular tumors as common type of tumors in intact aged dogs (Rogers, 1997); Etinger and Feldman (2000). Our findings are in total agreement with Thacher and Bradley (1983); Pandey *et al.,* (1989) who documented the testicle tumors in dogs more prevalent in 4-8years of age. Both the groups' revealed seminoma, a benign tumor. These types of tumor have also been found by Read and Johnston (1993); Vonder *et al.,* (1993). In group A where the Orchiectomy was done, the swelling reduced gradually after 14 days. But in 4th week there was extensive accumulation of straw colored transudate in the scrotum. This may be due to seepage of serum from the blood clots. This is in accordance with Spencer (1985) who reported massive swelling and lameness in horses with testicle neoplasia after castration. All the dogs of the group showed signs of dehydration and inappetance. Blood picture revealed decreased platelet count (100,000/µl) in two dogs. One of the dogs in group A succumbed to the disease whereas the rest two survived and showed delayed recovery. In group B where Scrotal ablation with orchiectomy was done showed no signs of swelling at the operation site. There was scanty discharge at the incision site. Our findings match with Spencer (1985) who also reported complete healing following scrotal ablation in horses and ponies. One of the dogs of group B, the skin suture line break at two points due to tension. Similar findings were reported by Charles (2009).The incision was left open to allow second intension healing. Overall compatible healing was achieved after 4th week. The dogs were alert and healthy. Duration of surgery was double in scrotal

ablation (37 minutes) as compared to conventional Orchiectomy. Long surgical time and modest increase in the cost of surgical procedure has also been reported by Palmer and Passmore (1987) and Charles (2009).

Conclusion

It may be concluded that scrotal ablation with orchiectomy has been an effective measure of managing the testicular tumors as compared to conventional castration (orchiectomy). The post-surgical complications could be zeroed by scrotal ablation than castration in dogs.

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