

SERTOLI CELL TUMOR OF ECTOPIC TESTIS AND ITS SURGICAL MANAGEMENT IN A DOG

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A Six year old male non descript dog was presented to Teaching Veterinary Clinical Complex Mannuthy with a history of alopecia, reduced appetite and swelling at the left inguinal region for the last six months. Condition was diagnosed as ectopic testis and surgical excision of the mass was performed under general anaesthesia. Microscopic features of the mass in this ectopic testicle were consistent with Sertoli cell tumor.

Keywords: Dog, Sertoli cell tumor.

Testicular tumors are the most common neoplasms in male dogs (Nodtvedt *et al.*, 2011). It constitutes >90% cases among all canine genital tumors and dogs are found to be the most affected animals (North *et al.*, 2009). Sertoli cell tumor is one of the three main types of tumors of the testes. Others being seminomas and Leydig cell tumors (D'Angelo *et al.*, 2012; Bini *et al.*, 2015). Sertoli cell tumors are known to produce pancytopenia in dogs, which is a condition in which the red blood cells, white blood cells and platelets values are below normal due to damage to the bone marrow (Lawrence and Saba, 2013) and in most cases can lead to fatal outcome. In cryptorchid

dogs, tumors most frequently develop in the right testicle probably due to the fact that the right testicle is more likely to be retained (Liao *et al.*, 2009). Sertoli cell tumor of an ectopically placed testis and its surgical management is reported.

Case History and Observations

A Six year old, male, non descript dog, weighing 10 kg was presented to Teaching Veterinary Clinical Complex, Veterinary College, KVASU, Mannuthy, Thrissur with the history of alopecia, reduced appetite and swelling at the left inguinal region for the last six months (Fig.1).



Fig.1. Dog showing swelling on left inguinal region

On clinical investigation all the physiological and haematological parameters were within normal range. Physical examination revealed that the animal was

having enlarged ectopic testis which was found subcutaneously near the left side of the penis, soft to touch and did not elicit pain on palpation. The other testis was normal and

scrotal in position. Radiographic examination revealed a soft tissue swelling in the left inguinal region. The condition was diagnosed as testicular tumor and decided surgical removal of ectopically placed testis.

Surgical Treatment

Animal was premedicated using atropine at the dose rate of 0.045 mg/kg body weight I/M followed by xylazine hydrochloride at the dose rate of 1mg/kg body weight I/M. General anaesthesia was induced with ketamine hydrochloride at the dose rate of 5mg/kg I/M and the anaesthesia was maintained with 2% isoflurane. The dog was placed on dorsal recumbancy and ventral abdomen was prepared for an aseptic surgery. A 5 cm long cutaneous incision was made over the tumor mass. Separated the subcutaneous tissue and exposed the testicular tumor from underlying tissues by blunt dissection. The vaginal tunic of the testis was incised. Traction was applied to free the vaginal tunic from its attachment at the epididymis. The ductus deferens, the

spermatic cord and its structures were exposed. Testis was then excised and removed after ligating the testicular artery. The tumor mass weighed 120 g and measured 9 cm in length (Fig.2). It was then fixed in 10% formalin for histopathological examination. The incision was closed in routine manner. Postoperatively animal was administered with ceftriaxone at a dose rate of 20 mg/kg body weight I/V and meloxicam at 0.2 mg/kg body weight I/M for five days. Skin sutures were removed on eight day.

On histopathological examination, tumour cells were closely arranged into tubule-like nests surrounded by a dense fibrovascular stroma. These cells were polygonal to elongate, with indistinct cell borders, and moderate amounts of eosinophilic, flocculent to vacuolated cytoplasm. Nuclei were centrally placed and oval to elongate, with vesicular chromatin and basophilic nucleoli. Mitotic figures were less. There was moderate anisocytosis and anisokaryosis (Fig.3) suggestive of sertoli cell tumor.



Fig.2: Surgically excised tumor mass

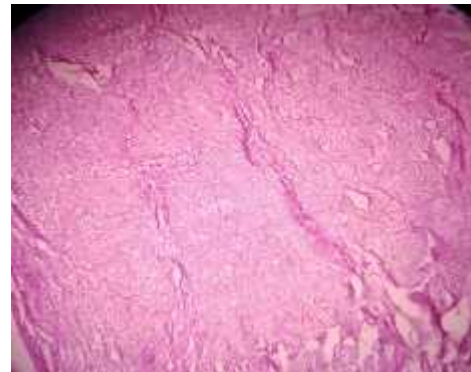


Fig.3: Tumour cells closely arranged into tubule-like nests surrounded by a dense fibrovascular stroma (H&E 100x)

Results and Discussion

The dog had an uneventful recovery. Testicular tumours involving sertoli cell and germinal cells occur less frequently in comparison to interstitial cell tumours and rarely encountered in extra-testicular sites. Dogs with inguinal cryptorchidism have higher risk of development of testicular tumor than the ones with abdominal cryptorchidism

as also reported by Liao *et al.* (2009). It is characterized by non-pruritic, symmetrical alopecia, hyperpigmentation, gynaecomastia, galactorrhoea, pendulous prepuce, attractiveness to other males and standing in a female posture to micturate and may cause feminizing syndrome in 25 to 60% of the dogs. The etiology of testicular tumor is not clear but the risk factors include increasing

age, breed environmental elements, and cryptorchidism as also mentioned by Quartuccio *et al.* (2012). It is the only testicular tumour that commonly produces hormonal changes with clinical effects.

Microscopic features of the neoplasm in this ectopic testicle were consistent with Sertoli cell tumor. In this case, considering the age of the dog, cryptorchidism is the risk factor responsible for the occurrence of this tumor.

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