SERTOLI CELL TUMORS IN DOGS- A REPORT OF FOUR CASES

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Four male non descript dogs aged between 5-8 years were presented to the Department of Veterinary Surgery and Radiology, College of Veterinary Science, Tirupati with the history of a large size swelling at the ventral abdomen adjacent to the body of penis (Fig.1). Two dogs were apparently healthy with normal temperature, pulse and respiratory rates. In two dogs there was a complaint of loss of hair coat and lethargy. Haematobiochemical values were within normal limits. Lateral thoracic radiographs were taken to rule out metastasis. Fine needle aspiration biopsy revealed neoplastic cells. Surgery was performed to excise the mass. Histopathological examination confirmed Sertoli cell tumor.

Key words: Sertoli cell tumor, Dog

Testicular tumors involving sertoli cell and germinal cells occur less frequently in comparison to interstitial cell tumors and are encountered rarely in extra testicular site (Doxsee et al. 2006). About one third of sertoli cell tumors are hormonally active causing signs of endocrine imbalance like hyperestrogenism, feminization, gynecomastia, alopecia, bone marrow suppression and atrophy of contra lateral testicle (Kennedy et al.1998). The association of SCT with cryptorchidism is well established (Post and Kilborn 1987). Neoplasia of testes can occur unilaterally or bilaterally and can involve mixed cell type also (Kennedy et al. 1998).

Four male dogs aged about 5-8 years were presented to the Department of Veterinary Surgery and Radiology, College of Veterinary Science, Tirupati with the history of a large size swelling at the ventral abdomen adjacent to the body of penis (Fig.1). Two dogs were apparently healthy with normal temperature, pulse and respiratory rates. In two dogs there was a complaint of loss of hair coat and lethargy. Haematobiochemical values were within normal limits. Lateral thoracic radiographs were taken to rule out metastasis. Fine needle aspiration biopsy revealed neoplastic cells. Bilateral orchiectomies and removal of tumor masses was performed as per the standard procedure in all four dogs under general anaesthesia (Propofol 5mg/kg body weight I/V) under strict asepsis. Tissue samples were subjected for histopathological examination.

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Histopathological sections revealed shrunken tubules, with conspicuous lumen. Cells were multi layered arranged with long axis perpendicular to basement membranes of tubules (Fig.2). Tumour cells were long and fusiform in shape with cytoplasmic prolongations and indistinct cell borders. Nuclei were narrow elongated and cytoplasm was vacuolated. Tubules of neoplastic cells were separated by thick collagenous connective tissue septa. The cells in the centre of the tubules were detached forming solid mass.

In the present study, three were German shepherd dogs and one was spitz with age ranging from 7-10 years. Older dogs and breeds like German shepherd, Boxer has an increased risk for predisposition of Sertoli cell tumour (Priester and Mckay, 1980). Tumors mostly occur in male dogs over 5 year of age (Ladd, 1993). The tumor growths were single in all the cases with 2-3 inches in diameter. Tumours were ulcerating in two dogs. The clinical signs like presence of one hypertrophied testis along with atrophied testicles, feminization syndrome, gynecomastia and hyper pigmentation of skin were in accordance with the findings of Mischke et al. (2002). Radiographs of thorax revealed normal lung patterns in all the 4 dogs. Metastasis is uncommon in sertoli cell tumor and is seen approximately in 10% of the cases (Moulton, 1978). Normalization of hair coat with complete reversion of feminization syndrome, gynecomastia and hyper pigmentation were noticed two months after surgery in two dogs.

Sertoli cell tumor is the only testicular tumor that commonly produces hormonal changes with clinical effects. The hyperestrogenism syndrome that characterizes most Sertoli cell tumors can be associated with severe bone marrow atrophy and progression to death. Because the risk of harmful consequences of Sertoli cell tumor increases with the progression of tumor growth, early castration and enbloc removal of all testicular neoplasms is always warranted.

**Fig. 1**

*Photograph showing Sertoli cell tumor- Dog*
REFERENCES


