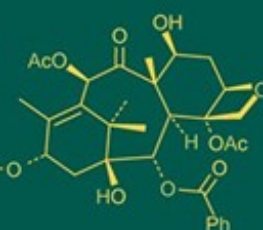
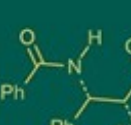


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Successful diagnosis and surgical management of a sertoli cell tumor in a mixed breed male dog

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ABSTRACT

This case report describes the ultrasonography aided sertoli cell tumor diagnosis, surgical management and its confirmatory diagnosis through histopathology in 8 years old mixed breed male dog. The animal was presented to SAC, OP, OG Unit of Veterinary Clinical Complex, Veterinary College and Research Institute, Salem, TANUVAS, Tamil Nadu with the primary complaint of abnormal, large pendulous mass hanging from the inguinal region for the past two months. Digital examination revealed a mass with firm consistency, without eliciting any pain response up on digital palpation in the left scrotal sac. Ultrasonography showed that the mass was unilateral testicular mass. The condition was tentatively diagnosed as unilateral testicular tumour of sertoli cell origin. Surgical resection of testicular tumor mass was done along with orchiectomy of contralateral testicle under general anaesthesia. Resected testicular tumor mass was sent to histopathological examination and the tumour was confirmed as sertoli cell origin. Post-operative treatment and management were followed for 10 consecutive days followed by suture removal on day 11. The animal had an uneventful recovery without any complication.

Keywords: Testicular tumor, Sertoli cell origin, Orchiectomy

Introduction

Testicular tumors are increasingly common in veterinary medicine (Foster, 2012) [2, 3]. The dynamics of oncological cases was multimodal the predisposing factors includes environmental changes and genetic traits (Grieco *et al.*, 2008; Nodtvedt *et al.*, 2011) [4, 5, 10, 11]. Testicular tumours can be divided into 2 main categories: stromal sex cord tumors and germ cell tumors. In the first category, we include sertolinoma and leydig cell tumors, the latter being considered the most common testicular tumor in canids, rats and mice (Creasy *et al.*, 2012; Kudo *et al.*, 2019) [1, 2, 6, 7]. Sertoli cell tumors, also known as sustentacular cell tumors arise from the supporting cells of the seminiferous tubules in testis (Gopinath *et al.*, 2009; MacLachlan *et al.*, 2002) [3, 8] (Grieco *et al.*, 2008; Morrison, 2002) [4, 9]. Approximately one third of dogs with sertoli cell tumor will manifest signs of apparent hyperestrogenism, characterized by any combination of feminization, gynecomastia, and atrophy of the contralateral testicle, squamous metaplasia within the prostate gland, symmetrical alopecia and bone marrow atrophy. The clinical manifestations may vary between animal to animal. The incidence of feminization increase from approximately 15% with scrotally located sertoli cell tumors to 70% in abdominally located sertoli cell tumors. The first manifestations of a functional Sertoli cell tumor are usually changes in the skin and hair coat. The skin is usually hyperpigmented and the hair is often easily epilated. Marked squamous metaplasia of the epithelial lining of the ducts and glands of the prostate can lead to glandular obstruction with secondary cyst formation.

Case history and clinical examination

An eight years old male mixed breed dog was presented to SAC, OP, OG Unit of Veterinary Clinical Complex, Veterinary College and Research Institute, Salem, TANUVAS, Tamil Nadu with the complaint of abnormal, large pendulous mass hanging from the inguinal region for the past two months along with alopecia and animal had treatment for the same through nearby veterinary physician. Clinical examination of the mass revealed firm right side testicular mass not showed any pain on palpation with hyperpigmented skin (Fig. 1). Further, ultrasonographic examination revealed disrupted testicular margins, mixed/heterogeneous echotexture (Fig. 2) suggestive of testicular tumor of sertoli cell origin.

Surgical management and discussion

Animal was subjected to surgical resection of testicular tumor affected testis and healthy testis as per the standard surgical procedure (Fig. 3) under general anaesthetic protocol which includes premedication with inj. Atropine sulphate 0.1 % @ 0.04 mg/kg⁻¹ (Atropin-Vet, Doctor's Life Science India Ltd., Andhrapradesh,

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India) subcutaneously, Inj. Xylazine hydrochloride 2% @ 1 mg/kg⁻¹ (Xylazine, Indian Immunologicals Ltd, Hyderabad, India) intramuscularly and induced with Ketamine hydrochloride - 5 mg/kg⁻¹ (Ketmin-50, Themis Medicare Ltd., Uttarakhand, India), Diazepam - 0.5 mg/kg⁻¹ (Lori, Neon Laboratories Ltd., Mumbai, India) cocktail and maintained with ketamine and diazepam cocktail. Post-operative wound management was carried out as per the standard procedure. Resected testicular mass was subjected to histopathological examination which confirmed testicular tumor of sertoli cell origin (Fig. 4). Based on the gross pathology, ultrasonography and histopathology this case was diagnosed as a sertoli cell tumor.

Primary testicular tumors are the most prevalent neoplasms in male dogs, accounting for approximately 90% of all tumors affecting the male genitalia (Liao *et al.*, 2009) [7, 8]. The Sertoli cell tumor is one of the three main testicular tumors in dogs. Sertoli cell tumors occur more often in cryptorchid animals (Botelho *et al.*, 2014) [1] where in the current case report it was a sertoli cell tumor with descended scrotal testicle. Testicular tumor of sertoli cell origin has a range of clinical signs related to the hormonal derangement namely symmetrical alopecia, gynaecomastia, anaemia, feminization associated with hyperestrogenism, contralateral testicular atrophy squamous metaplasia within the prostate gland (Gopinath *et al.*, 2009; MacLachlan and Kennedy, 2002; Morrison 2008) [3, 4, 8, 9] where as in this case report animal showed only the enlarged and firm testicular structure,

prostate gland was normal in terms of size, symmetry and texture without the other clinical signs described in the previous report. Sertoli cell tumors with feminization syndrome due to excessive oestrogen production. Hyperestrogenism disrupts the hypothalamic-pituitary-gonadal (HPG) axis, cause reduction of testosterone production, atrophy of sebaceous glands and impaired spermatogenesis (Herzog *et al.*, 2023, Welle, 2023) [6,12]. These systemic effects impact the overall health status and well-being of the animals.

Conclusion

This case report highlights the importance of ultrasonography and histopathology to arrive a diagnosis and to go with surgical management to safeguard the wellbeing of the affected animals.

Conflict of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Fig.1 Hyperpigmentation of skin around the external genitalia and ventral abdomen

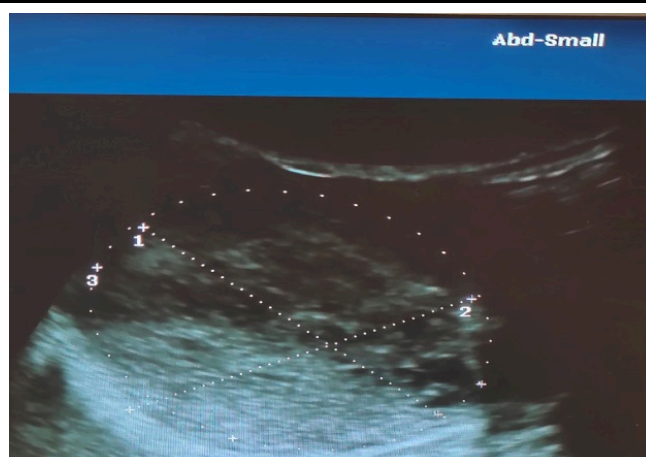


Fig.2 Indistinct testicular margins with mixed/heterogeneous echotexture

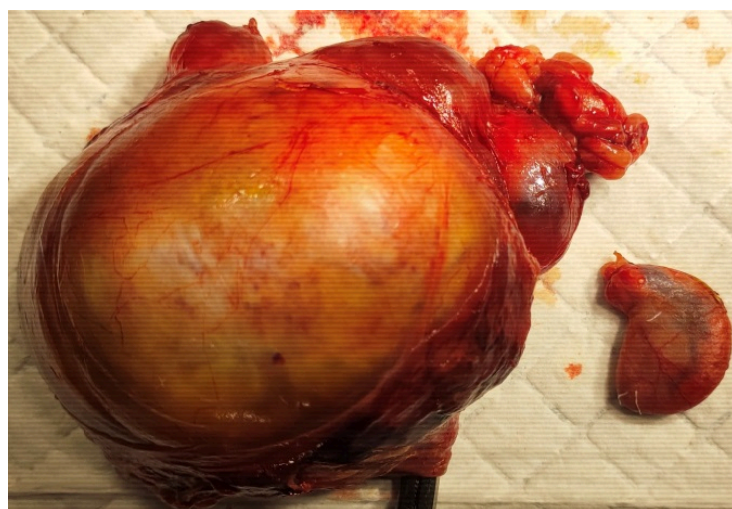


Fig.3 Resected testicular tumor mass and healthy testicle

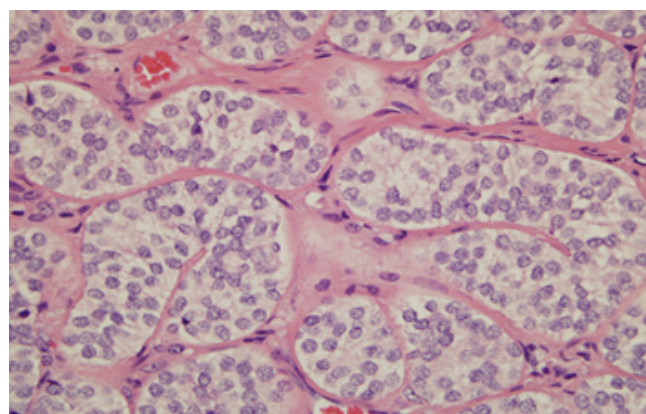


Fig.4 Photomicrograph showing tubules with an occluded lumen, oval, round or elongated nuclei, with pale eosinophilic or clear cytoplasm

References

1. Creasy D, Bube A, de Rijk E, Kandori H, Kuwahara M, Masson R, Nolte T, Reams R, Regan K, Rehm S, Rogerson P, Whitney K. Proliferative and nonproliferative lesions of the rat and mouse male reproductive system. *Toxicologic pathology*. 2012;40(6):40S–121S.
2. Foster RA. Common lesions in the male reproductive tract of cats and dogs. *The Veterinary clinics of North America. Small animal practice*. 2012;42(3):527–vii.
3. Gopinath D, Draffan D, Philbey AW, Bell R. Use of intralesional oestradiol concentration to identify a functional pulmonary metastasis of canine sertoli cell tumour. *J Small Anim Pract*. 2009;50:198–200.
4. Grieco V, Riccardi E, Greppi GF, Teruzzi F, Iermanò V, Finazzi M. Canine testicular tumours: a study on 232 dogs. *Journal of comparative pathology*. 2008;138(2-3):86–89.
5. Herzog F, Adams D, Blanc AS, Lee J, Langohr I, Pinto C. Canine Sertoli cell tumor: *anti*-Müllerian hormone, inhibin B, and estrone sulphate. *Clin Theriogenol*. 2023;15.
6. Kudo T, Kamiie J, Aihara N, Doi M, Sumi A, Omachi T, Shiota K. Malignant Leydig cell tumor in dogs: two cases and a review of the literature. *Journal of veterinary diagnostic investigation: official publication of the American Association of Veterinary Laboratory Diagnosticians, Inc*. 2019;31(4):557–561.
7. Liao AT, Chu PY, Yeh LS, Lin CT, Liu CH. A 12-year retrospective study of canine testicular tumors. *J Vet Med Sci*. 2009;71:919–23.
8. MacLachlan NJ, Kennedy PC. Tumors of the genital systems. In: Meuten DJ (ed.). *Tumors in Domestic Animals*. 4th ed. Ames: Iowa State Press; 2002. p. 561–567.
9. Morrison WB. Cancer in Dogs and Cats: Medical and Malignant Sertoli cell tumor in a dog 175 *Surgical Management*. 2nd ed. Jackson: Teton New Media; 2002. p. 558–560.
10. Nodtvedt A, Gamlem H, Gunnes G, Grotmol T, Indrebo A, Moe L. Breed differences in the proportional morbidity of testicular tumours and distribution of histopathologic types in a population based canine cancer registry. *Veterinary and comparative oncology*. 2011;9(1):45–54.
11. Welle MM. Canine noninflammatory alopecia: An approach to its classification and a diagnostic aid. *Vet Pathol*. 2023;60:748–769.

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