SERTOLI CELL TUMOR ALONG WITH PROSTATIC ABSCESS IN A GERMAN SHEPHARD#

Anjali Verma[1*], Gulshan Kumar[2], R.P. Pandey[3], Sanjay Purohit[3] and Tarun Kamal[4]
Department of Surgery and Radiology, College of Veterinary Science and Animal Husbandry, Uttar Pradesh Pandit Deen Dayal Upadhyaya Pashu Chikitsa Vigyan Vishwavidyalaya, Mathura-281001, Uttar Pradesh, India

Received on:24.01.2025
Accepted on:28.07.2025

ABSTRACT

An eight years old intact male German Shephard (GSD) was presented with a primary complaint of a large mass in scrotum for over 3 months. On general examination of the animal generalized alopecia, rat-tail appearance, gynecomastia and preputial discharge were observed while clinical examination revealed the scrotal mass to be hard in consistency which evinced no pain on palpation. On per rectal digital examination a symmetrically enlarged prostate was palpable. Ultrasonogram showed an anechoic structure caudal to bladder with echogenic contents. The mass was excised and scrotal ablation was performed using standard protocol. A fibrosed and hypertrophied right testes with numerous cystic lesions as well as severe testicular torsion was removed and resolved, respectively. The animal recovered uneventfully. The histopathology of the testicular mass sample later confirmed to be a Sertoli cell tumor.

Keywords: Sertoli cell tumor, prostate abscess, German Shephard, alopecia

Introduction

The prostate gland is the sole accessory sex gland present in reproductive system of male dogs (Nizanski *et al*., 2014) and can be susceptible to various diseases and disorders. Accurate diagnosis and timely intervention are crucial for optimal canine health. Paclikova *et al*. (2006) mentioned that proteinuria, hematuria, leukocyturia and bacteriuria could be observed in dogs suffering from prostatic abscess whereas in well-encapsulated abscesses no such changes were observed. Freitag *et al*. (2007) reported prostatic abscesses appeared as hypoechoic or anechoic lesions surrounded by an ill-defined capsule, although mineralization with hyperechogenicity and a distal acoustic shadow may indicate neoplasia or inflammation. Ramesh *et al*. (2018) reported prostatic abscesses in dogs was presented with clinical symptoms such as urine dribbling, pyuria, dysuria, fever, alopecia, and gynecomastia. Sertoli cell tumor is mostly observed in intact, unneutered older male dogs (Ettinger and Feldman, 2000) and most common cause of endocrine alopecia in male dogs (Miller, 2004). The incidence of endocrine dermatoses of testicular tumor origin was higher in dogs with Sertoli cell tumors (20.54%). Feminization signs in symmetrically alopecic male dogs with anemic signs must trigger clinical suspicion. Regrowth of hair was observed after castration (Selvaraj, 2015).

Clinical history and observations

An eight years old intact male German Shephard weighing 27 Kg presented with a primary complaint of a large mass in scrotum along with foul smell in urination and preputial discharge for the last 3 months. On general examination of the animal, generalized alopecia, rat-tail appearance, gynecomastia were observed. On clinical examination, the scrotal mass was found to be hard in consistency but no pain evinced on palpation and no hydrocele. Contralateral testis was found atrophied.

Diagnosis

On per rectal digital examination, only the caudo-dorsal border of the prostate was palpable which was regular smooth, symmetrical, mobile but enlarged. On ultrasonographic examination, prostate was seen as a large anechoic sac just caudal to bladder with echogenic contents. (Fig. 2a) and a coarse heterogenous prostate having moderate hyperechoic echogenicity with anechoic sac with echogenic content within the prostatic lobes (Fig. 2b). The various numeric ultrasonographic biometric observations consisted of length on longitudinal plane (L), depth in longitudinal section (DL), depth in transverse section (DT) and width in transverse section (W) of the prostate. All the biometric parameters were measured in centimeters (cm). The prostatic volume (V) and prostatic weight (Wt.) were later calculated using formulae derived by (Atalan *et al*., 1999). The prostatic volume and weight were measured in cm^3 and gm. Radiograph revealed distended bladder with a radio dense mass caudal to the bladder (Fig. 3). The radiographic prostatic length (L), depth (D) and sacral promontory to pubic brim distance (SPL). All the radiographic biometry measurements were recorded in cm. The biometric measurements recorded are presented in Table 1.

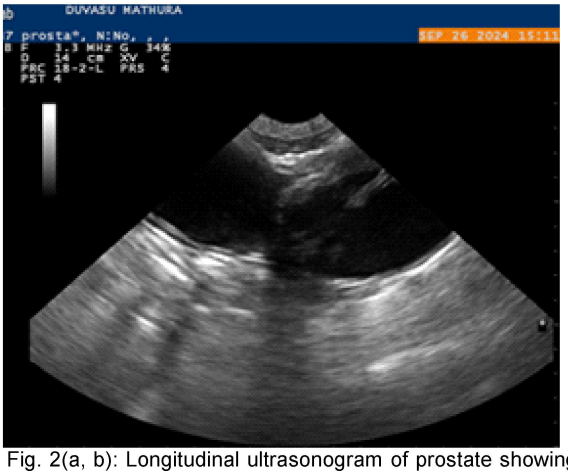
Hematology parameters were within the normal range except leukocytosis and mild anemia. The urine sample had an acidic pH of 5 and abundance of leucocytes but no hematuria. This case on the basis of sonographic and clinical findings was diagnosed as prostatic abscess.

Treatment and Discussion

Surgical intervention was done by bilateral orchidectomy and scrotal ablation using standard protocol. A fibrosed and hypertrophied right testes with numerous cystic lesions as well as severe testicular torsion was revealed intraoperatively (Fig. 3 and 4). The right sided hypertrophied testicular mass sample was sent for histopathology which was later confirmed

[1*]Part of thesis of first author and Corresponding author E mail:-dranjali.vsr@gmail.com; [2]Associate Professor, [3]Professor, [4]Assistant Professor, Veterinary Clinical Complex (VCC)

Fig. 1 (a, b): 8 years old GSD showing (a) generalized alopecia along with typical rat-tail appearance (b) Purulent preputial discharge and gynecomastia



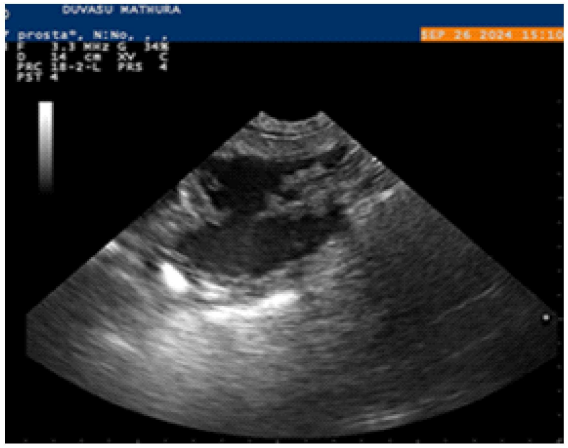


Fig. 2(a, b): Longitudinal ultrasonogram of prostate showing (a) an anechoic structure caudal to bladder (b) moderate hyperechoic echogenicity with anechoic sac with echogenic content within the prostatic lobes

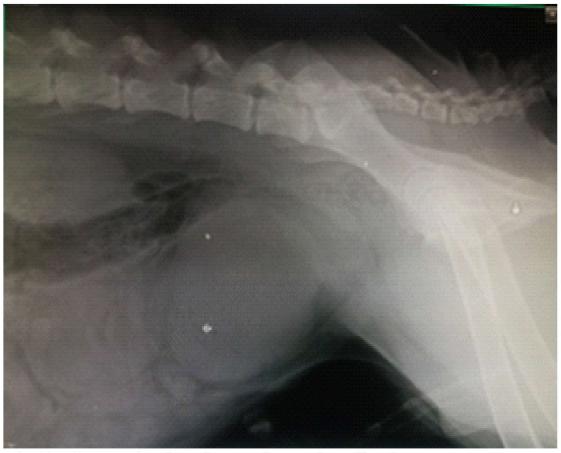


Fig. 3: Radiograph showing enlarged radio dense prostate caudal to bladder

Table 1: Sonographic and radiographic biometry of case

Sonographic biometry						Radiographic biometry		
L_{USG}	DL	DT	W	V	Wt.	$L_{X\ RAY:}$	Depth	SPL
7.46	6.81	8.43	7.92	255.53	231	4.32	3.80	6.65

Fig. 4: Image showing severe testicular torsion and hypertrophied and fibrosed right testes intra-operative.

Fig. 5: Image showing fibrosed and hypertrophied right testes having numerous cystic lesions as compared to atrophied left testes

to be a Sertoli cell tumor. The case was followed with antibiotic (cefotaxime @ 25 mg/kg b.wt.), anti-inflammatory (meloxicam @ 0.5 mg/k b.wt.) and supportive therapy. This case on the basis of sonographic, clinical and histopathologic findings was diagnosed as prostatic abscess and Sertoli cell tumor. The clinical findings were in accordance with the findings in Sertoli cell tumor cases in dogs reported by (Kujur *et al.*, 2005 and Selvaraj, 2015). Also, Ettinger and Feldman (2000) reported Sertoli cell tumor to be mostly observed in intact, unneutered older male dogs and the right testicle being more often affected than left that is similar to the present study which is considered the common cause of endocrine alopecia in male dogs (Miller, 2004).

Acknowledgements

The author isobliged to convey sincere regards to the head of institute for the provision of facilities during the study.

Conflict of interest

Authors declare no conflict of interest.

References

Atalan G, Holt PE, Barr FJ, Brown PJ (1999) Ultrasonographic estimation of prostatic size in canine cadavers. *Res. Vet. Sci.* **67**: 7-15.

Ettinger S and Feldman E (2000) Veterinary Internal Medicine, 5th ed., WB Saunders Co., Philadelphia. pp.1699.

Kujur, Rajni Flora, S Priya, Chidambaram Balachandran, Bhakatavatsalam Muralimanohar, Ganne Venkata Sudhakar Rao (2005) Sertoli Cell Tumor in a German Shepherd dog. *Indian J. Vet. Pathol.* **29**: 54-55

Miller WH Jr. (2004) Sex Hormone Dermatoses. 29th World Congress of the World Small Animal Veterinary Association. 1-3.

Nijanski W, Levy X, Ochota M and Pasikowska J (2014) pharmacological treatment for common prostatic conditions in dogs - benign prostatic hyperplasia and prostatitis: an update. *Reprod. Domest. Anim.* **49**: 8-15.

Paclikova K, Kohout P, Vlasin M (2006) Diagnostic possibilities in the management of canine prostatic disorders. *Vet. Med.* **51**(1): 1-13.

Ramesh N, Rakesh A, Sathish K (2018) Ultrasonographic features and surgical management of prostatic abscess in twelve (12) dogs. *Pharma Innov. J.* **7**(2): 257-261.

Selvaraj P, Enbavelan PA, Nambi AP, Srinivasan SR (2015) Therapeutic management of acute prostatitis in dogs. *Intas Polivet*, **16**(1): 145-146.

Sindhu K, Rajan UN, Pillai PC, Alex KM, Jayakumar and Joseph M (2011) Prostatic abscess in a German shepherd dog-A case report. *J. Vet. Anim. Sci.* **42**: 68-70.