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Surgical management of testicular tumour in a Spitz dog: A case report

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Abstract

A 7-year-old intact male Spitz was brought in with a history of scrotal enlargement and recent urine incontinence. On physical examination, an atypical testicular growth was seen. It was diagnosed as a testicular tumour on ultrasonography. The tumour was removed under general anesthesia. The animal recovered without incident.

Keywords: Testicular tumour, Spitz dog, Monorchism

Introduction

The third most typical anatomical location for canine tumour formation is the testicles (Kudo *et al.*, 2019) [1]. One of the most frequent genital tumours in canines was the testicular tumour, which has seen an increase in occurrence over the previous 40 years (Hohsteter *et al.*, 2014) [2]. Age and cryptorchidism are the main risk factors for canine testicular tumour development (Canadas *et al.*, 2016) [3]. Nearly 90% of testicular tumours were found in dogs. Sertoli cell tumour, Leydig cell tumour, and seminoma were the three most prevalent testicular tumours found in dogs (Santos *et al.*, 2000) [4].

Case history & observations: A 7-year-old intact male Spitz dog with a history of scrotal enlargement and urine incontinence was brought to the Department of Veterinary Surgery and Radiology, CVSc & AH, OUAT, Bhubaneswar. On physical examination, an atypical testicular growth was seen (Fig. 1). The results of the ultrasound examination showed a thick hyperechoic border with a uniform hypoechoic echo structure (Fig. 2). It was diagnosed as a testicular tumour and decided for surgical removal of the tumour under general anesthesia.

Surgical treatment: The animal was premedicated with Inj. Atropine at 0.04 mg/kg bwt and Inj. Xylazine at 1 mg/kg IM before being induced with Inj. Ketamine at 5 mg/kg IM. After shaving, the surgery site was scrubbed with a povidone-iodine solution. A linear incision was made across the swollen scrotum after correct placement and drapery. Subcutaneous tissues were gently dissected after that, and the testis was gently squeezed out (Fig. 3). Using chromic catgut 1-0, a twofold ligation was carried out after the spermatic cords were cut loose from the surrounding tissue. The operation revealed the animal to be a monorchid. Subcutaneous tissues are apposed with chromic catgut 1-0 and skin is apposed with non-absorbable sutures (Polyamide 2-0) in a horizontal mattress pattern (Fig. 4). A sample was kept in 10% formalin for histopathological analysis. Post-operatively antibiotics (inj. Ceftriaxone and tazobactam at 20 mg/kg bwt. IM) and an analgesic (inj. meloxicam at 0.5 mg/kg bwt. IM) were given once daily for 5 days. Wound dressing with povidone iodine ointment continued for up to 7 days. Skin sutures were removed on the 10th postoperative day. The animal made an uneventful recovery.



Fig 1: Enlarged testicle

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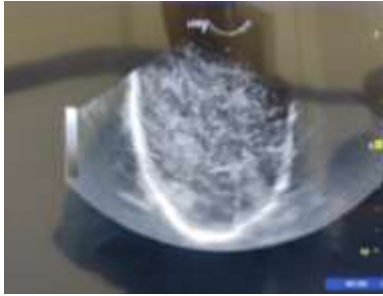


Fig 2: Hyperechoic border with a uniform hypoechoic echostucture on USG



Fig 3: Squeezing out the testicular mass after scrotal incision



Fig 4: Closure of incision

Result and Discussion: The animal made an uneventful recovery after the surgical intervention. Testicular tumors, which occur less frequently than other histological structures such as mesothelioma, rete testis epithelial tumors, and so on, can arise from sex cord stroma (Sertoli and interstitial cell tumors), germ cells (seminoma, teratoma, and so on), or both (mixed tumors) (Maxie, 2015) [5]. Interstitial cell tumours, seminomas, and Sertoli cell tumours are the three most prevalent forms of canine testicular tumours; however, the incidence of these neoplasms differs between studies (Nascimento *et al.*, 2020) [6]. In the present case cut surface of the tumor mass revealed irregular diffused nodular growths (Fig. 5). Histological examination of sections of the cryptorchidism testicle revealed multifocal to confluent, intratubular to coalescing sheets of neoplastic Sertoli cells that had extensively replaced the testicular parenchyma. Testicular tumours can be avoided by early sterilisation. Orchiectomy, in contrast, is the only corrective procedure for the vast majority of dogs with testicular tumours that may be performed without any additional complications (Dhaliwal *et al.*, 1999) [7]. Different approaches such as surgery, electrochemotherapy, radiotherapy, chemotherapy, cell therapy etc. are adopted depending on the type of tumor and condition of the patient (Dhaliwal *et al.*, 1999; Das *et al.*, 2015; Sahu *et al.*, 2019; Satapathy *et al.*, 2022) [8, 9, 10, 11]. In the present case surgical intervention was done and found successful.



Fig 5: Cut surface of the tumor mass

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