

SURGICAL MANAGEMENT OF TESTICULAR MALDESCENT IN A PUG

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Testicular maldescent/malposition, a developmental genital defect may affect one or both testes. The chances of neoplastic changes are increased in a maldescended testis as the animal ages which emphasize the need for its surgical removal. A one and a half years old pug was brought to the division of surgery, IVRI with a swelling lateral to penis. It was diagnosed as maldescended testicle located subcutaneously. It was a left ectopia with testicular position towards lateral aspect of penis. A bilateral orchiectomy was performed under general anaesthesia. The consistency of the ectopic testis was normal but the size was smaller in comparison to the eutopic testis. Post-operatively, antibiotics and analgesics were given. Animal recovered completely.

Key Words: Testicular maldescent, ectopic testis, pug

Introduction

In dogs, the testes descend into the scrotum by 40 days after birth (Tobias, 2010). When this doesn't happen the testes is said to be malpositioned/ maldescent. Maldescent of testis is a broad term that includes both ectopic and cryptic conditions. An ectopic testis is one that is seen in an abnormal location outside the inguinal ring (Docimo *et al.*, 2000; Schindler *et al.*, 1987; D'Cruz and Das, 2004). It is most often referred to as cryptic, in which the testis remains inside the abdomen or inguinal canal (Romagnoli, 1991; Yates *et al.*, 2003). When only one testis is affected it is called unilateral testicular maldescent. Though maldescent of testes is a common developmental defect of genitals in dogs with unilateral malposition/ cryptorchidism more common (Shulz *et al.*, 1996), the left testis was less frequently involved than the right one (Romagnoli, 1991). There are reports of ectopic position of testis/testes in Spitz (Singh *et al.*, 2008), Alsation (Nandi and Som, 1986) and Pomeranian (Dabas and Chaudhari, 2010), but the authors could not find any such reports in Pug till date. Since Pug breed of dog has become very popular in India during last few years, the present case was put on records.

Materials and methods

The diagnosis of the condition was done by clinical examination that revealed only one testis in the scrotum and a subcutaneous swelling on the left lateral side of the penis - Fig (i). The swelling had been present since one year and it was noted by a clinician when the dog was brought for vaccination. On palpation,

the mass was firm in consistency and had a dimension of 5X3X1 cm.

It was decided to perform bilateral orchiectomy. The anaesthetic protocol included atropine @ 0.04mg/Kg i/m, diazepam @ 0.3 mg/Kg as slow i/v, followed by thiopentone @ 10 mg/Kg i/v to effect and the animal was intubated. It was positioned in dorsal recumbency. The site was prepared aseptically for surgery. The mass was held between the thumb and index finger of the left hand and an incision was given on the skin over the swelling. There was subcutaneous fat cushion beneath the skin, which when incised and explored revealed the ectopic testis. A pre-scrotal incision was given for the removal of the scrotal testis. Bilateral orchiectomy was done by closed technique. The skin was sutured with 3-0 monofilament nylon in simple interrupted manner.

Result and Discussion

The consistency of the ectopic testis was normal but the size was smaller in comparison to the eutopic testis – Fig (ii). However, no gross neoplastic transformation was evident. The post-operative treatment included ceftriazone 500 mg i/m for 5 days and melonex 1ml i/m for 3 days. The sutures were removed on the 10th post-operative day – Fig (iii).

Ultrasonography is the best diagnostic modality for cryptorchid testis as it is very difficult to palpate the intraabdominal/intrainguinal testis but here the diagnosis was made by the subcutaneous position and location of swelling lateral to

penis, along with the absence of testis in the

ipsilateral side of the scrotum.



Fig (i) The swelling (arrow) lateral to penis **Fig (ii)** the scrotal/eutopic testis (left) and ectopic testis (right) **Fig (iii)** After suture removal

Slye *et al.* (1919) reported that ectopic testicle in dog and horse is more likely to undergo malignant transformation as evident from many literature citations. In cats also there are reports of interstitial cell and sertoli cell tumors in ectopic testes (Tucker and Smith, 2008). In the present case, ectopic testis was not neoplastic, but chances of neoplastic transformation could be more as the animal becomes older.

No reports regarding the heritable nature of ectopic testes could be found by the authors. As the term cryptorchidism is generally employed for ectopic testes also and since cryptorchidism is a heritable trait (Romagnoli, 1991; Yates *et al.*, 2003), and as many of the cases of ectopic testis showed a tendency towards neoplastic transformations, it was decided to perform bilateral orchietomy.

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