

# Sonographic Diagnosis of Ectopic Testis and It's Surgical Management in a Dog – A Case Report

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**Abstract:** Cryptorchidism is a common hereditary defect in dogs due to testicular malposition of one or both the testis. A two year and six months old pug was presented to the clinics of Department of Veterinary Gynaecology and Obstetrics, Veterinary College, Bengaluru with a complaint of swelling in the ventral abdomen region, lateral to penis. On physical examination and ultrasonography the condition was diagnosed to be ectopic testis or unilateral cryptorchidism. Bilateral orchietomy was performed under xylazine hydrochloride sedation and 2% lignocaine hydrochloride anaesthesia by local infiltration. The ectopic testis was found to be morphological normal with inflamed pampiniform complex and fluid accumulation in the testicular capsule. After surgery the animal recovered uneventfully.

**Keywords:** Ectopic testis, dog, ultrasonography, lignocaine

## 1. Introduction

In dogs usually testes descend in to the scrotum within six to eight weeks of birth. The testicular descend is necessary for male fertility. Cryptorchidism is a sex linked autosomal recessive trait that can be described as testicular malposition inside the abdomen or inguinal ring or any abnormal location outside the inguinal ring (Veronesi *et al.*,2009 and Memon, 2007). Unilateral condition is more common in dogs. Factors that predispose the cryptorchid condition are insulin like hormone-3, androgen, estrogen, gonadotropin, anti-mullerian hormone, calcitonin gene related peptides etc. (Kurpisz, 2010). Cryptorchidism is a hereditary condition and retained testicles are more prone to neoplasia, spermatic cord torsion, inguinal hernia. Hence, it is always recommended to go for bilateral castration after locating the retained testicle (Memon, 2007). Hormonal treatment with human chorionic gonadotropin (hCG) and gonadotropin releasing hormone (GnRH) are of little efficacy and more over not recommended due to risk of hereditary transmission. In the present case confirmatory diagnosis of ectopic testis by ultrasonography and its successful surgical management under local anaesthesia is discussed.

## 2. History and Observation

A two and half year old male pug was presented in the clinics of Department of Veterinary Gynaecology and Obstetrics with a complaint of swelling in ventral abdomen lateral to penis (Fig-1). History revealed presence of a small swollen area which increased in size along with age.

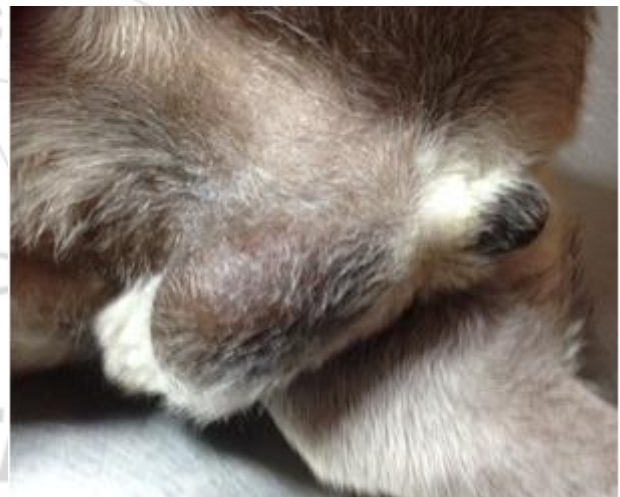


Figure 1: Animal with swelling lateral to penis



Figure 2: U/S- Ectopic testis

On digital palpation the swollen mass texture was suspected to be inflamed testicle. Hernia, neoplasia, abscess were ruled out. The scrotum was found to be underdeveloped. On palapation, scrotum contained only right testicle. Ultrasound examination confirmed the mass to be ectopic testis with inflamed pampiniform plexus and fluid accumulation

surrounding the testicle (Fig-2). The condition was diagnosed to be ectopic testis.

### 3. Treatment and Discussion

Initially the animal was pre-medicated with atropine sulphate @ 0.04mg/kg body weight and xylazine hydrochloride @ 1.0 mg/kg body weight intramuscularly. The surgical site was prepared aseptically for prescrotal midline incision. Cefazoline (Reflin®) @ 25 mg/kg body weight and tramadol hydrochloride @ 2 mg/kg body weight were administered intravenously. The animal was kept under dorsal recumbency. Local infiltration of the area surrounding the ectopic testis was done with 8ml of 2% lignocaine hydrochloride solution. After five minutes the incision given on median raphe of prescrotal area on ectopic testis and the testicle was removed after ligating the spermatic cord. The testicular capsule and pampiniform complex were found to be inflamed but the testicle had a normal morphology. The scrotal testis was pushed towards the incision site and removed after ligating the spermatic cord.



Figure 3: Animal condition after 10<sup>th</sup> day

The muscle layer was sutured with chromic catgut no-1 with continuous suture pattern and skin layer apposed with Trulon no -0 with interrupted suture pattern. The surgical wound was dressed with 5% povidone iodine ointment and bandaged. Post operatively Sporidex® tablet @ 10 mg/kg body weight twice daily for seven days and meloxicam tablet @ 0.2 mg/kg body weight twice daily for two days was advised. Sutures were removed on tenth day and animal was found to be healthy with a normal activities and appetite throughout period of observation (Fig-3).

Menon (2007) reported that occurrence of cryptorchidism is higher in smaller breeds of dog compared to larger breeds with a incidence ranging from 1.2% to 10% and diagnosis could be made by digital palpation of scotum. Ultrasound scanning is sensitive and confirmatory test for detecting the location of retained testicle (Felumlee *et al.*, 2012). Bilateral castration is considered as treatment of ectopic testis to avoid the occurrence of testicular neoplasia, inguinal hernia, testicular torsion (Memon, 2007). Hormonal treatment with hCG and GnRH to stimulate the growth and descend of testicle is not always effective (Lopate, 2014). The WSAVA global pain council recommends local anaesthesia technique like intratesticular block and incisional block for performing

castration in dogs (Mathew *et al.*, 2014). In case of cryptorchid dogs removal of the affected male from breeding program is usually recommended.

### 4. Summary

A condition of ectopic testes was diagnosed by digital palpation and confirmed ultrasonography. Bilateral castration performed under xylazine sedation with local lignocaine 2%, local infiltration as a method of treatment for ectopic testis.

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