

# PREOPERATIVE LOCALIZATION OF UNDESCENDED TESTES USING ULTRASOUND AND CRYPTORCHIDECTOMY IN A DOG

B.R. Suchitra<sup>1</sup>, S. Mahendra<sup>2</sup>, G. Malasri<sup>2</sup>, G.J. Renukaradhya<sup>3</sup> and G. Sudha<sup>4</sup>

<sup>1</sup>Ph.D Scholar, <sup>2</sup>M.V.Sc Student, <sup>3</sup>Assistant Professor, <sup>4</sup>Associate Professor, Department of Veterinary Gynaecology and Obstetrics, Veterinary College, Hebbal, Bangalore-5600024.

[Received: 09.6.2018; Accepted: 22.1.2019]

A one year old German shepherd male dog was presented to the Department of Gynaecology and Obstetrics, Veterinary College, Bangalore with the history of undescended testicles. Clinico-gynaecological examination revealed absence of both testicles in the scrotal sac. Preoperative localization of undescended testes was done using ultrasound and the right testis was located parallel to the prepuce orifice and left testis was found beneath the bladder. Testicles were located in accordance with the ultrasound findings on exploratory laparotomy and cryptorchidectomy was performed. Surgical wound was sutured as per standard procedure. Male dog was medicated with antibiotics for 7 days and sutures were removed after 10 days.

**Key word:** Bilateral Cryptorchidism, Cryptorchidectomy, Ultrasound.

Cryptorchidism is the failure of one or both testicles to descend into the scrotum within the first eight weeks of a dog's life (Ettinger and Feldman, 2005). The causes of this condition may be genetic, anatomical or endocrine which includes topographic position abnormalities, a short gubernaculum testis or its fibrotisation and contraction or its failure to regress correctly. Undescended testicles can remain in the abdominal cavity, in the inguinal canal, or they can shift to an ectopic para-penile position.

Comparatively localization of testes using ultrasonography is non-invasive, without side effects and is considered superior to physical examination (Felumlee *et al.*, 2012; Adesanya *et al.*, 2014).

A one year old German shepherd male dog weighing 15kg b.wt was presented to the Department of Gynaecology and Obstetrics with the history of undescended testicles.

Clinico-gynaecological examination revealed absence of testicles in the scrotal sac and was non-palpable in the peri-penile position. The pet was subjected to preoperative ultrasound evaluation using a 7.5-mHz linear array transducer. The normal course of embryologic descent of the testis, that is the abdomen, the inguinal canal, and the upper scrotum were examined. The right testis was located parallel to the prepuce orifice and left testis was beneath the bladder. Ultrasonographically testicles were homogenous in appearance with midgrey or medium level echos with an easily identifiable linear hyperechoic mediastinum testis (Fig.1). On finding the position of the testicles the testicular resection was recommended since retained testis are more prone for development of testicular neoplasia as the age advances.



Fig.1 Ultrasonographically located left testis beneath the bladder



Fig. 2: Cryptorchid Right and left testicles

On the day of cryptorchidectomy the dog was premedicated with Xylazine @ 1mg/kg b.wt intramuscularly. When an adequate level of sedation was achieved, general anaesthesia was induced and maintained with 12.5mg/kg b.wt of Thiapentol sodium of 2.5% solution. Caudal paramedian incision was made parallel to prepuccial orifice. On exploratory laparotomy the right undescended testicle of size 3cm x 2cm was located lateral to the prepuccial orifice in accordance with the ultrasound findings and spermatic chord was ligated using No. 0 catgut and then the resection was performed (Fig.2). The bladder was everted and the left testicle was located beneath the bladder and resected after ligation.

The risk factors with cryptorchidism are the development of testicular neoplasia. The waiting period to declare a dog as cryptorchid is 6 months as inguinal rings prevents further migration of the testis as also reported by Johnston *et al.* (2001). Since the presented animal was one year old it was subjected for bilateral cryptorchidectomy after locating the testicular positions using ultrasonography.

It was concluded that, ultrasonographically localised

cryptorchidectomy is an efficient and suitable method of castrating the cryptorchid testis in this dog.

## References

- Adesanya, O.A., Ademuyiwa, A.O., Evbuomwan, O., Adeyomoye, A.A.O. and Bode, C.O. (2014). Preoperative localization of undescended testes in children: Comparison of clinical examination and ultrasonography. *J. Pediatric Urology*, **10**: 237-240.
- Ettinger, S.J. and Feldman, E.C. (2005). *Veterinary internal medicine*, 6<sup>th</sup> edn., W.B. Saunders Company, St. Louis, Missouri, U.S.A. Pp. 1694-1695.
- Felumlee, A.E., Reichle, J.K., Hecht, S., Penninck, D., Zekas, L., Dietze, Yeager, A., Goggin, J.M. and Lowry, J. (2012). Use of ultrasound to locate retained testis in dogs and cats. *Vet. Radiol. Ultrasound*, **53**: 581-585.
- Johnston, S.D., Root Kustritz, M.V. and Olson, P.N.S. (2001). Disorders of the canine testes and epididymes. *In: Canine and Feline Theriogenology*, 1<sup>st</sup> edn., W.B. Saunders Company, Philadelphia, U.S.A. Pp. 312 – 332.