



International Journal of Veterinary Sciences and Animal Husbandry



ISSN: 2456-2912

NAAS Rating (2026): 4.61

VET 2026; 11(3): 219-221

© 2026 VET

www.veterinarypaper.com

Received: 15-12-2025

Accepted: 18-02-2026

Dr. Manoj Kumar Kalita

Department of Animal
Reproduction Gynaecology and
Obstetrics, Lakhimpur College of
Veterinary Science, Assam
Veterinary & Fishery University,
Joyhing, North Lakhimpur,
Assam, India

Dr. Mridu Pavan Baishya

Department of Veterinary
Surgery and Radiology,
Lakhimpur College of Veterinary
Science, Assam Veterinary &
Fishery University, Joyhing,
North Lakhimpur, Assam, India

Dr. Manav Sharma

Department of Veterinary
Surgery and Radiology,
Lakhimpur College of Veterinary
Science, Assam Veterinary &
Fishery University, Joyhing,
North Lakhimpur, Assam, India

Dr. Pranjal Borah

Department of Animal
Reproduction Gynaecology and
Obstetrics, Lakhimpur College of
Veterinary Science, Assam
Veterinary & Fishery University,
Joyhing, North Lakhimpur,
Assam, India

Corresponding Author:

Dr. Manav Sharma

Department of Veterinary
Surgery and Radiology,
Lakhimpur College of Veterinary
Science, Assam Veterinary &
Fishery University, Joyhing,
North Lakhimpur, Assam, India

Surgical management of testicular ectopia in a dog: A case study

**Manoj Kumar Kalita, Mridu Pavan Baishya, Manav Sharma and Pranjal
Borah**

DOI: <https://www.doi.org/10.22271/veterinary.2026.v11.i3d.3129>

Abstract

This communication represents a case of Testicular Ectopia in a 2½ years old male Spitz dog. Surgical correction was done under Dexmedetomidine and Ketamine combination after confirmation following thorough clinical and ultrasonographic evaluation. Careful routine post-operative management resulted in uneventful recovery without any complications till communication of this article.

Keywords: Dog, ectopic testis, orchiectomy, scrotum, ultrasonography

1. Introduction

Anatomical existence of both the testes in scrotum plays a vital role in gonadal physiology, required for maintenance of optimum reproductive health (O'Donnell *et al.*, 2017) [9]. In late pre-natal life or early post-natal life the gonads descend from their embryonic lumbar position to the final destination, i.e. scrotum via inguinal ring; typically, between six and eight weeks of birth testes become palpable within the scrotum (Yates *et al.*, 2003; Amann and Veeramachaneni, 2007) [12, 2]. Outside inguinal ring or extra-scrotal existence of testes is generally referred to as Ectopic testes or Testicular ectopia, which may be either intra-abdominal (abdominal) or extra-abdominal (subcutaneous); or even canalicular (within Inguinal canal wall) (Rao and Lakshman, 2004; Amann and Veeramachaneni 2006; Khan *et al.*, 2018) [11, 1, 7]. If the condition is left untreated in a dog, several serious health complications like testicular torsion, testicular tumours, inguinal hernia, hormonal imbalances etc. may arise (Dubey *et al.*, 2016) [5]. Hence, immediate surgical intervention, preferably orchiectomy or orchidectomy is recommended in canine once diagnosed. Ultrasonography plays a pivotal role in pre-surgical confirmatory diagnosis. In the present communication a confirmed case of ectopic testes and its surgical management was placed on record in a Spitz for the first time from this part of the country.

2. Materials and Methods

2.1 Case history & clinical findings

A two and half years old male Spitz weighing 9.3 kg was reported to Dept. of Veterinary Clinical Complex, with asymmetric bilateral swelling near penis (Fig. 1.a.) but with no other problem. On comprehensive clinical examination the animal was found to be clinically healthy with normal vital parameters viz. Body Temperature: 101.4°F; Heart Rate: 98 beats per minute (bpm); Pulse Rate: 95 bpm; Respiration rate: 23 breaths-pm. Digital palpation of both the masses revealed a betel nut sized uniformly fluctuating (within a confined space), round, smooth texture, firm mass with a closely attached stripe/cord like structure on right side giving a testis like feel and an almond sized (tiny) analogous structure on left side. No pain, hernia ring and fluid-filled consistency could be detected over physical examination. Plain ultrasonography (USG) of right testis revealed moderately homogeneous echo-textured oval structure with a thin peripheral, hyperechoic covering (indicative of tunica albuginea). At the center hyperechoic irregular structures or lines and caudally an isoechoic structure closely attached to it with a hyperechoic thick center line (indicative of tail of epididymis) could be

detected (Fig 1.e). These findings are identical to testis. At the same time, absence of testes in the scrotum was also recognized (Fig 1.a). Based on these findings, the condition was diagnosed as Ectopic Testis and subjected to bilateral orchiectomy or orchidectomy under balance anaesthetic combination by the next day. Balance anaesthesia was induced by Dexmedetomidine @ 5 µg/kg body weight (bwt) and Ketamine Hydrochloride @ 5 mg/kg bwt administered intramuscularly (IM) following 10 to 12 hours fasting and pre-anaesthetic administration of Atropine Sulphate @ 0.04 mg/kg bwt IM. The maintenance was done by intravenous (IV) administration of Ketamine and Diazepam mixture at 1:1 ratio via a single syringe. Following aseptic surgical technique, linear incisions were made over each swelling to exteriorize both the ectopic testes. Orchiectomy was performed similar to the standard neutering procedure. Removed testes were presented in Fig. 1.c. Surgical incision was closed by subcuticular suture using Polyglactin 910 No. 4-0 suture materials for subcutaneous tissue and locked stitch pattern using black braided Silk No. 2-0 for skin (Fig. 1.d). Post operatively, a course of Ceftriaxone and Sulbactam (EXACT injection: Excellar Healthcare Pvt. Ltd.) @ 20 mg/kg b.wt. IV twice daily for 7 days, Meloxicam (Melonex inj: Intas Pharmaceuticals Ltd.) @ 0.3 mg/kg b.wt. IM once daily (OD) for 5 days, Pheniramine maleate (Anistamineinj: Intas Pharmaceuticals Ltd.) @ 0.5 mg/kg b.wt. IM OD for 7 days along with a multi-vitamin multi-mineral oral supplementation (Zipvitsyp: Intas Pharmaceuticals Ltd.). Surgical site was covered with sterile bandage using antiseptic ointment (Poly XLR ointment: Excellar Healthcare Pvt. Ltd.). Subsequently regular antiseptic dressing of the surgical site from 72 hours onward was advised till suture removal (which was done on 8th post operative day). Application of Elizabethan collar and clean dry confinement was also advised.

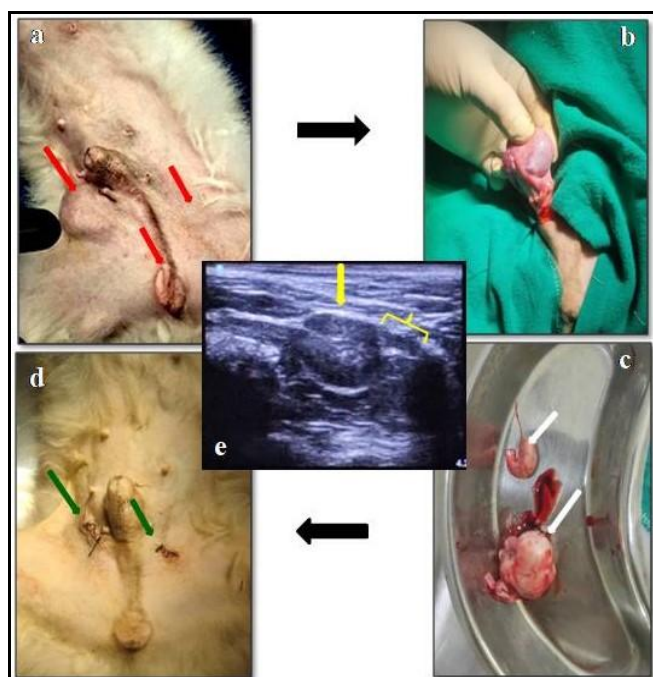


Fig 1: Illustrations representing surgical procedure followed in the present case: a. bilateral swelling due to ectopic testes & absence of testes in scrotum (represented by red arrows); b. orchiectomy of right testis; c. both testes post-surgery (represented by white arrows); d. post-surgical site with lock stitch pattern skin suture (represented by green arrows); e. Plain USG of right testis and tunica albuginea (represented by yellow arrow) and tail of epididymis (represented by yellow bracket).

3. Results

The animal returned to normal health within three post-operative days and an uneventful progressive recovery could be observed within fifteen post-operative days following suture removal.

4. Discussion

Testicular ectopia can be unilateral or bilateral (Dubey *et al.*, 2016) [5]; in the present communication we reported bilateral ectopic testes. Probability of mal-positioned testis/testes in small breeds of dogs were reported to be more, out of which commonly encountered breed is Spitz like the present case (Dubey *et al.*, 2016; Rafee *et al.*, 2016) [5, 10]. Due to the masking effect of long hair coat or sometime due to unawareness, this condition is overlooked unless it leads to serious issues like testicular torsion, testicular tumours, hormonal imbalances etc. (Murthy *et al.*, 2015; Dubey *et al.*, 2016) [8, 5]. However, in the present case the owner reported with a complaint of hernia, which was finally confirmed as Testicular ectopia with careful investigation. As done in this case, digital palpation is the most effective approach of clinical diagnosis in the absence of imaging techniques but USG remains the most sensitive and confirmatory modality in this regard (Dabas and Chaudhari, 2010; Felumlee *et al.*, 2012; Dubey *et al.*, 2016) [4, 6, 5]. Though the USG findings of the right testis were not on par with a normal testis but identical to a testicular structure giving a confirmatory observation against the finding of digital palpation in this case. Since the left testis was tiny, no clear image could be obtained. Since both the testes were not in their original anatomical location, natural growth of the same had not properly occurred giving a coarse appearance in USG. Use of USG in diagnosis of ectopic testes was also reported by Murthy *et al.*, 2015 [8] and Bigliardi *et al.*, 2015 [3]. The most recommended treatment is bilateral castrations, which prevent further complications (Dubey *et al.*, 2016) [5], as observed in this case too. Combination of Alpha-2 adrenoceptor agonists with Ketamine for inducing balance anaesthesia had been reported (Dubey *et al.*, 2016) [5]. In this case we used Dexmedetomidine with Ketamine which provided comparatively better unconsciousness, analgesia and muscle relaxation. The animal was found to be clinically healthy without any complication till the communication of this article indicating effectiveness of the surgical management attempted.

5. Conclusion

The authors of the article would like to conclude from the aforesaid report that, careful thorough clinical investigation including diagnostic imaging support helps in diagnosis and differential diagnosis and finally selecting the appropriate therapeutic measures of clinical cases and particularly for the present case.

6. Acknowledgment

We acknowledge Associate Dean, LCVSc, AVFU, Joyhing, North Lakhimpur-787051, Assam, for allowing publication of the case.

Conflict of Interest

Not available.

Financial Support

Not available.

References

1. Amann R, Veeramachaneni DNR. Cryptorchidism and associated problems in animals. *Animal Reproduction*. 2006; 3:108-120.
2. Amann RP, Veeramachaneni DNR. Cryptorchidism in common eutherian mammals. *Reproduction*. 2007;133(3):541-561.
<https://doi.org/10.1530/rep-06-0272>
3. Bigliardi E, Bresciani C, De Cesaris V, Parmigiani E. A rare clinical case of double scrotum with ectopic testicle in a dog. *Journal of Advances in Agriculture*. 2015;4(2):398-402.
<https://doi.org/10.24297/jaa.v4i2.4270>
4. Dabas VS, Chaudhari CF. Ectopic testis and its surgical removal in a Pomeranian pup. *Intas Polivet*. 2010;11(1):82-83.
5. Dubey P, Rajoriya JS, Baghe M, Madhu DN, Sivanarayanan, Singh J. Testicular ectopia in a dog and its surgical management: a case report. *Indian Journal of Canine Practice*. 2016;8(1):75-76.
6. Felumlee AE, Reichle JK, Hecht S, Penninck D, Zekas L, Yeager AD, Goggin JM, Lowry J. Use of ultrasound to locate retained testes in dogs and cats. *Veterinary Radiology & Ultrasound*. 2012;53(5):581-585.
<https://doi.org/10.1111/j.1740-8261.2011.01943.x>
7. Khan FA, Gartley CJ, Khanam A. Canine cryptorchidism: an update. *Reproduction in Domestic Animals*. 2018;53(6):1263-1270.
<https://doi.org/10.1111/rda.13231>
8. Murthy N, Behera S, Shwetha KS, Krishnaswamy. Sonographic diagnosis of ectopic testis and its surgical management in a dog: a case report. *International Journal of Science and Research*. 2015;4(5):213-214.
9. O'Donnell L, Stanton P, de Kretser DM. Endocrinology of the male reproductive system and spermatogenesis. In: Feingold KR, Ahmed SF, Anawalt B, *et al.*, editors. *Endotext*. South Dartmouth (MA): MDText.com, Inc.; 2017. <https://www.ncbi.nlm.nih.gov/books/NBK279031/>
10. Rafee MA, Bhat AR, Shah MA, Amarpal. Anomaly of ectopic testis in dog. *Indian Journal of Canine Practice*. 2016;8(2):177-179.
11. Rao TM, Lakshman M. Ectopic testicular tumour in two bullocks. *Intas Polivet*. 2004;5(2):262-264.
12. Yates D, Hayes G, Heffernan M, Beynon R. Incidence of cryptorchidism in dogs and cats. *Veterinary Record*. 2003;152(16):502-504.
<https://doi.org/10.1136/vr.152.16.502>

How to Cite This Article

Kalita MK, Baishya MP, Sharma M, Borah P. Surgical management of testicular ectopia in a dog: A case study. *International Journal of Veterinary Sciences and Animal Husbandry*. 2026;11(3):219-221.

Creative Commons (CC) License

This is an open-access journal, and articles are distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 International (CC BY-NC-SA 4.0) License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.