



Surgical correction of unilateral inguinal hernia in “bilateral cryptorchid pug”

¹Shukla B.²Singh K.D and ³Parihar A.S

¹Professor and Head, Department of Veterinary Surgery and Radiology, Co.V.Sc & A.H ,Mhow.,NDVSVU Jabalpur.

²M.V.Sc Scholar, Department of Veterinary Surgery and Radiology , Co.V.Sc & A.H ,Mhow., NDVSVU Jabalpur

³Assistant Professor, Department of Veterinary Surgery and Radiology, Co.V.Sc & A.H ,Mhow.,NDVSVU Jabalpur.

<https://doi.org/10.5281/zenodo.7574890>

Abstract

A 1.5-year-old, bilateral cryptorchid pug was presented to Veterinary Clinical Complex, College of Veterinary Science and Animal Husbandry, Mhow with bilateral swelling located on the inguinal region, left swelling being more prominent compared to right one. Swelling was diagnosed as inguinal hernia by physical examination (palpation). Castration and herniorrhaphy was done simultaneously under general anaesthesia. The hernia sac contained omentum on left side of cryptorchid testes. Excessive hernia sac was trimmed of and edges apposed using polygalactin 910, number 1 suture material in a simple interrupted pattern. Skin incision was sutured using mersilk number 1 suture material in cross mattress pattern. Antibiotics and analgesics were administered for five days and three days respectively post – operatively. Follow up, was done until healing and no complications were noted and animal recovered uneventfully.

Introduction

Canine cryptorchidism is one of the most common congenital testicular defects, it is a failure of one or both testes to descend into the scrotum (Slatter, 2003). The usual time for testicular descent is at birth, although descent may occur normally at any time up to 6 months of age. Cryptorchidism may be presumed to be present if the testicles cannot be felt in the scrotum after two to four months of age.

Canine cryptorchidism is a congenital defect that results from sex limited autosomal recessive gene. Incidence is higher in some breeds, especially in smaller and inbred ones. Affected puppy’s parents are carriers. The dogs with unilateral cryptorchidism are generally fertile and bilateral cryptorchid dogs are generally infertile (Romagnoli,1991). To decrease the incidence of this defect the affected individuals and their siblings should be eliminated from breeding program.



Inguinal Hernia

Inguinal hernia are protrusions of organs or tissues through the inguinal canal. It may be congenital or acquired (mainly traumatic). Commonly occurs in young male young dog (< 2 year of age). The common contents in the hernial sac are omentum, intestine, urinary bladder and uterus. Omentum is the most common organ present in the canine inguinal hernia. Unilateral inguinal hernia is more common than bilateral hernia. Left side inguinal hernia is more common than right side (Fossum *et al.*,2019).

Herniorrhaphy with simple interrupted or mattress sutures and onlay grafting with polypropylene mesh, where the hernial ring is large with weak edges has been reported as effective surgical treatment for inguinal hernia (Laiju *et al.*,2019).



Fig.1: Soft swelling at left inguinal region.



Fig.2: Bilateral cryptorchidism.

History and diagnosis

A two-year-old male pug dog weighing 11 kg were presented, to Veterinary clinical complex, Mhow with history of swelling at inguinal region and dullness since last 7 days. Swelling was bilateral with left swelling more prominent as compared to right one. Hemato-biochemical parameters were in normal range. On physical examination soft fluctuating, warm and painless swelling is palpated at inguinal region and both testes were palpated in inguinal region (Bilateral cryptorchidism) (Fig.1). Based on clinical examination animal the dog was tentatively diagnosed with unilateral inguinal hernia (left) and bilateral cryptorchidism. Condition was corrected by inguinal herniorrhaphy.

Surgical correction

The caudal abdominal and inguinal areas were prepared aseptically and patient was maintained with IV fluids prior to surgery. Pug was premedicated with inj. Xylazine @ 1mg/kg b.wt and inj. Atropine sulphate @ 0.04 mg/kg b.wt . Meloxicam @ 0.4 mg/kg b.wt and Ceftriaxone @ 25mg/kg b.wt were given 20 minutes before the surgery . General anesthesia was induced with Ketamine hydrochloride @ 5mg/kg b.wt. and intubated. Maintenance was done with inj. Ketamine hydrochloride and inj. Dizepam (1:1). Patient was given IV fluid RL throughout the surgery. The Pug was positioned in dorsal recumbency.



Linear incision was made over the left swelling at inguinal region and hernial sac was explored, omentum was present in the hernial sac, excess omental fat was trimmed of and left undescended testicle was removed, after reducing the hernial content hernial ring was closed by polygalactin 910 no-1 suture material in simple interrupted pattern. On right side inguinal swelling, incision was given over swelling and no hernia was found thereby only right cryptorchid testicle was removed. Skin incision of both sides were closed using mersilk no 1 suture material in cross mattress pattern. Wound dressing was done with 10% Betadine and Neosporin after the surgery.



Fig.3: Hernial content (Omentum).



Fig.4: Hernial ring.



Fig.5: Cryptorchid testes.



Fig.6: Skin sutures

Post -operatively, inj.Intacef @ 25 mg/kg b.wt IV, BD for five days, inj.Melonex @0.5 mg/kg b.wt IM,OD for three days and inj.Pantop @1mg/kg b.wt IV,OD for five days and syp.Cremaffin @ 3 ml PO, BD for 5 days were prescribed. Wound dressing was done regularly with liq. Betadine and powder Neosporin for 3 days post operatively and on alternate day until skin sutures are removed. Animal recovered without any complications and skin sutures were removed on day 12 post operatively.

Conclusion and discussion

In our case left inguinal hernia along with bilateral cryptorchidism was present. Inguinal herniorrhaphy along with castration was successfully done, with no intra -operative and post -operative complications. Two months after surgery the dog was doing well with no evidence of hernia reoccurrence. In male dogs' inguinal hernia is generally congenital and more frequently seen than females (Anand *et al.*,2022).

References

- Anand,V.M., Balagoni,M., Anil., Akash., Gujjalkar,P. and Pruthviraj. (2022). Successful surgical management of inguinal herniation of uterus in a pug. *The Pharma Innovation Journal*, **11**(10):1851-1852.
- Fossum, T.W. (2018). *Small Animal Surgery*,5th Edn., Elsevier Publishing Co., Philadelphia, U.S.A., pp 522-526.
- Laiju, M.P., Prabhukumar, M.D., John, K.D., Dileepkumar, K.M., Sudheesh, S.N., Syam, K.V., Adarsh, S.L. and Devanand, C.B. (2019). Inguinal Hernia and its Management in Dogs: A Review of Eight Cases. *Indian journal of canine practice*,**11**(2): 171-174.



- Romagnoli, S. E. (1991). Canine Cryptorchidism. *Veterinary Clinics of North America: Small Animal Practice*, **21**(3):533-544.
- Slatter, D.H. (2003). Textbook of Small Animal Surgery, 3rd Edn., Volume 2., Saunders Elsevier publishing Co., Philadelphia, U.S.A., pp 1524-1525.

