

UNUSUAL PERINEAL HERNIA IN A DOG AND ITS SURGICAL MANAGEMENT

Jayakrushna Das, Sidhartha Sankar Behera and Manas Ranjan Senapati

Department of Veterinary Surgery and Radiology, College of Veterinary Science and Animal Husbandry, Odisha University of Agriculture and Technology, Bhubaneswar-751003, Odisha.

Introduction

The perineal swelling can be due to hernia, accumulation of fluid or some tumorous growth however, perineal hernia is found to be most common cause of such swellings (Sharma et al., 2010). Perineal hernia is protrusion of the abdominal or the pelvic viscera through the pelvic diaphragm which supports the rectal wall (Tyagi and Singh, 2010). The pelvic diaphragm which controls entry of abdominal organs into the perineal areas gets teared due to trauma and constant straining caused by enteritis and vaginitis (Singh et al., 2012). It has been reported to occur most commonly in old and uncastrated male dogs and is associated with constipation, obstipation, dyschezia, a soft perineal swelling and occasionally due to urination problems (Madhu et al., 2012). The present report describes a case of successful surgical management of an unusual perineal

hernia in a dog.

Case History and Observations

A nine years old male non-descriptive dog was presented to Teaching Veterinary Clinical Complex with a history of anorexia, vomition, dyschezia and a large swelling in the perineal region (Fig.1). There was history of retention of urine and difficulty in defecation for last 2 weeks. During constant straining for urination and defecation the swelling was enlarged in that area. On palpation the swelling was soft in consistency and reduced by manual pressure and the bulged urinary bladder could be palpated. On C-arm examination of the pelvic region it revealed fold of intestine and the bladder was marked by catheterization (Fig.2). So the case was diagnosed as perineal hernia and advised for surgical correction.



Fig.1. Perineal hernia of the dog

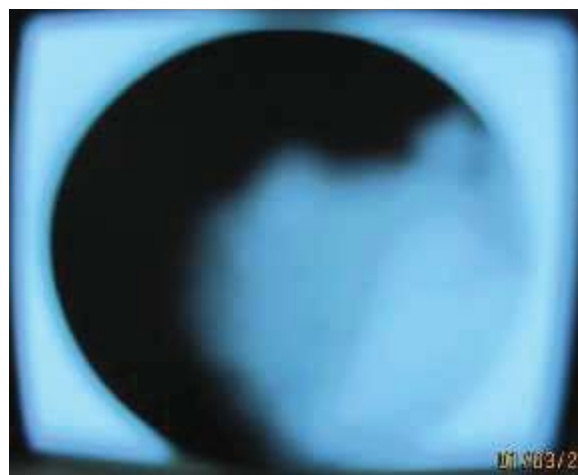


Fig.2. C-arm showing perineal swelling region of the dog

Surgical Treatment

The dog was kept fasting for 24 hours and water was withheld for 12 hours prior to surgery. Anemia was given 4 hours before operation. Anaesthesia was achieved by intramuscular injection of mixture of Atropine sulphate @ 0.04mg/kg body weight, Xylazine @ 1mg/ kg body weight and Ketamine hydrochloride @ 5mg/kg body weight. Intravenous port was maintained with normal

saline solution (NSS) to give extra dose of Ketamine Hcl intermittently as and when required. The urinary bladder was catheterized to evacuate the urine. The skin at the perineal region was prepared for aseptic surgery. A long elliptical incision was made over the swelling mass and folds of small intestine along with mesenteric fold and bulged urinary bladder was seen. The collapsed urinary bladder and intestine were pushed back to the pelvic cavity.

The muscles of the ruptured pelvic diaphragm i.e. coccygeus muscles were sutured with the levator ani muscle by vest over pant technique using Polyglactin 910 no.2 suture (Vicryl). The overlying muscles and skin were closed in standard manner. For proper apposition of skin the extra hanging portion was required to excise. Postoperatively antibiotic therapy was constituted using Ceftriaxone @ 10 mg/kg body weight, analgesic meloxicam @ 0.2 mg/kg body weight and oral administration of cremaffin @ 2 teaspoonfuls twice daily. The wound was dressed with povidone iodine solution daily at regular intervals and cleaning of the anal opening was performed after defecation. The dog was kept under intravenous fluid for first two days and then the owner was advised to feed liquid diet for five days. Solid non-veg diet was strictly avoided for one month. The skin sutures were removed after 14th day of operation.

Results and Discussion

The result of successful management depends upon the general condition of animal when it is brought for surgery and on the extent of tissue damage (Waters et al., 1993). Here the successful surgical repair of the complicated case of perineal hernia was observed with normal defecation and urination after removal of suture. For hernia repair in dogs, if muscle weakness or loss of muscle occurs in long standing cases, porcine small intestinal submucosa (Ettinger and Feldman, 2005) or prolene mesh could be adopted. In the present case no such hernioplasty was required. The repair of the perineal hernia by suturing the coccygeus muscles with levator ani muscle was observed to be successful. Dogs with benign prostatic hyperplasia have been found to have increased relaxin levels and suspected subsequent weakening of the pelvic diaphragm (Niebauer et al., 2005). Hence it is advisable to perform castration whenever prostatomegaly is diagnosed in a dog to eliminate the effect of relaxin on perineal hernia pathogenesis (Merchav et al., 2005). In this case prostrate hyperplasia was not observed and hence castration was not decided. Perineal wound

infection is the most common complication described after the perineal herniorrhaphy, ranging from 27 to 45% of cases (Sjollema and Van Sluijs, 1989) and is mainly results from contamination of the wound by faeces. In the present case no such infection was occurred with proper managerial practices. Recurrence of hernia is often related to poor surgical technique in the initial repair, however no specific post-operative complications or recurrence was observed in this case.

References

- Ettinger, S.J. and Feldman, E.C. (2005). Text book of Veterinary Internal Medicine, 6th Edn., W.B. Saunders Company.
- Madhu, D.N., Saxena, A.C., Singh, J., Sivanara-yanan, T.B., Kinjavdekar, P., Aithal, H.P., Amarpal, Pawde, A.M. and Zama, M.M.S. (2012). Surgical management of an unusual case of perineal hernia in a dog. *Indian Journal of Canine Practice*, **4(2)**: 144-146.
- Merchav, R., Feuermann, Y., Shamay, A., Ranen, E., Stein, U., Johnston, D.E. and Shahar, R. (2005). Expression of relaxin receptor LR G7, canine relaxin, and relaxin-like factor in the pelvic diaphragm musculature of dogs with and without perineal hernia. *Vet. Surg.*, **34**: 476-481.
- Niebauer, G., Shibly, S., Seltenhammer, M., Pirker, A. and Brandt, S. (2005). Relaxin of prostatic origin might be linked to perineal hernia formation in dogs. *Ann. NY. Acad. Sci.*, **1041**: 415-422.
- Sharma, A., Kushwaha, R.B. and Gupta, A. (2010). Perineal hernia in a dog involving multiple abdominopelvic organs. *Intas Polivet*. **11**: 341-43.
- Singh, P., Kumar, P., Agnihotri, D., Chandolia, R.K., Behl, S.M. and Kumar, K. (2012). Perineal swelling in dogs-Ultrasonographic/Radiological diagnosis and management. *Intas Polivet*. **13(I)**: 117-119.
- Sjollema, B.E. and van Sluijs, F.J. (1989). Perineal hernia repair in the dog by transposition of the internal obturator muscle. Complications and results in 100 patients. *Vet. Quart.*, **11(1)**: 18-23.
- Tyagi, R.P.S. and Singh, J. (2010). *Ruminant Surgery*. CBS Publishers and Distributors, New Delhi.
