

# PERINEAL HERNIOPLASTY IN A DOG

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A ten year old male dog of nondescript breed was presented with complaint of urinary incontinence, frequent micturation, anorexia, constipation and dysphasia with restlessness. Physical examination of dog indicated perineal hernia. Ultrasound imaging was performed to confirm the diagnosis and involvement of urinary bladder. The case was confirmed as Perineal hernia on the basis of physical and ultrasound imaging technology. The dog was operated for correction of the herniation under general anaesthesia. The position of urinary bladder was corrected and opening was sealed by a synthetic polymer mesh of 6 cm X 10 cm and sutures were taken. Postoperatively, the dog was treated with broad spectrum antibiotic, analgesic and B-complex.

**Key words:** Perineal hernia, perineal hernioplasty, Synthetic polymer mesh.

A perineal hernia results due to tear or separation of muscle of pelvic diaphragm and allows abdominal/ pelvic organs or tissue *viz.* urinary bladder, intestine, prostate gland retroperitoneal fat to herniate into perineal region, especially in middle aged or older male dogs (Brown *et al.*, 2006; Douglass, *et al.*, 2006; Vnuk *et al.*, 2006; Pekcan, *et al.*, 2010). Perineal hernias occur in association with muscular deterioration due to muscular atrophy, myopathy, prostatic or anal gland enlargement and chronic constipation (Brown *et al.*, 2006; Bellenger and Canfield, 2003). Perineal hernias may be unilateral or bilateral, among which approximately 59 % are unilateral hernia while 49 % are bilateral (Bellenger and Canfield, 2003). Pekcan, *et al.* (2010) studied 41 cases of perineal hernia in dog where hernia was unilateral hernia in 30 and bilateral in eleven dogs whereas Sharma *et al.* (2010) reported unilateral right sided hernia in a nine year old intact non descript male dog. Vnuk *et al.* (2006) stated that the hernial content can be retroperitoneal fat, urinary bladder, prostate gland and small intestine. In the same study, they reported three cases of urinary bladder as a content of perineal hernia out of sixteen cases studied. Sharma *et al.* (2010) reported urinary bladder and prostate gland as a content of perineal hernia. Brown *et al.* (2006) stated that perineal hernia were generally

precipitated by abdominal straining due to chronic constipation or probably predisposed by weakening of perineal fascia and muscles from some unknown cause, possibly hormone *viz.* testosterone. Perineal hernia is very unusual in females. Castration has been suggested to avoid recurrence of perineal hernia (Bellenger and Canfield, 2003). Some authors have reported perineal wound infection as most common complication ranging from 5 to 45% (Pekcan *et al.*, 2010). Douglass *et al.* (2006) reported postsurgical complications like infection, fecal incontinence, rectal prolapse, sciatic nerve entrapment and hernia recurrence on the same or opposite side.

Present paper put on record the occurrence of bilateral perineal hernias with herniation of urinary bladder in dog and its management.

## Case history and observations

A ten year male, non-descript dog was presented with complaint of restlessness, urinary incontinence, stranguria, frequent micturation, anorexia, difficult in passing stool and fluctuating swelling around tail. On clinical examination of the dog, the parameters *viz.* respiration, heart rate and pulse rate were found slightly elevated with normal rectal temperature. On thorough clinical examination and with aid of ultrasound imaging, the case was suspected for

perineal hernia and was decided for surgery (perineal hernioplasty).

### Treatment and Discussion

Before operation, urinary bladder was emptied by Ryle's infant feeding tube no. 6 and kept as such up till three days post operation. The dog was sedated with Triflupromazine (Siquil) @1.0 mg/kg body weight intravenously followed by Thiopentone @ 5 mg/kg body weight intravenously for induction of anaesthesia. Subsequently, the anaesthesia was maintained by administration of bolus dose of Thiopentone @ 10 mg/kg body wt. intravenously as and when required. For surgical repair (perineal hernioplasty), the dog was placed on abdomen with the support of cushion and hind legs were stretched away from body. The tail was raised and pointed towards anterior side



**Fig. 1: Saccular, bilateral dilatation of perineal region due to hernia**

The subcutaneous tissue was closed by chromic catgut no. 2/0. Finally skin was apposed with horizontal mattress nylon sutures. The same procedure was followed on other side of tail and surgical repair of the other side was performed in the same operation. However, the neurovascular cord of one side only severed to avoid paralysis of rectum. The purse string suture on the anus was removed after surgery. In the present case, urinary bladder was herniated through the perineal fascia and ring was closed using synthetic polymer mesh. Post-operatively, the dog was treated with cefotaxime @ 20 mg/kg body weight intramuscularly once

with rope (Fig. 1). The intestinal contents from terminal portion were evacuated. Temporary closing of anus was done by purse string suture to avoid contamination of surgical wound from faeces. A slightly curved long incision was taken on the hernial swelling from lateral side of anus. The skin edges were retracted and perineal fascia was incised without any damage to herniated content. The urinary bladder was felt which was protruded through the hernial ring. The position of urinary bladder was corrected and the perineal musculature was freshened and then was opposed by simple interrupted sutures using Vicryl No. 0. The suture line on hernial ring was additionally secured by a synthetic polymer mesh (ETHICON, Johnson and Johnson Medical Ltd.) of 6 cm X 10 cm (Fig. 2) and hernioplasty was performed.



**Fig.2: Placement of synthetic polymer mesh to correct hernia**

daily for five days and meloxicam @0.2 mg/kg body weight once daily for three days and B-complex 1 ml intramuscularly for five days. The sutures were removed on 10 post-operative days. The dog was intermittently observed for six months post surgery. The dog was found healthy and had a normal urine output and flow and defecation. The follow up of the dog for one year did not find any reoccurrence or complication.

The clinical signs observed in the present case of perineal hernia have also been reported by various authors (Bellenger and Canfield, 2003; Pekcan, *et al.* 2010; Vnuk *et al.*, 2006, Sharma *et al.*,

2010). In the present case, the age of the dog was ten year, which was in accordance with the Pekcan *et al.* (2010) who have reported an average age of 10.2 (4.5 -16 years) year for occurrence of perineal hernia in dogs. The history taken from pet owner revealed that the dog had chronic constipation which could have been immediate cause of hernia as also reported by Brown *et al.* (2006). Similar to our study, use of synthetic material in perineal hernias (perineal hernioplasty) in dogs has been reported by Vnuk *et al.* (2006). To check the secondary infections, we used cefotaxime; similarly, Douglass, *et al.* (2006) suggested broad spectrum antibiotic after surgery to prevent infection. We did not find any reoccurrence or complication in follow up of the dog for one year. However, Vnuk *et al.* (2006) recorded recurrence in one dog 12 months after surgery out of 16 dogs studied.

### Summary

Present communication reports a successful clinical and therapeutic management of perineal hernia in a ten

year old dog and its correction using synthetic polymer mesh.

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