

PERINEAL HERNIA IN A CROSSBRED JERSEY COW AND ITS SUCCESSFUL SURGICAL MANAGEMENT-A CASE REPORT

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ABSTRACT

A five-and-a-half-year-old Jersey cross bred cow was presented with the complaint of a protruding mass on right lateral aspect of vulval lip for the past 10 days. Clinical examination revealed a soft, fluctuating, non-painful reducible mass measuring 8 inch in length and 6 inch in width on the right side of the perineal region. Based on ultrasonographic and radiographic evaluations, it was diagnosed as a case of perineal hernia and surgical intervention was advocated. Surgical correction was performed under xylazine-ketamine-butorphanol sedation and epidural anesthesia using 2% lignocaine and butorphanol. Herniorrhaphy was successfully completed using polyester No.5 suture. Skin closure was done using No.1 polyamide suture. Post-operative care included wound management, antibiotic therapy, and pain management. Sutures were removed on 15th day and animal was made an uneventful recovery.

Key words: Cow, perineal hernia, herniorrhaphy, polyester suture

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INTRODUCTION

Perineal hernia is the protrusion of abdominal or pelvic viscera through the pelvic diaphragm that supports the rectal wall. Although fairly common in dogs, it is rare in ruminants, though recorded in

cattle and buffalo. Herniation occurs due to slacking or tearing of the muscle supporting the pelvic diaphragm. The herniated structure occupying the ischiorectal fossa appears as a reducible swelling along the side of the anus (Tyagi and Singh, 1996).

CASE HISTORY AND TREATMENT

A five and half year old Jersey crossbred cow, was presented to the Veterinary Clinical Complex, Veterinary College and Research Institute, Salem with the history of a swollen mass around the right lateral aspect of vulval region for the

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past 10 days and the animal had difficulty in urination. On clinical examination, all the vitals parameters were within normal range. The swollen mass appeared, fluctuating, non-painful and reducible (Fig.1). On palpation, animal strained to urinate, and hence urinary bladder catheterization was done to relieve urine and the size of the mass reduced drastically. It was tentatively diagnosed as a case of cystocele.

Contrast radiography was done using iohexol solution through Foley's catheter. On examination, the inflated bulb of the Foley's catheter confirmed bladder herniation (Fig.2). Ultrasonographic examination revealed an anechoic fluid filled cavity along with hypoechoic intestinal loops and a small round as urinary bladder (Fig.3). Hemato-biochemical parameters were studied and there was a mild elevation in blood urea nitrogen and creatinine values. It was confirmed as a case of unilateral perineal hernia involving urinary bladder and intestinal loops.

The animal was kept under fasting 24 hours prior to surgery. The surgical site was shaved, thoroughly cleaned and prepared for aseptic surgery. Pre operatively, Foley's catheter was inserted into bladder to prevent straining during urination after surgery. The animal was sedated using a combination of xylazine (@0.03 mg/kg BW), ketamine (@0.25 mg/kg BW) and butorphanol (@0.003 mg/kg BW) intravenously. The animal was positioned in left lateral recumbency, anal plug was done to prevent contamination. Epidural

anesthesia using 7 ml of 2% lignocaine and 3 ml of butorphanol in lumbo- sacral space was given to induce effective analgesia. The surgical site was draped, scrubbed and a curvilinear incision was made using a scalpel, followed by blunt dissection to enter into the hernia defect in the pelvic diaphragm (Fig.4). Straw coloured fluid oozed out and hernial contents were revealed. The hernial contents were intestinal loops (Fig.5) and urinary bladder. Hernial defect was identified which measured about 5 inch in length and 3 inches width which were formed between external anal sphincter and levator ani muscle. Herniorrhaphy was done in far-near-near-far tension relieving suture pattern using polyester no. 5 suture (Fig.6). Initially, external anal sphincter muscle and levator ani muscles were united, followed by levator ani with coccygeus muscle, and external anal sphincter with internal obturator muscle. Finally, an anchorage was made between internal obturator muscle and sacro tuberos ligament using figure of eight suture pattern. Then skin closure was done using polyamide no. 1 suture with simple interrupted suture pattern. Post operatively, animal was administered inj.streptopenicillin 5g intramuscularly and meloxicam (@ 0.2 mg/kg BW) intramuscularly for pain management for 5 days and regular wound dressing was done using povidone iodine solution and loraxene ointment. After 72 hours of surgery (Fig.7), Foley's catheter was removed, suture removal was done on 12th post-operative days, the symmetry of the perineum was almost restored after 20 days (Fig.8) and the animal showed an uneventful recovery.

CASE DISCUSSION

Perineal hernia is uncommon in cows. According to Yasin(2017) and his colleagues 1% of the hernia cases were in ovine species, 15.6% were in caprine; bovine constituted only 3.4% of the cases. High incidence of hernias was recorded in females; the sex distribution was 72.4% females and 27.6% males. The majority of ruminants suffering from perineal herniation are female (Prasad *et al.*, 2015, Singh *et al.*, 2017 and Vadalía *et al.*, 2017). Perineal hernias are typically diagnosed early in pregnancy or shortly after parturition (Singh *et al.*, 2017), as it is associated with estrogen and relaxin hormones. Perineal herniation in ruminants has also been associated with pregnancy (Singh *et al.*, 2017 and Sobti *et al.*, 1994). The exact cause of this condition in this case remained unknown. Its cause is unknown, but muscle weakness due to neurogenic atrophy, chronic constipation, and hormonal alterations are described as predisposing factors in small animals

(Hedlund *et al.*, 2002). Any condition that causes straining may stress the pelvic diaphragm also could predispose this condition. Some reports indicate a right-sided predominance. Epidural analgesia was used in the above case which may reduce the occurrence of post-operative rectal prolapse (Fossum *et al.*, 2013). As the urinary bladder was retroflexed into the hernia, a urinary catheter was placed to relieve distress and prevent further physiologic deterioration (Fossum *et al.*, 2013). Early diagnosis and treatment is a must in this type of hernia to avoid adhesions and other secondary complications (Priyanka *et al.*, 2018) like bladder rupture and strangulation of herniated contents. No post-surgical complications like suture abscesses, seromas, hematomas, and dehiscence (Fubini and Ducharme, 2004) did occur which aided the animal to make an uneventful recovery.

CONCLUSION

A case of perineal hernia in a crossbred cow and its successful surgical management is kept on record.

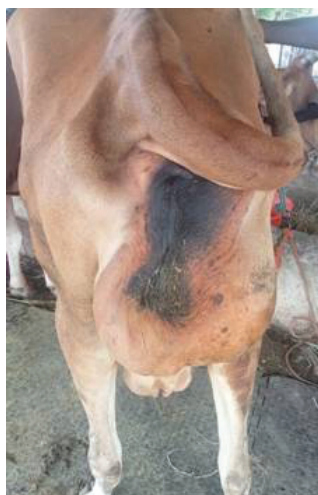


Fig.1. Soft, fluctuating, non-painful reducible mass measuring 8 inch in length and 6 inch in width noticed on the right side of the perineal region- Cow

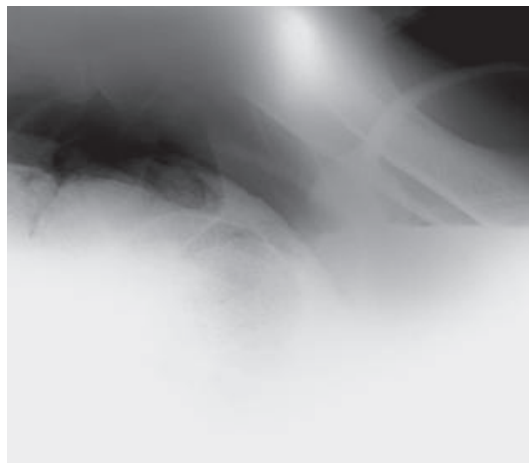


Fig.2. Urinary Bladder catheterization with positive contrast



Fig.3. Anechoic fluid filled urinary bladder with hypoechoic structures appeared as intestinal loops



Fig.4. Defect in the pelvic diaphragm

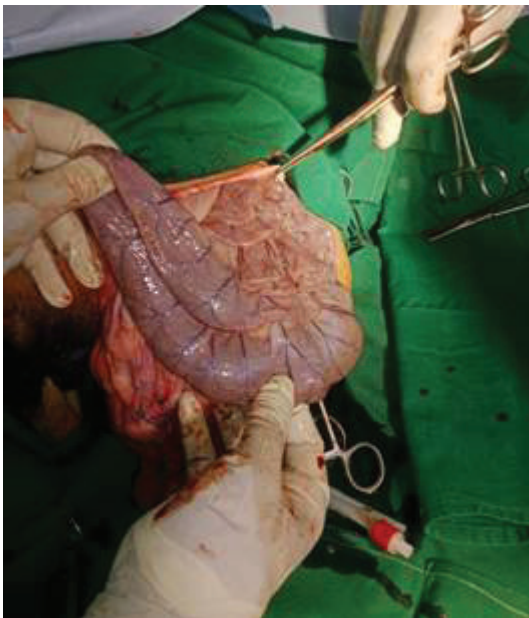


Fig.5. Herniation of intestinal loops



Fig.6. Herniorrhaphy



Fig.7. 72 hrs of post operative day



Fig.8. Recovery on 20th post operative day

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