

Case Study

<https://doi.org/10.20546/ijcmas.2018.712.047>

## Surgical Management of Perineal Hernia in a Crossbred Cow: A Case Report

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### ABSTRACT

#### Keywords

Cow, Epidural anaesthesia, Hemiorrhaphy, Perineal hernia

#### Article Info

Accepted:  
 04 November 2018  
 Available Online:  
 10 December 2018

A 5 years old cross bred Holstein Friesian cow was presented to Teaching Veterinary Clinical Complex with the history of unilateral swelling around vulva and difficulty in urination. On the basis of history and clinical examination it was diagnosed as perineal hernia. Under epidural anaesthesia the animal was operated for perineal herniorrhaphy in standing position and urinary bladder and omentum were found as hernial content. Ten days post-operatively the animal made an uneventful recovery with normal urination.

### Introduction

Perineal hernia is characterized by protrusion of the abdominal or pelvic organs through the ruptured pelvic diaphragm (Ferreira and Delgado, 2003) which supports the rectal wall. Due to weakened pelvic diaphragm, there is abnormal displacement of these pelvic organs into the perineal region. Although, exact cause of muscle weakness is unknown but some factors have been proposed, such as neurogenic, senile muscle atrophy, congenital

predisposition, prostatic disease, chronic constipation, myopathies and hormonal alterations (Hedlund, 2002). Diagnosis is mainly made by history, clinical signs, per rectal examination, radiographic and sonographic findings (Dean and Bojrab, 1996). Perineal hernia is very common in small animals and uncastrated male dogs (Kumar *et al.*, 2016, Weaver 1981), but rarely reported in buffaloes (Malik *et al.*, 2012) and cows (Tyagi and Singh, 1996).

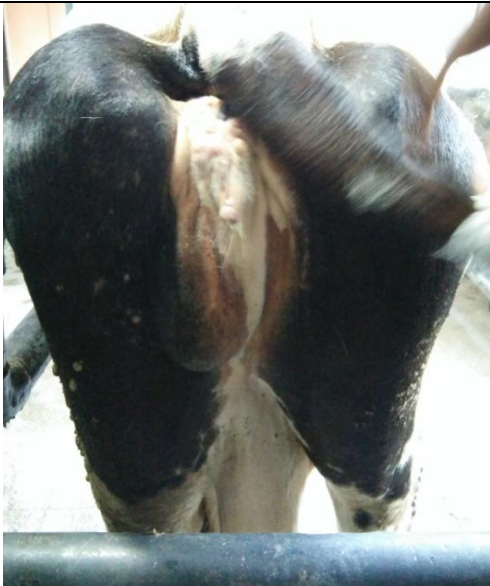
### **Case history and observations**

A 5 years old cross bred Holstein Friesian cow was presented to teaching veterinary clinical complex, LUVAS, Hisar with the history of unilateral swelling around vulva. History revealed that the animal had an episode of constipation and in due course of time the animal owner reported a swelling which was increasing in size gradually. On presentation, the Swelling was present on left side of vulvar lips in perineal region (Fig. 1). On palpation the swelling was found soft, painless and reducible in nature with defined hernial ring. Animal was normally defecating but was voiding urine with difficulty. On the basis of history and clinical examination, it was diagnosed as unilateral perineal hernia and herniorrhaphy was decided.

### **Treatment and Discussion**

The site was shaved, cleaned and aseptically prepared for surgery. Epidural anaesthesia was given with lignocaine hydrochloride @0.5mg/kg body weight (Ismail, 2016). Tail was fastened to the neck chain, the anus was plugged with a sterile tampon and purse string

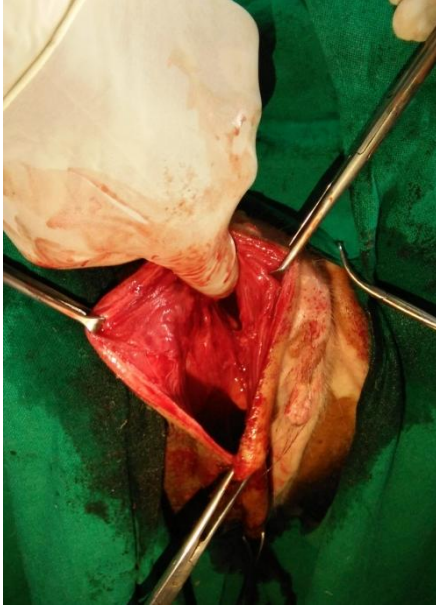
sutures were applied around anus (Fig. 4). Surgery was performed in standing position. A linear incision was given over hernial swelling (Fig. 2). After separating skin and fascia, hernial contents were identified as omentum and urinary bladder. The contents were found to be free from adhesions and repositioned without any difficulty. The hernial ring was two finger wide (Fig. 3) and it was sutured using polydioxanone no. 2 suture material. After herniorrhaphy skin was sutured in horizontal mattress with silk no. 2 (Fig. 4). Antiseptic dressing was done with liquid betadine and loraxane spray and advised for the same till healing of the wound. Purse string sutures were removed immediately after completion of surgery. Post-operatively Ampicillin+Cloxacillin(AC-VET forte) antibiotic @10mg per kg body weight and melonex NSAID @0.5 mg per kg body weight was advised for 5 days and 3 days respectively. Skin sutures were removed 10 days post-operatively. Animal's owner was advised to keep the animal on green fodder for few days to avoid straining while defecation. On telephonic follow up 10 days after surgery, the cow was normal urinating and made an uneventful recovery.



**Fig.1** Pre-operative image showing unilateral left side swelling in perineal region.



**Fig.2** Intra-operative image showing hernial sac containing hernial content.



**Fig.3** Hernial ring with two finger width in size.



**Fig.4** Horizontal mattress skin sutures and anal purse string sutures.

Pelvic diaphragm is a dam comprising of levator ani muscle, coccygeus muscle, external anal sphincter muscle, internal obturator muscle and perineal fascia which keeps the internal organs like intestine, prostrate and urinary bladder in place. Perineal hernia occurs due to alteration in pelvic diaphragm. This type of hernia is different from other types that the contents of the hernia doesn't covered by peritoneum. Most cases of this type of hernias where animal could not urinate, must be dealt with as an emergency (Padilla, *et al.*, 1999). Similar case was also reported where urinary bladder was herniated into the vaginal folds and formed a Perineal hernia (Shridhar, 2011). Early diagnosis and treatment is must in this type of hernia to avoid adhesions and other complications.

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**How to cite this article:**

Priyanka, Satbir Sharma, R.N. Chaudhary, Ram Niwas and Neeraj Arora. 2018. Surgical Management of Perineal Hernia in a Crossbred Cow: A Case Report. *Int.J.Curr.Microbiol.App.Sci.* 7(12): 385-388. doi: <https://doi.org/10.20546/ijcmas.2018.712.047>