



International Journal of Veterinary Sciences and Animal Husbandry



ISSN: 2456-2912

NAAS Rating (2026): 4.61

VET 2026; 11(3): 210-212

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www.veterinarypaper.com

Received: 01-11-2025

Accepted: 23-12-2025

Sangeet Rana

Department of Veterinary
Surgery and Radiology, M.R.
College of Veterinary Science and
Research Center, Jhajjar,
Haryana, India

Neeraj Arora

Department of Veterinary
Surgery and Radiology, Lala
Lajpat Rai University of
Veterinary and Animal Sciences,
College of Veterinary Science,
Hisar, Haryana, India

Deepak Tiwari

Department of Veterinary
Surgery and Radiology, Lala
Lajpat Rai University of
Veterinary and Animal Sciences,
College of Veterinary Science,
Hisar, Haryana, India

Corresponding Author:

Sangeet Rana

Department of Veterinary
Surgery and Radiology, M.R.
College of Veterinary Science and
Research Center, Jhajjar,
Haryana, India

Diagnosis of perineal hernia by ultrasonography and its surgical correction in a crossbred cow

Sangeet Rana, Neeraj Arora and Deepak Tiwari

DOI: <https://www.doi.org/10.22271/veterinary.2026.v11.i3d.3124>

Abstract

A four-year-old crossbred cow was presented with a soft, fluctuant, non-painful swelling on the right lateral side of the vulva and a recent history of difficulty urinating. Clinical examination and ultrasonography confirmed a unilateral perineal hernia containing the urinary bladder. Surgical repair was carried out under caudal epidural anaesthesia using lignocaine hydrochloride 2% w/v. The herniated urinary bladder was reduced without complication, and the defect was closed with polyglycolic acid sutures in a simple interrupted pattern. The skin was closed with non-absorbable monofilament polyamide. The cow recovered well after the procedure, and no recurrence was noted during telephonic follow-up. This case demonstrates that early diagnosis and appropriate surgical management can result in a favourable outcome in bovine perineal hernia.

Keywords: Perineal hernia, caudal epidural anaesthesia, herniorrhaphy, ultrasonography

Introduction

A perineal hernia is characterized by the protrusion of abdominal or pelvic organs through a defect in the pelvic diaphragm, the muscular structure responsible for supporting the rectal wall (Ferreira and Delgado, 2003) ^[1]. Although the exact cause of weakening of these muscles is not clearly established, several factors have been proposed, including age-related or neurogenic muscle atrophy, primary muscle disorders, and endocrine or hormonal influences (Hedlund, 2002) ^[4]. Perineal herniation is considered uncommon in ruminant species, particularly in cattle and buffalo. When reported in ruminants, the condition is observed more frequently in females (Prasad *et al.*, 2015; Vadalia *et al.*, 2017) ^[8, 14]. In most cases, perineal hernias are identified either during the early stages of pregnancy or in the period shortly following parturition (Singh *et al.*, 2017) ^[13]. Perineal hernia is very common in small animals and uncastrated male dogs (Kumar *et al.*, 2016) ^[6]. Earlier reports suggested that persistent tenesmus and chronic diarrhea may contribute to weakening of the pelvic diaphragm, and that subsequent trauma can lead to herniation of pelvic viscera such as the urinary bladder and loops of the large intestine (Prasad *et al.*, 2015) ^[8]. In cases where the urinary bladder becomes entrapped within the hernial sac, affected animals may exhibit clinical signs including stranguria and tenesmus (Singh *et al.*, 2017; Gill and Barstad, 2018; Kumar *et al.*, 2021) ^[13, 2, 6], although normal defecation has also been reported in some instances (Priyanka *et al.*, 2018) ^[9]. Ultrasonographic examination typically demonstrates a hyperechoic hernial sac containing hypoechoic, homogeneous hernial contents (Kumar *et al.*, 2021) ^[6]. Surgical correction of perineal hernia (herniorrhaphy) is most commonly performed with the animal in a standing position (Kumar *et al.*, 2021) ^[6], whereas procedures conducted in sternal recumbency have been reported only rarely (Prasad *et al.*, 2015) ^[8]. Various surgical techniques have been described for the correction of perineal hernia. These include direct ventral suturing between the external anal sphincter and the internal obturator muscle, as well as herniorrhaphy involving suture placement between the external anal sphincter and the levator ani, coccygeus, or both muscles (Priyanka *et al.*, 2018; Gosai *et al.*, 2019) ^[9, 3]. In cases of large perineal hernias in cattle and buffalo, successful repair has also been achieved through hernioplasty using synthetic mesh, which facilitates tension-free closure of the hernial defect (Malik *et al.*,

2012) [7]. Following surgical repair of a perineal hernia, several postoperative complications may occur. Commonly reported problems include wound infection, wound dehiscence, persistent clinical signs such as fecal incontinence and tenesmus, rectal prolapse, urinary tract dysfunction, sciatic nerve paralysis, and recurrence of the hernia, particularly in dogs (Hedlund, 2012) [5].

Case summery

Four-year-old crossbred cattle presented to the Department of Veterinary Surgery and Radiology, Hisar, Haryana with a history of soft, fluctuating, non-painful and non-reducible mass hanging on right lateral aspect of vulva (Figure 1a). The animal was normally defecating but stranguria was present in the past 8 days and history of recent parturition. Ultrasonography confirmed a unilateral perineal hernia containing the urinary bladder (Figure 1b). On the basis of history, clinical examination and USG, it was diagnosed as unilateral perineal hernia.

Epidural anaesthesia was given with lignocaine hydrochloride 2% w/v (Lox 2%; Neon Laboratories Ltd) @ 0.5 mg/kg body weight. The site was shaved, cleaned aseptically through povidone-iodine scrub (Sistadine surgical scrub-7.5%, Sista laboratories, Narela Delhi). Percutaneous purse-string non-absorbable monofilament polyamide black (Trulon® 2, Helthium Medtech limited, Bangalore, Karnataka) applied on to anus after removal of faeces and placement of foleys (Romson, foley trac®) catheter inside urinary bladder. Surgery was performed in standing position. A linear incision of 12 cm was given over perineal swelling (Figure 2a). Urinary bladder as hernial content was identified after proper anatomical dissection. Content was found free from adhesion and repositioned without any difficulty. After reposition hernial ring was appreciated. Hernial ring was 4 fingers wide (Figure 2b) and herniorrhaphy was conducted using simple interrupted pattern with absorbable braided and coated polyglycolic acid (Truglyde® 2, Helthium Medtech limited, Bangalore, Karnataka). Underlying fascia and muscle were sutured (Figure 2c) with absorbable braided and coated polyglycolic acid (Truglyde® 2-0, Helthium Medtech limited, Bangalore, Karnataka) and skin was sutured through non-absorbable monofilament polyamide black (Trulon® 2, Helthium Medtech limited, Bangalore, Karnataka) and purse-string suture was removed immediately after surgery. Antiseptic dressing was done with povidone-iodine scrub (Sistadine microbicidal solution-10%, Sista laboratories, Narela Delhi) and triple-antibiotic (neomycin sulphate, polymyxin B sulphate and bacitracin; Aluspray-AWD®, Vetoquinol).

Post-operatively, the cattle were given Penicillin-streptomycin combination (Penstrep) intramuscularly once daily at a dose of 10,000 IU penicillin/kg, 6.2 mg of streptomycin/kg and 6.25 mg of dihydrostreptomycin/kg for five successive days. Phenylbutazone (Phenylbutazone 20% injection) was given intravenously at a dose of 4 mg/kg body weight once daily for three successive days as anti-inflammatory drug. The wound was dressed three times a day with Povidone-iodine antiseptic solution for 10 days. Then, the stitches were removed 10 days post-operatively. The case was followed up for 2 months, the straining during urination disappeared a few days after surgery and uneventful recovery with neither recurrence nor complications was reported.

Discussion

Perineal hernia in large ruminants is reported predominantly

in females, likely due to anatomical factors such as wider pelvic musculature, repeated parturition, and increased likelihood of pelvic floor weakening (Prasad *et al.*, 2015) [8]. Singh *et al.* (2017) [13] and Vadalia *et al.* (2017) [14] also documented a higher incidence in female cattle compared to males, suggesting a hormonal and reproductive influence in disease predisposition. The present case aligns with this pattern, involving a female patient but did not assess endocrine parameters, and therefore this association remains speculative rather than confirmed.

Although defecation remained normal in the present case, the occurrence of stranguria corroborates similar findings documented in buffalo and cattle affected with perineal hernia due to the urinary bladder being included in the hernia (Shridhar 2011; Prasad *et al.*, 2015; Gosai *et al.*, 2019) [11, 8, 3]. The hernia content of the present case was a urinary bladder. In large animal clinical practice, perineal hernias in buffaloes, cattle, and goats have been reported to contain organs such as the urinary bladder, omentum, intestine, and, in some cases, the pregnant uterus (Shridhar 2011; Salci and Guner 2016; Vadalia *et al.*, 2017; Priyanka *et al.*, 2018; RK, Gosai *et al.*, 2019) [11, 12, 14, 9, 3].

Diagnosis of perineal hernia in cattle is primarily based on clinical examination and ultrasonography, which remain fast, non-invasive and reliable tools for identifying herniated abdominal organs. In the present case, ultrasonography was instrumental in confirming urinary bladder herniation, consistent with previous reports of similar cases in bovines (Sankar *et al.*, 2025) [10]. Contrast cystography or retrograde contrast techniques have been shown to help differentiate perineal hernia from perineal swelling of other etiologies such as abscess, haematoma, or vaginal prolapse (Sankar *et al.*, 2025) [10]. In this case, contrast imaging was not performed, which may be considered a diagnostic limitation.

The successful outcome following suture herniorrhaphy in the present case may be attributed to the size of the hernial ring and adequate tissue integrity. Nevertheless, polypropylene mesh reinforcement has been reported as a useful alternative in buffaloes with larger perineal hernia defects (Malik *et al.*, 2012; Kumar *et al.*, 2021) [7, 6].

Although perineal hernia repair in dogs is frequently complicated by wound infection, dehiscence, persistent tenesmus, fecal incontinence, rectal prolapse, urinary dysfunction, sciatic paralysis, and recurrence (Hedlund, 2012) [5], no such complications were recorded in the present case during the two-month follow-up period.

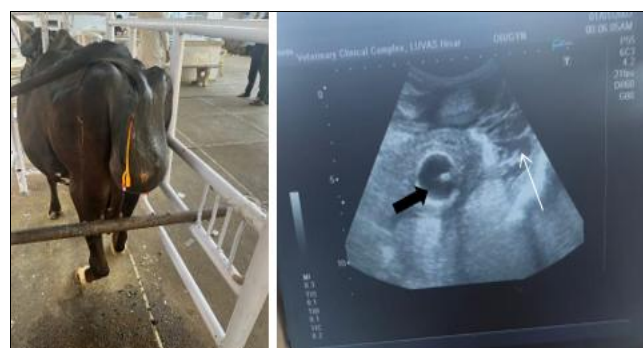


Fig 1(a & b): Pre-operative image (a) unilateral right-side swelling in perineal region. Ultrasound image (b) anechoic pockets of fluid indicative of subcutaneous edema and absence of any doppler flow around urinary bladder (White arrow) and foleys placement inside the urinary bladder appreciated by inflated cuff (Solid black arrow).

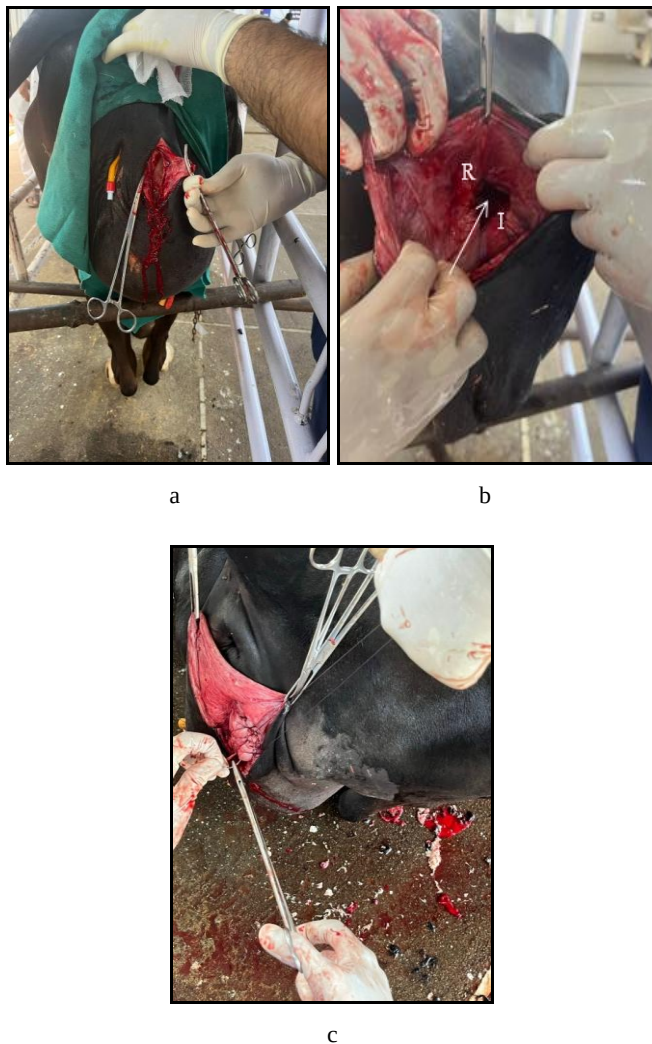


Fig 2(a, b & c): Intraoperative view of a perineal hernia in cattle (a) placement of incision on to the perineal swelling and urinary bladder is appreciated (U), (b) Rent in pelvic diaphragm (white arrow) is visible along with retractor clitoris muscle (R) and internal obturator muscle (I), (c) suturing of surrounding fascia and muscle.

Conclusion

Perineal hernia in cattle, although rare, should be considered when perineal swelling is associated with urinary difficulty. Early diagnosis and surgical repair remain essential to prevent complications. The successful outcome in this case demonstrates that prompt herniorrhaphy and proper perioperative management can result in a favourable prognosis.

Conflict of Interest

Not available.

Financial Support

Not available.

Reference

1. Ferreira F, Delgado E. Perineal hernias in small animals. Portuguese Journal of Veterinary Sciences. 2003;98(545):3-9.
2. Gill SS, Barstad RD. A review of surgical management of perineal hernia in dogs. Journal of the American Animal Hospital Association. 2018; 54:179-187.
3. Gosai RK, Chauhan PM, Patel KD, Patelia HR. Perineal hernia in a buffalo: a case report. Veterinary Research. 2019;7(1):13-14.

4. Hedlund CS. Perineal hernia. In: Fossum TW, editor. Small animal surgery. 2nd ed. St. Louis: Mosby; 2002. p. 433-437.
5. Hedlund CS. Perineal hernia. In: Fossum TW, editor. Small animal surgery. 4th ed. St. Louis: Mosby; 2012. p. 568-573.
6. Kumar V, Asodiya FA, Vora SD, Singh VK. Perineal hernia repair using polypropylene mesh in three female Jaffarabadi buffaloes: a short communication. Veterinary Archives. 2021;91(3):327-332.
7. Malik V, Purohit S, Panday RP, Singh B. Surgical management of perineal hernia using nylon mesh in a buffalo. Indian Journal of Veterinary Surgery. 2012; 33:71-71.
8. Prasad V, Prasad R, Kamalakar G, Mahesh V. Perineal hernia in a buffalo heifer: a case report. Research and Reviews: Journal of Veterinary Science and Technology. 2015;4(3):22-24.
9. Priyanka, Sharma S, Chaudhary RN, Niwas R, Arora N. Surgical management of perineal hernia in a crossbred cow: a case report. International Journal of Current Microbiology and Applied Sciences. 2018;7(12):385-388.
10. Sankar R, Jaianusiya A, Kalaiselvan V, *et al.* Perineal hernia in a crossbred Jersey cow and its successful surgical management: a case report. Indian Journal of Veterinary and Animal Sciences Research. 2025;54(1):102-105.
11. Shridhar NB. Perineal hernia in a crossbred cow and its surgical management. Indian Journal of Animal Research. 2011;45(1):73-74.
12. Salci SO, Guner B. Perineal hernia containing pregnant uterus in a doe. Thai Journal of Veterinary Medicine. 2016;46(3):503-507.
13. Singh J, Singh S, Bansal P. Surgical correction of perineal hernia in bovines: a clinical study. International Journal of Veterinary Science. 2017;6(2):98-101.
14. Vadalia J, Chaudhary D, Modi L, Patel K. Management of perineal hernia in a cow: a case report. Indian Journal of Veterinary Sciences and Biotechnology. 2017;13(1):85-87.

How to Cite This Article

Rana S, Arora N, Tiwari D. Diagnosis of perineal hernia by ultrasonography and its surgical correction in a crossbred cow. International Journal of Veterinary Sciences and Animal Husbandry. 2026;11(3):210-212.

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