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Rajesh Kumar

Associate Professor,
Department of Veterinary
Surgery and Radiology, Bihar
Veterinary College, Patna,
Bihar, India

Aakankasha

Assistant Professor,
Department of Veterinary
Surgery and Radiology, Bihar
Veterinary College, Patna,
India

Ramesh Tiwary

Associate Professor,
Department of Veterinary
Surgery and Radiology, Bihar
Veterinary College, Patna,
India

MK Singh

Assistant Professor,
Department of Veterinary
Anatomy, Bihar Veterinary
College, Patna, India

Dr. Ratnesh Kumar Choudhary

Associate Professor
Department of Veterinary
Anatomy, Bihar Veterinary
College, Patna, Bihar, India

Corresponding Author:

Dr. Ratnesh Kumar Choudhary

Associate Professor
Department of Veterinary
Anatomy, Bihar Veterinary
College, Patna, Bihar, India

Surgical management of perineal hematoma with vaginal tear in a cow: A rare clinical case report

Rajesh Kumar, Aakankasha, Ramesh Tiwary, MK Singh and RK Choudhary

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Abstract

Perineal hematomas along with vaginal tear are uncommon but clinically important reproductive disorders in cattle. Perineal hematomas are characterized by swelling, pain, and discomfort in the perineal region, while vaginal tears are generally associated with bleeding, swelling, pain, and straining in severe cases. The present report describes the clinical presentation and successful surgical management of a perineal hematoma along with a vaginal tear. A 1.5-year-old cow was presented with a history of progressive swelling in the right perineal region following mating. Clinical examinations and vaginal examinations revealed a firm swelling and a 10 cm laceration in the vaginal roof. Based on clinical, physical, fine-needle aspiration cytology, and ultrasonographic findings, the condition was diagnosed, and surgical excision of the perineal hematoma with repair of the vaginal tear was performed under posterior epidural anaesthesia. The cow made an uneventful recovery within one month. This case demonstrates that early diagnosis, surgical excision of hematoma, and timely repair of vaginal tears ensure complete recovery and help prevent further complications.

Keywords: Perineal hematoma, vaginal tear, traumatic mating, epidural anaesthesia and surgical management

Introduction

Perineal hematomas are characterized by sudden swelling, pain, and discomfort in the perineal or vulvar region, often accompanied by dysuria, straining, and reluctance to move ^[1]. It is an uncommon reproductive disorder in cattle that results from trauma to the perineal region, leading to rupture of subcutaneous blood vessels and subsequent accumulation of blood in the tissues. While most genital tract injuries in cattle are associated with parturition or obstetrical manipulations, trauma during natural service may also cause significant perineal injury, particularly in heifers or cows with narrow vaginal passage, poor relaxation of the genital tract, or when subjected to forceful mating by a heavy bull ^[2].

Vaginal tear in cattle is uncommon but frequently reported due to trauma during parturition, assisted delivery, or, less frequently, during mating ^[1]. Traumatic mating injuries are usually seen in heifers or cows with inadequate relaxation of the genital tract, narrow vaginal passage, or when mated with a heavy bull ^[2]. Such injuries may range from superficial lacerations of the vaginal mucosa to deep tears involving submucosa and surrounding connective tissue. Vaginal tears are generally associated with bleeding, swelling, pain, and straining in severe cases, or other secondary complications like infection, prolapse, and adhesions may lead to infertility or permanent damage to the reproductive tract ^[3]. Early diagnosis and prompt surgical intervention are necessary to restore the integrity of the vaginal wall and management of haematoma to minimize infection, and ensure normal reproductive performance. This report describes the clinical presentation and successful surgical management of perineal haematoma along with vaginal tear in a cow following traumatic mating.

Materials and Methods

Clinical case of perineum haematoma along with vaginal tear (Fig. 1) in a 1.5-year-old female cow presented to the Surgery OPD, Teaching Veterinary Clinical Complex, Bihar Veterinary College, Patna-14, with a primary complaint of swelling in the perineal region

from the last 15 days. The owner reported that the swelling developed post-mating and it gradually started increasing in size. The animal was exhibiting difficulties with normal urination and defecation. Transrectal and transvaginal examination revealed that the animal was having a hard swelling and there was a large tear measuring up to 10 cm in the vaginal roof. The vital parameters like rectal temperature, respiration and heart rate were in normal range. Haemato-biochemical values were within normal range, and also found negative to blood protozoa. FNAC sample suggested that a large no. RBC cell. Sonographic examination revealed the presence of homogeneous echogenic contents without any vascularity, no organs were involved. Surgery was planned for the removal of the perineal mass and the repair of the tear defect under posterior epidural anaesthesia. After proper aseptic preparation, an incision was made above the swelling. It was excised to remove the haematoma contents (Fig. 2). The defect in the vaginal roof was repaired with a simple interrupted suture pattern using vicryl, size-2 (Fig. 3). The skin incision was partially sutured with cross mattress sutures (Fig.4). The cavity was plugged with gauze soaked in povidone iodine. It was advised to change on alternative days. Post-operative antibiotics and analgesics were given. Calendula-glycerine paste was used to hasten the healing process.

Results

The surgical intervention was successful, and the cow uneventfully recovered over a period of one month. The swelling subsided gradually, and the surgical wound healed without any major complications. Sutures remained intact, and no signs of infection, discharge, or recurrence of hematoma were observed during the post-operative period. The animal maintained normal urination and defecation throughout recovery. Follow-up examination confirmed complete resolution of the hematoma and satisfactory healing of the vaginal tear, restoring the integrity of the reproductive tract.

Discussion

Genital tract injuries in cattle are relatively uncommon, but may occur during parturition, obstetrical manipulations, or traumatic mating [3]. In the present case, traumatic mating led to the unusual simultaneous occurrence of a perineal hematoma and a vaginal tear. Vaginal tears are often associated with insufficient relaxation of the genital tract, narrow vaginal passage, or excessive force applied during mating, particularly in heifers or cows mated with a large bull [4].

The perineal hematoma observed was due to rupture of subcutaneous blood vessels in the perineal region, leading to rapid accumulation of blood and swelling. It causes discomfort, dysuria, and straining [5]. Vaginal tears, on the other hand, can lead to hemorrhage, infection, adhesions, and infertility if left untreated. The simultaneous presence of the two disorders predisposes the case to secondary infection and hinders effective management. Early surgical intervention was critical in this case. Evacuation of clotted blood, drainage of the hematoma, and suturing of the vaginal tear under proper aseptic precautions prevented further complications. Similar observation also reported by Purohit, [4] and Sharma *et al.* [6] that early surgical correction of vaginal tears promotes rapid healing and restores normal

reproductive performance in cows. Use of systemic antibiotics, NSAIDs, and local wound care minimized infection risk and supported tissue healing, consistent with earlier recommendations for genital tract trauma in bovines [7]. In contrast, non-surgical or conservative management like topical antiseptics, expectant healing, or delayed drainage has been associated with prolonged convalescence, recurrent infection, and reduced conception rates [8].



Fig 1: Clinical case of Perineal Hematoma with Vaginal Tear



Fig 2: Removal of the haematoma contents

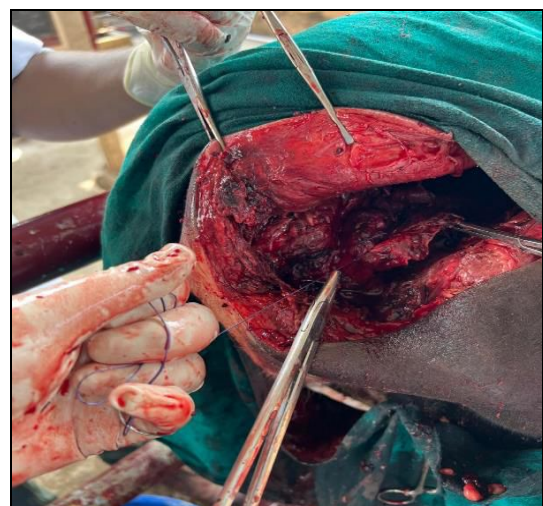


Fig 3: Repair of vaginal tear



Fig 4: Suture of Skin

Conclusion

The present case highlights the successful surgical management of perineal hematoma along with a vaginal tear in a cow caused by traumatic mating. Early diagnosis, timely surgical intervention, and appropriate postoperative management ensured complete recovery. Therefore, early detection and proper treatment of genital injuries are essential not only for saving the life of the animal but also for preserving reproductive health and its future productivity.

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Conflict of Interest Statement

The authors declare that there are no conflicts of interest regarding the publication of this manuscript.

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Ethical Approval

The surgical case was conducted with informed owner consent, and all procedures followed standard clinical and ethical guidelines of the Bihar Veterinary College, Bihar Animal Sciences University, Patna.

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