

SUCCESSFUL MANAGEMENT OF POSTPARTUM UTERINE PROLAPSE IN A GOAT: A CASE REPORT

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SUMMARY

Postpartum uterine prolapse is a common condition in various animal species, particularly in cows and ewes, and less frequently in does and mares. A 5-year-old multiparous goat was presented with a history of a prolapsed mass hanging from the vulva. The prolapse was managed under epidural anaesthesia using 2% lignocaine. After cleaning the prolapsed mass with a mild potassium permanganate solution, the uterus was repelled and repositioned with gentle pressure. A retention suture was placed on the vulva to prevent the recurrence of prolapse. The goat was administered calcium boro-gluconate, antibiotics, and antihistamines. The goat made an uneventful recovery without complications or recurrence of the prolapse.

Keyword: Goat, Management, Uterine prolapse

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Goats (*Capra hircus*) are economically vital livestock globally. In India, goats play a crucial role in the rural economy, providing livelihoods and nutritional security, particularly for smallholder farmers. Their resilience and low input requirements make them well-suited to the diverse agro-climatic zones of the country. Uterine prolapse poses a significant challenge to goat health and productivity. Uterine prolapse is a common complication following the third stage of labour in cows and ewes, with higher prevalence in these species compared to doe goats (Sahadev *et al.*, 2014). While rare in goats, uterine prolapse is a critical emergency that requires immediate, proper treatment (Gupta *et al.*, 2018). This condition typically occurs shortly after parturition when the cervix is open, and the uterus is atonic (Hanie, 2006). Contributing factors include hormonal imbalances, hypocalcaemia, mineral deficiencies, trauma to the birth canal, excessive traction during assisted delivery, dystocia, or forceful removal of foetal membranes (Hanie, 2006). Initially, the prolapsed tissue may appear normal, but it soon becomes oedematous and enlarged. In severe cases, animals may experience hypovolemic shock due to internal blood loss, organ lacerations or expulsion of abdominal viscera (Potter, 2008). Successful treatment depends on the type of case, the extent of damage and contamination. This report focuses on the effective management of postpartum uterine prolapse in a doe goat.

A 5 year old multiparous doe was presented to the Veterinary Clinical Complex at CVAS, Navania, Udaipur, Rajasthan, with a uterine prolapse that occurred 24 hours after a normal delivery of kids. Upon examination, the prolapsed uterus was found to be swollen, oedematous,

injured and contaminated with dung. Clinical parameters recorded included rectal temperature (102.5° F), respiratory rate (26 breaths per minute) and heart rate (90 beats per minute). The vaginal wall appeared tense, oedematous, swollen and thicker, with a bluish-pink coloration. The prolapsed uterus exhibited prominent caruncles and significant edema (Figs. 1 and 2). Based on the clinical findings, the condition was diagnosed as a fourth-degree uterine prolapse.

The management of uterine prolapse was initiated following the owner's consent, considering the severity of the case. To prevent straining during uterine repositioning, 2 mL of lidocaine solution was infiltrated into the first intercocygeal space to perform epidural anaesthesia. Then, waited for 5 minutes for the local anaesthetic to effectively block perineal nerves, ensuring minimal pain during needle prick assessment and procedures. The prolapsed mass was gently cleaned with lukewarm saline solution while wearing sterile polythene sleeves on both hands. The mass was then elevated to the level of the vulva to relieve pressure on the urinary tract. The prolapsed area and vulva were washed with a warm 1:1000 dilution of potassium permanganate solution, followed by drying with a clean, dry cloth. Drying with a clean cloth after washing is crucial to eliminate excess moisture, as this can promote bacterial growth and hinder the success of further treatments and healing.

The goat was positioned in sternal recumbency, and the hind limbs were pulled outward. The prolapsed mass was lubricated with xylocaine gel and gently repositioned into its normal position by applying gentle pressure ensure both uterine horns were fully returned. To maintain the

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Fig. 1. Complete Eversion of uterus in Goat



Fig. 2. Postpartum uterine prolapse in a goat



Figs. 3 & 4. After reposition uterus and applying the suture

repositioned uterus and prevent further prolapse, a Buhner suture using nylon as the suture material was applied to the vulva as a retention technique. (Figs. 3 & 4). This suture aims to narrow the vulvar opening, providing mechanical support while allowing for urination. Immediately after repositioning, 70 mL of intravenous Calcium boro gluconate was administered to stimulate uterine tone. Follow-up treatment included intramuscular chlorpheniramine maleate (30 mg), intramuscular oxytocin (10 IU), and intramuscular ceftriaxone (10 mg/kg body weight) for 5 days. Meloxicam (0.5 mg/kg body weight) was administered intramuscularly for pain relief and inflammation control. The owner received instructions to apply an antiseptic cream, such as Povidone-iodine cream or Chlorhexidine cream, to the vulvar suture line to prevent infection and maggot infestation. Additionally, they were advised to administer an oral calcium supplement to support adequate calcium levels and maintain uterine tone, along with providing a laxative diet for 10 days to ensure easy defecation and minimize straining that could disrupt the repositioned uterus and the integrity of the sutures. The

vulvar retention suture was removed on day 7, and the goat made a full recovery without complication.

The condition typically occurs during the third stage of labour, after the expulsion of the foetus when the foetal cotyledons have separated from the maternal caruncles (Singh *et al.*, 2018). In this case, uterine prolapse in the goat occurred post-partum, which is consistent with the findings of previous studies. Caudal epidural anaesthesia plays a critical role in the management of uterine prolapse, as it alleviates straining and desensitizes the perineum, which is vital for the successful replacement of the prolapsed uterus (Hanie, 2006). In the present study, epidural anaesthesia was administered before attempting to reposition the prolapsed uterus, ensuring minimal discomfort and reducing the risk of further trauma. Complete repositioning of both uterine horns is crucial, as incomplete repositioning may lead to abdominal straining and an increased likelihood of recurrence (Hanie, 2006; Dutt *et al.*, 2023).

The exact aetiology of uterine prolapse in domestic however, hypocalcaemia can result in atony of the genital

organs, which predisposes the animal to uterine prolapse. This is supported by recent studies, including (Abbas and Abed, 2021), which suggest that low calcium levels can increase the risk of uterine prolapse. The administration of parenteral calcium boro gluconate is recommended to treat uterine atony caused by hypocalcaemia (Singh *et al.*, 2020). It is vital to gently manipulate the prolapsed mass during repositioning to minimize the risk of damage and further complications. In the present case, care was taken to handle the prolapsed uterus gently to minimize trauma, and the use of lubricants and anaesthetics further facilitated a smooth repositioning process. In addition to calcium therapy, antibiotics administered for 3 to 5 days after uterine repositioning can significantly reduce the risk of infection and saved the life of dam (Plunkett, 2000). The management of uterine prolapse in this goat involved the reduction, repositioning, and retention of the prolapsed mass, followed by the administration of calcium Boro gluconate, oxytocin, dextrose normal saline, antibiotics, antihistamines, anti-inflammatory drugs and multivitamins. This comprehensive treatment approach ensured the successful recovery of the animal without complications. The findings of this case are consistent with the established principles for the management of uterine prolapse in small ruminants, demonstrating that timely and appropriate intervention can lead to favourable outcomes.

CONCLUSIONS

This case of postpartum uterine prolapse in a goat was successfully managed through epidural anaesthesia,

careful repositioning of the uterus, and administration of Calcium boro gluconate, oxytocin, antibiotics, and supportive care. The goat recovered without complications, demonstrating the effectiveness of timely and appropriate treatment in managing uterine prolapse in goats.

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