



Obstetrical management of postpartum uterine prolapse in a smallholder Angus beef cow

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ABSTRACT: Postpartum uterine prolapse is a severe reproductive emergency in cattle that may result in hemorrhage, contamination, shock, and death if not treated promptly. This case report describes the successful management of uterine prolapse in a 5-year-old Angus beef cow maintained under a traditional smallholder farming system. The animal was found in lateral recumbency one day after calving, presenting with complete uterine prolapse and impaired standing ability. Clinical examination revealed a rectal temperature of 38.5 °C. Immediate treatment involved epidural-assisted manual repositioning of the prolapsed uterus, followed by vulvar retention suturing using a simple interrupted pattern. Adjunctive therapy included amoxicillin, vitamin B12, and an antihistamine. Clinical recovery was achieved without recurrence or post-treatment complications.

Keywords:

uterine prolapse, Angus beef cow, smallholder farming, postpartum complication, emergency treatment

■ INTRODUCTION

Uterine prolapse is a life-threatening postpartum emergency in cattle, occurring within hours after calving (Rees 2016). The condition involves complete uterine eversion through the vulva, caused by uterine atony and abdominal straining. Predisposing factors include dystocia, hypocalcemia, prolonged parturition, and excessive traction during fetal extraction (Carluccio *et al.* 2020). Without prompt management, uterine prolapse can lead to hemorrhage, contamination, metritis, hypovolemic shock, and death. Understanding its pathophysiology and ensuring timely clinical management are crucial for animal welfare, reproductive performance, and farm economics.

This case demonstrates successful clinical outcomes under traditional smallholder farming conditions with limited veterinary access. It shows how rapid recognition and intervention through manual repositioning, vulvar retention suturing, and supportive therapy can yield favorable outcomes in obstetrical emergencies. This case highlights the critical role of farmers' awareness in identifying early signs and seeking prompt assistance, as delays may determine recovery versus mortality.

Previous evidence reported a 35% prevalence of uterine prolapse in beef cows at the Besuki Animal Health Center, Situbondo, with housing, age, parity, and dystocia as significant risk factors (Mardotillah *et al.* 2024). This study examined the clinical management of uterine prolapse in beef cattle and its relevance to veterinary medicine and farmer education, focusing on emergency obstetric handling, nutritional and calcium balance, and post-treatment care for reproductive health and herd productivity.

■ CASE

Signalment: Angus beef cow, 5 years old, body condition score (BCS) 3, second calving, maintained in an individual cage under traditional farming conditions. **Anamnesis:** One day postpartum, the cow was found collapsed in lateral recumbency with the uterus completely prolapsed and exposed to contamination. **Clinical signs:** The animal showed lateral recumbency. A partial uterine prolapse extending 15 cm beyond the vulva was observed. Vital signs included a temperature of 38.5°C, heart rate of 80 bpm, and respiratory rate of 32 breaths/min. No severe hemorrhage was observed. **Differential diagnoses:** Vaginal prolapse, retained fetal membranes, partial uterine eversion, and severe postpartum vaginal edema. **Diagnoses:** Postpartum uterine prolapse. **Prognosis:** Fausta. **Therapy:** The prolapsed uterus was cleansed with sterile saline and treated with hypertonic saline (NaCl 7.2%, Vetitex) to reduce edema. Epidural anesthesia (lidocaine 50–100 mg/100–300 kg BW [Lidocaine HCl 2%, Pharos]) was administered to prevent straining. Manual repositioning began with the cervix and was followed by Bühner retention sutures on the vulva. Treatment included 15 mg/kg BW amoxicillin (Amoxi 15 LA, Avindo), vitamin B12 kompleks 0.5 mL/10 kg BW (Injekvit B-Plex, Medion), and antihistamine 25–50 mg/100–300 kg BW diphenhydramine HCl (Vetadryl Inj, Sanbe) to prevent infection, aid recovery, and reduce inflammation.

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Figure 1. Postpartum uterine prolapse and clinical outcomes following treatment in an Angus beef cow. (A) Prolapsed uterus after parturition, showing uterine eversion with exposed mucosal tissue. (B) Post-treatment condition following manual repositioning and supportive management, indicating successful uterine replacement.

■ RESULTS AND DISCUSSION

In the present case, uterine prolapse was most likely precipitated by uterine atony occurring shortly after parturition when inadequate myometrial contraction failed to maintain the uterus in its normal anatomical position. Several contributing factors may have further compromised uterine tone, including calcium deficiency, physical exhaustion following prolonged labor, and excessive traction during delivery, all of which are recognized as predisposing conditions for uterine prolapse in cattle (Dubuc *et al.* 2010). Early detection and immediate treatment are pivotal in preventing progression to more severe complications, such as hemorrhage, contamination, tissue trauma, and necrosis of the exposed uterus (Miesner & Anderson 2008).

The favorable prognosis (fausta) observed in this case was primarily attributed to prompt and appropriate clinical intervention. Epidural anesthesia played a critical role in suppressing abdominal straining, thereby facilitating safer and more controlled uterine repositioning (Dorn 2023). Careful manual replacement of the prolapsed uterus, followed by the application of retention sutures, was essential to minimize the risk of recurrence and stabilize the reproductive tract. In addition, supportive therapy contributed to systemic recovery during the postpartum period, and close monitoring over the subsequent 7 days confirmed that the uterus remained in the correct position and that no secondary infection developed. Collectively, this management approach highlights the effectiveness of timely obstetrical intervention in restoring reproductive integrity and preventing long-term reproductive sequelae. Importantly, the successful outcome achieved under smallholder farming conditions underscores the practical challenges of managing uterine prolapse in resource-limited settings, where access to veterinary services, facilities, and optimal environmental hygiene may be restricted.

The therapeutic administration of amoxicillin provided broad-spectrum antibacterial coverage, thereby reducing the risk of metritis and septicemia. Vitamin B12 was administered to support hematologic and metabolic recovery during the postpartum period, whereas Vetadryl functioned as an antihistaminic agent to help alleviate inflammatory responses

and discomfort. To reduce the likelihood of such cases, farmers should ensure an adequate mineral balance—particularly calcium—during the prepartum and postpartum periods, provide nutritionally balanced feed, and closely supervise animals during calving (Kang *et al.* 2025). Ultimately, sound obstetrical management and early clinical intervention remain the most effective strategies for preventing uterine prolapse and preserving reproductive performance in beef cattle.

■ CONCLUSION

Early recognition and prompt management of uterine prolapse in beef cattle can enable complete recovery. Success requires timely uterine repositioning, retention suturing, and supportive therapy to prevent complications. In smallholder systems, prevention should focus on proper nutrition, calcium balance, and periparturient monitoring to reduce the incidence of prolapse.

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Author Contributions

RW was responsible for conducting animal treatments, collecting experimental data, and drafting the initial version of the manuscript. MRR contributed to review, editing, and enhancement of the manuscript's scientific content and structure. All the authors have read and approved the final version of the manuscript.

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