

Case Report

# Cesarean Section in a Local Zebu Cow due to Malformed Dead Fetus with Uterine Injury in Masha, South West Ethiopia

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## Introduction

Dystocia is a major reproductive emergency in cattle that can cause significant economic loss and welfare issues. It may arise due to either maternal or fetal causes, including fetal malpresentation, oversize, or congenital malformation [1]. In local zebu cattle, prolonged dystocia often results in severe damage to the reproductive tract, fetal death, and sometimes maternal mortality if not managed promptly.

Cesarean section (C-section) is a surgical intervention indicated when vaginal delivery is impossible due to fetal or maternal causes [2]. Among fetal causes, congenital malformations such as ankylosis, hydrocephalus, schistosomus reflexus, and other skeletal deformities are frequently reported (Jackson, 2014). This report describes a case of cesarean section in a local zebu cow with a malformed, dead fetus that could not be extracted normally due to its body conformation, resulting in uterine injury.

## Case History and Clinical Findings

A 4-year-old local zebu cow, approximately in its first parity, was presented to the veterinary clinic in Sheka zone, Masha Ateso veterinary clinic on July 11, 2025 with a history of prolonged labor of more than 24 hours. The owner reported straining without fetal expulsion despite assistance by traditional attendants.

Upon clinical examination, the cow was dull, dehydrated, with a slightly elevated heart rate (90 bpm) and weak pulse. Vaginal examination revealed a fully dilated cervix, but extraction of the fetus was impossible due to abnormal fetal conformation. The fetus was palpated to be in anterior presentation but with rigid limbs and abnormal body curvature suggestive of fetal malformation. Foul odor indicated fetal death and early autolysis.

## Abstract

A 4-year-old local zebu cow from Masha, Southwest Ethiopia, was presented with a history of prolonged dystocia (>24 hours) and repeated unsuccessful assisted delivery attempts. Clinical examination revealed anterior presentation with rigid limbs and abnormal spinal curvature, suggesting fetal malformation and death. Due to the impossibility of vaginal delivery, a cesarean section was performed under local anesthesia (2% lidocaine) via the left paralumbar fossa. A malformed dead fetus with a twisted spine was extracted, and partial uterine tearing was observed. The uterine tear was sutured in two layers using chromic catgut No. 2, and the uterus was lavaged with saline and procaine penicillin before closure. Postoperative management included procaine penicillin (20,000–40,000 IU/kg IM for 5 days), multivitamins, fluid therapy, and uterine lavage. The cow showed good recovery after 72 hours, with normal feeding and rumination resumed within five days. This case highlights that fetal malformation is an important cause of dystocia in zebu cattle and that early surgical intervention is vital to prevent uterine rupture, infection, and maternal loss. Proper surgical technique, aseptic management, and timely veterinary attention are essential for favorable outcomes in such reproductive emergencies.

Given the inability to deliver the fetus per vaginam, a decision was made with my team to perform a cesarean section under field conditions.

## Surgical Intervention

The animal was restrained in right lateral recumbency, and local infiltration anesthesia was performed using 2% lidocaine along the left paralumbar fossa. The site was aseptically prepared. A left paralumbar laparotomy incision was made to expose the uterus. The gravid uterine horn was exteriorized with difficulty due to tissue edema. A longitudinal incision was made on the greater curvature of the uterus, and a malformed dead fetus with twisted spine and rigid limbs was extracted manually. Inspection revealed partial uterine tearing caused by the malformed fetal limbs. The uterine tear was carefully sutured in two layers using absorbable chromic catgut No. 2 with continuous Lembert pattern. The uterus was lavage with sterile saline and Procain penicillin powder and solution before replacement into the abdominal cavity. The abdominal wall was sutured in standard three layers. Postoperatively, the cow received: Procaine penicillin (20,000 to 40,000 IU per kg) for 5 days, Multi vitamin for 3-day, Fluid therapy, and uterine lavage with diluted povidone iodine on the second day and continue wound drainage continuously (Figure 1).

## Outcome and Follow-up

The cow showed gradual improvement after 72 hours. Appetite and rumination returned to normal within 5 days. The surgical wound healed without complications, although mild vaginal discharge persisted for one week. The owner was advised to withhold breeding for at least three months to allow complete uterine recovery.



Figure 1: Cesarean Section.

## Discussion

Fetal malformations are important causes of dystocia in cattle, often necessitating surgical intervention [1]. In this case, the fetus's rigidity and spinal deformity prevented traction, leading to prolonged dystocia and uterine injury. Prolonged labor increases risk of tissue necrosis, uterine rupture, and secondary infections [3].

The success of cesarean section depends on early decision-making, aseptic technique, and postoperative management. Although the dam's uterus was partially damaged, proper suturing and postoperative care allowed recovery. Similar cases in zebu breeds have been documented in Ethiopia, often linked to delayed veterinary intervention [4].

This case underscores the importance of timely obstetrical examination and referral to minimize maternal losses and uterine injuries in field conditions.

## Conclusion

Cesarean section remains a valuable surgical option for managing dystocia due to fetal malformation in local zebu cattle. Early diagnosis, proper surgical technique, and postoperative care are key to improving survival and reproductive recovery of affected cows. Awareness among livestock owners about early veterinary intervention is essential to prevent complications from prolonged dystocia.

## References

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