Short Communication

DOI: 10.48165/ijar.2025.46.02.24

The Indian Journal of Animal Reproduction
The official journal of the Indian Society
for Study of Animal Reproduction
Year 2025, Volume-46, Issue-2 (June)

ISSN 0970-2997 (Print)
ISSN 2583-7583 (Online)

Resolution of Uterine Torsion with Incomplete Cervical Dilation through Caesarean Section in a Crossbred Cow

Anshu Vasantbhai Patel[1], Falgun Maheshkumar Kapadiya[1], Gajendrasinh Bhavarsinh Solanki[1], Karansinh Jitubhai Chavda[1], Dipak Naranbhai Suthar[2]

[1]Department of Veterinary Gynaecology and Obstetrics,
[2]Department of Veterinary Surgery and Radiology
College of Veterinary Science and Animal Husbandry, Rajpur (Nava), Himmatnagar, Gujarat

ABSTRACT

A four years old crossbred cow was presented to the Veterinary Clinical Complex (VCC), with a history of full-term pregnancy and signs of labour in the past 15 hours. The case was confirmed left side uterine torsion through per rectal and vaginal examination. Left side uterine torsion was relieved with modified Schaffer's method but cervical dilatation was not established, inspite of appropriate treatment. The left flank para median site was prepared for performing Caesarean section. The surgical site was prepared aseptically with povidone-iodine solution and anesthetized by local infiltration with 2% lignocaine. A dead emphysematous male calf around 39 kg was delivered from the incision site. The uterine wall was closed with continuous cushing suture pattern, followed by continuous Lembert suture pattern. The animal was treated with standard treatment protocol and skin sutures were removed at 15 days after surgery.

Keywords: Caesarean section, Emphysematous Foetus, Schaffer's method, Uterine torsion

How to cite: Patel, A. V., Kapadiya, F. M., Solanki, G. B., Chavda, K. J., & Suthar, D. N. (2025). Resolution of uterine torsion with incomplete cervical dilation through caesarean section in a crossbred cow.
The Indian Journal of Animal Reproduction, 46(2), 130-132.10.48165/ijar.2025.46.02.24

INTRODUCTION

Uterine torsion is a significant reproductive complication in cattle, particularly affecting pregnant heifers and cows during advanced pregnancy. Uterine torsion, rotation of the gravid uterus on its longitudinal axis was first reported in 1766 by Boutrolle. It is one of the most important obstetrical conditions needing immediate veterinary attention and causes severe economic losses to the dairy farmer as well as dairy sectors (Reshma et al., 2018). The uterine torsion generally occurs during late 1st stage or early 2nd stage labour, but there are some reports of pre partum uterine torsions (Frazer et al., 1996). The instability of the gravid uterus is certainly the most important predisposing factor in bovine uterine torsion. Many authors suggested that increased foetal movements during 1st stage of labour may be the precipitating parturient factor. Other factors that have been mentioned are decreased amounts of uterine fluid, flaccid uterine wall, small non-gravid horn and excessive foetal weight. The present case is about successful management of uterine torsion with caesarean section in cross breed cow.

*Corresponding author.
E-mail address: fmkapadiya@kamdhenuuni.edu.in (Kapadiya Falgun Maheshkumar)
Received: 10.03.2025, Accepted: 05.05.2025

CASE HISTORY AND OBSERVATIONS

A Four years old crossbred cow brought to the veterinary clinical complex, with history of fully developed udder, milk oozing from last 4 days, full term pregnancy and signs of labour since last 15 hours, but failing to deliver the foetus. Clinically, the animal was found to be having normal appetite, temperature, heart rate and respiration rate. Pervaginal examination indicates anticlockwise spiral folds or twists in the vaginal wall, while no foetal movements, very feeble fremitus and tensed uterus was observed in per rectal examination. Moreover, the broad ligament was pulled vertically downward beneath the uterus on the left side, whereas the contralateral broad ligament was tightly stretched diagonally above the uterus, thus the hand moved in a pouch formed at left side of uterus. The stretching of broad ligaments revealed twisting of uterus on left side.

TREATMENT AND DISCUSSION

The animal was restrained in left lateral recumbency, and detorsion was attempted using the modified Schaffer's method. After each roll, the effectiveness was assessed through per-vaginal examination. The torsion was successfully corrected after the second roll, however the cervix remained undilated, with a small amount of discharge from the vulva. As the incomplete cervical dilatation did not respond to appropriate treatment, a decision was made to perform a caesarean section. The animal was restrained in lateral recumbency, and the lower left flank para median site was prepared for a Caesarean section (Fig. 1). The surgical site was cleaned with povidone-iodine, and 60-80 ml of 2% lidocaine was administered for local infiltration. After aseptic preparation, an oblique incision was made, and the skin, subcutaneous layers, and muscles were incised, ligating bleeding vessels as needed. The peritoneum was opened, and the uterus was exteriorized and packed with sterile drapes. An incision was made on the greater curvature of the uterus (Fig. 2) to extract a dead, emphysematous male calf (39 kg), and uterine fluid was manually removed (Fig. 3, 4). The uterus was flushed with metronidazole and normal saline (0.9%) to prevent infection and dehydration. The wound closure was done using continuous Cushing and Lembert suture patterns with Vicryl 1.0, followed by muscle closure with a simple continuous pattern. The surgical site was dusted with cephalexin powder, and the skin was sutured with standard suturing pattern. Postoperative care included 1 Litre of 0.9% normal saline, Oxytetracycline LA (20 mg/kg BW), meloxicam (0.5 mg/kg BW), pheniramine maleate (10 ml), and Tribivet (12 ml). Daily antiseptic dressing with povidone-iodine was performed for one week, and skin sutures were removed 15 days post-surgery.

Fig. 1: Skin incision

Fig. 2: Incision on uterus

Fig. 3: Foetus removed through incision

Fig. 4: Dead foetus 39kg

The management of uterine torsion with incomplete cervical dilation had been successfully carried out through a caesarean section in a crossbred cow. The procedure had been performed under local anesthesia using 2% lignocaine in lateral recumbency, following strict aseptic techniques. Postoperative recovery had been smooth, with the

animal having exhibited normal activity within 15 days. The cow had shown signs of estrus 75 days after surgery and had successfully conceived thereafter, indicating a favorable reproductive outcome.

Cervical dilation failure is a common complication following the correction of uterine torsion and poses a significant challenge to vaginal foetal delivery, particularly when the foetus is dead (Prabhakar et al., 2007). Younger animals have a higher incidence of assisted births compared to older cows. Delayed uterine torsion lasting more than 72 hours should be directly managed through caesarean section to prevent undue stress caused by rolling (Prabhakar et al., 1995). Previous studies by Singh et al. (1978) and Nanda et al. (1991) also support the use of caesarean section in cases where uterine torsion remains uncorrected through rolling or in long-standing cases where fetal death increases the risk of uterine adhesions or ruptures. Ali et al., (2020) reported that male calves tend to have longer gestation periods and face calving difficulties often than their female counterparts. Similarly, in the present case, the animal was presented with over gestational length and carrying a male foetus. According to Campbell and Fubini (1990), attempting a fetotomy on an emphysematous foetus in cases of a tightly contracted uterus, minimal uterine fluid, incomplete cervical dilation, or a friable uterus is not advisable and, in such situations, caesarean section is the preferred approach. After foetal death, it starts putrefy and gas accumulates in subcutaneous tissues (emphysema formation) resulting in increased size within 24-72 h (Purohit and Mehta, 2006). In prolonged cases of uterine torsion, response to Schaffer's method is grave. Hence, caesarean section should be considered as a last resort in valuable cow otherwise slaughter is recommended (Roberts, 2004).

The successful recovery and subsequent conception of the cow in the present case further highlight the effectiveness of timely surgical intervention in managing uterine torsion cases. Proper postoperative care and monitoring play a crucial role in ensuring optimal reproductive performance and overall health in affected animals.

CONCLUSION

Uterine torsion in cattle is a significant reproductive emergency that requires timely diagnosis and intervention to ensure the health of both the dam and the foetus. This condition, characterized by the twisting of the uterus, presents with distinctive clinical signs and poses risks of foetal distress, maternal morbidity, and even mortality if not addressed promptly. The primary goal of a caesarean section is to save the dam, maintain the cow's productive and reproductive efficiency. However, it should be performed only as a last resort due to the risk of complications, particularly peritonitis.

ACKNOWLEDGEMENTS

Authors are thankful to the university authorities.

CONFLICT OF INTEREST

Authors have no conflicts of interest.

REFERENCES

Ali, M. S., Rajadurai, A., Arul, V., Manimaran, N., and Periyasamy, G. (2020). Surgical management of dystocia due to Fetal emphysema in a crossbred cow. *J. Entomol. Zool. Stud.,* **8**(2): 1704-1705.

Campbell, M. and Fubini, S. (1990). Indications and surgical approaches for cesarean section in cattle. The Compendium on continuing education for the practicing veterinarian (USA), **12**:285-291.

Frazer, G. S., Perkins, N. R. and Constable, P. D. (1996). Bovine uterine torsion: 164 hospital referral cases. *Theriogenology*, **46**(5), 739-758.

Nanda, A. S., Sharma, R. D. and Nowshahari, M. A. (1991). The clinical outcome of different regimes of treatment of uterine torsion in buffaloes. *Indian J. Anim. Reprod*., **12**: 197-200.

Prabhakar, S., Dhaliwal, G. S., Sharma, R. D. and Nanda, A. S. (1995). Success of treatment in relation to milk letdown and pelvic relaxation in bovines with torsion of uterus. *Indian J. Dairy Sci.,* **48**: 323-325.

Prabhakar, S., Matharu, S. S., Gandotra, V. K. and Brar, R. S. (2007). Corpus luteum does not contribute to higher progesterone concentration around parturition in buffaloes with uterine torsion. *Indian J. Anim. Sci.,* **77**(10): 956-959.

Purohit, G. N. and Mehta, J. S. (2006). Dystocia in cattle and buffaloes. A retrospective analysis of 156 cases. *Veterinary Prac.*, **7**(1): 31-34.

Reshma, A., Gudur, I. H. and Shankare, G. A. J. (2018). A retrospective study of incidence of dystocia in crossbred dairy cows. *J. Entomol. Zool. Stud.,* **6**(4): 660-662.

Roberts, S. J. (2004). Veterinary Obstetrics and Genital Diseases (Theriogenology). 2nd ed. Reprint. CBS Publishers and Distributors. New Delhi. India. Pp: 140

Singh, J., Prasad, B. and Rathore, S. S. (1978). Torsio uteri in buffaloes (Bubalus bubalis) - An analysis of 65cases. *Indian. Vet. J*., **55**: 161-65.