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A successful approach to handling dystocia resulting from postural defects of a fetus in a primiparous crossbred cow: A case report

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Abstract

This study documents the successful management of a case of dystocia in a primiparous crossbred cow, which occurred due to the right lateral deviation of the head and neck and flexion of the right carpal joint. The entire procedure took place at the farmer's shed, highlighting the practicality and effectiveness of on-site treatment. To correct the postural abnormalities of the fetus, specific manoeuvres were employed. Repulsion was applied to the brisket region to reposition the fetus as done, while the head and neck were carefully realigned to their normal posture by gently holding the fetus's mouth in the palm directed towards the birth canal. Additionally, the forelimb's postural defect was corrected by grasping the hoof in cuffed hand and straightening it to its normal posture. To facilitate the smooth delivery of the calf, both the fetus and the calving passage were thoroughly lubricated with liquid paraffin, which aided in reducing friction and easing the passage of the calf. Ultimately, through the application of controlled traction, a deceased female calf was successfully delivered. Post-handling, the cow was treated with appropriate medication followed by good management leading to a healthy recovery. This case underscores the importance of timely intervention and specialized techniques in resolving challenging dystocia situations, even in resource-limited settings like a farmer's shed.

Keywords: Crossbred cow, dystocia, deviation of head, parturition, primiparous

Introduction

Dystocia, which refers to difficult or prolonged parturition, can significantly impact cattle production. It is influenced by various factors grouped into four main categories: direct factors like malpresentation and uterine torsion, phenotypic factors related to both the calf and cow, non-genetic factors such as cow age, calving season, nutrition and genetic factors, including congenital abnormalities (Gaafar *et al.*, 2011) ^[1]. Cattle producers invest considerable time, effort, and resources to ensure successful pregnancies through artificial insemination or natural mating. Dystocia poses a significant economic burden due to increased calf morbidity and mortality. This impact is particularly severe in areas with limited access to veterinary services, as it leads to higher veterinary expenses and, in extreme cases, may result in injury or death of the dam (Singh *et al.*, 2019) ^[2]. Primiparous cows, or first-time calvers, are more susceptible to dystocia, with incidence rates ranging from 10 % to 50 % of all births. Addressing dystocia in such cases is crucial to ensure the well-being of both the cow and the calf. By effectively managing and resolving dystocia in time, farmers can mitigate the potential adverse consequences on their livestock, enhance overall productivity, and reduce financial losses associated with calf health issues and maternal complications. This case report presents a successful intervention for relieving dystocia in a primiparous crossbred cow under field conditions.

Case presentation

A 4-year-old primiparous crossbred cow was presented with a history of a full-term pregnancy, straining since 6 hrs with a visible water bag at the vulva and no attempt of assistance was made by the owner (Fig. 1). Upon external clinical examination the animal was restless and in a standing position with the presence of allantois bag at the vulva (Fig. 2); the rectal temperature was 101.0°F. Pervaginal examination (Fig. 3) under epidural analgesia with 2 % lignocaine HCL revealed a tightly engaged fetus in the birth canal accompanied by severe abdominal contractions in the anterior longitudinal presentation and dorso-sacral position of

the fetus. Further, it was found that the fetal head and neck were severely deviated towards the right side along with right carpal flexion. The cervix was found completely dilated and fetal reflexes were absent.

Treatment and Discussion

Initially, the flexed carpal was secured with rope and then the engaged fetus in the birth canal was repulsed back into the uterus. Further, catch holding the fetal maxilla and nostrils, the fetal head was brought into the pelvic cavity. Later, the right forelimb was extended into the birth canal by grasping the hoof of the fetus in cuffed hand along with safe traction on the rope which was previously tied to the forelimb. The rope was then tied on both forelimbs after correcting the fetal posture, alternate traction was applied on both limbs simultaneously guiding the fetal head to yield a dead female calf (Fig. 4, 5 & 6). The dead calf was weighing ~ 38 kg indicating a relatively oversized fetus in the heifer. Later, the cow was administered with I/V fluids (Mifex® - 350 mL, Normal saline - 3L, Dextrose normal saline - 2L),

Enrofloxacin @ 7.5 mg per kg body weight slow I/V (Fortivir®, Virbac Animal Health India Private Limited), Meloxicam @ 0.5 mg per kg body weight, I/M (Melonex®, Intas Pharmaceuticals Limited, India), 10 ml of Chlorpheniramine maleate, I/M, 3 intrauterine boluses (Involon®, Natural Remedies Private Limited, India) were kept. The animal was under proper care and management, following which the animal recovered uneventfully and came back to estrus after 4 months. Majeed and Taha (1995) [4] described four procedures for handling dystocia in animals: mutation, traction, fetotomy and caesarean section. In this study, mutation and traction were used to remove the dead fetus. Similar cases were reported by Kumar *et al.* (2022) [5], who reported lateral deviation of head and carpal flexion in mare, where the correction of the head was made using obstetrical hooks on the mandible and carpal flexion correction by cupping the hoof. Furthermore, Azizunnesa *et al.* (2020) [6] reported carpal flexion of the calf in a crossbred cow, but it was removed by fetotomy.



Figure 1: Visible allantois at the vulva



Figure 2: External clinical examination



Figure 3: Pervaginal examination to assess presentation, position and posture



Figure 4: Guiding fetal head just before traction



Figure 5: Applying alternate traction on both forelimbs



Figure 6: Dead female calf after delivery

Conclusion

In conclusion, taking swift action to address bovine dystocia cases at the farmer's doorstep is essential for ensuring favourable outcomes for both the cow and her calf. Failing to do so can have detrimental consequences for the health and welfare of both the dam and the calf. Therefore, timely intervention is crucial to promote the well-being of the animals and ensure a successful outcome in such situations.

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References

1. Gaafar HMA, Shamiyah SM, El-Hamd MA, Shitta AA, El-Din MT. Dystocia in Friesian cows and its effects on postpartum reproductive performance and milk production. *Tropical animal health and production.* 2011;43:229-234.
2. Singh M, Sharma A, Kumar P. Bovine dystocia. An overview. *Journal of Veterinary Science and Zoology.* 2019, 1(1).
3. Uzamy C, Kaya I, Ayyilmaz T. Analysis of risk factors for dystocia in a Turkish Holstein herd. *Journal of Animal Veterinary Advances.* 2010;9(20):2571-2577.
4. Majeed AF, Taha MB. Obstetrical disorders and their

- treatment in Iraqi Awassi ewes. *Small Ruminant Research*. 1995;17(1):65-69.
5. Kumar B, Srivastava N, Sahu T. Dystocia due to lateral deviation of head and carpal flexion in mare-a case report. *Animal Reproduction Update*. 2022;2(2):28-30.
 6. Azizunnesa R, Hasan T, Yadav U, Yadav CJ, Reza MB. Management of dystocia due to postural defect (Carpal flexion) in Holstein Friesian cross breed cow- A case report. *Bangladesh Journal of Veterinary and Animal Sciences*. 2020;8(2):208-211.