

SUCCESSFUL PER-VAGINAL MANAGEMENT OF DYSTOCIA DUE TO A DICEPHALIC FETUS IN A CROSSBRED COW

V. Balamurugan¹, V. Ramakrishnan^{2*} and U.S. Kalyan³

*Department of Veterinary Gynaecology and Obstetrics
Madras Veterinary College
Tamil Nadu Veterinary and Animal Sciences University
Chennai - 600 007*

ABSTRACT

A five-year-old Holstein Friesian crossbred cow at full-term gestation was presented with prolonged labour and failure to deliver the fetus. Per-vaginal examination revealed complete cervical dilatation and a dead fetus in anterior longitudinal presentation with two fully developed heads attached to a common neck and trunk, causing mechanical obstruction of the birth canal. Under caudal epidural anaesthesia and adequate lubrication, the fetus was repelled, appropriately aligned and extracted per vaginum by controlled traction on the forelimbs. The dam received supportive postpartum therapy and recovered without complications. The case demonstrates that, when the cervix is fully dilated and adequate pelvic space is available, careful obstetrical manipulation may permit vaginal delivery of a dicephalic fetus and avoid fetotomy or caesarean section.

Key words: Dystocia, dicephalus, vaginal extraction

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INTRODUCTION

Dystocia is an important reproductive emergency in cattle and may arise from maternal or fetal causes, including abnormal fetal size, presentation, posture and congenital malformations (Noakes *et al.*, 2019). Dicephalus (dicephaly) is a rare congenital duplication in which two

heads are present on a common body and is considered a form of incomplete embryonic division. The increased cranial dimensions can result in fetomaternal disproportion and obstructive dystocia. Recent bovine and buffalo reports confirm that dicephalic fetuses may require either surgical delivery or carefully planned vaginal manipulation depending on fetal configuration and available pelvic space (Okur, 2021; Ramteke *et al.*, 2023; Raval *et al.*, 2024). The present report describes successful per-vaginal management of dystocia caused by a dicephalic fetus in a Holstein Friesian crossbred cow.

¹Veterinary Consultant, EMRI Green Health Service

²Assistant Professor, Veterinary University Training and Research Centre, Rajapalayam, Virudunagar District,

*Corresponding Author Email : ramakrishnanvet@gmail.com

³Assistant Professor,

CASE HISTORY AND OBSERVATION

A five-year-old Holstein Friesian crossbred cow in its second lactation was examined under field conditions after prolonged labour at full-term gestation. The owner reported rupture of the fetal membranes several hours earlier followed by persistent straining without progress. The cow was standing and fatigued, with mild dehydration and vulval oedema. Per-vaginal obstetrical examination revealed complete cervical dilatation and a fetus in anterior longitudinal presentation. Further exploration identified two fully developed heads attached to a common neck and trunk, with four limbs. The fetus was dead at examination. The enlarged cranial region caused mechanical obstruction within the maternal pelvis, and dystocia due to a dicephalic fetus was diagnosed.

TREATMENT AND DISCUSSION

The cow was restrained in a standing position and the perineal region was prepared aseptically. Caudal epidural anaesthesia was produced with 2% lignocaine hydrochloride to reduce straining and facilitate manipulation, and the birth canal was generously lubricated. The fetus was gently repelled to create working space and the two heads were aligned as favourably as possible. Obstetrical snares were applied to both forelimbs, followed by steady, controlled traction in coordination with the dam's expulsive efforts. Progressive

adjustment of the fetal position permitted passage of the enlarged cranial portion through the pelvis and successful per-vaginal extraction without fetotomy or caesarean section.

After delivery, the birth canal and uterus were examined for trauma. Supportive postpartum therapy, including fluids, antimicrobial and anti-inflammatory treatment and calcium supplementation, was provided according to the attending veterinarian's clinical protocol. The dam recovered without reported postpartum complications.

Gross examination showed two completely developed heads joined to a common neck and trunk, consistent with dicephalus/dicephaly. This anomaly results from incomplete division of an early embryo and can cause dystocia because of increased fetal dimensions and abnormal conformation. Recent reports have described caesarean delivery of dicephalic fetuses in cattle (Okur, 2021) and successful obstetrical management of related dicephalic conjoined anomalies in buffaloes (Ramteke *et al.*, 2023; Raval *et al.*, 2024). In the present case, complete cervical dilatation, adequate pelvic space, epidural anaesthesia, lubrication, fetal repulsion and controlled traction allowed vaginal delivery. Thus, the mode of delivery should be selected after careful assessment of fetal viability, fetal configuration, cervical dilatation, pelvic space and the condition of the dam.



Fig.1. Field obstetrical management of dystocia in the crossbred cow by controlled per-vaginal traction.



Fig.2. Dicephalic fetus showing two distinct heads attached to a common trunk following per-vaginal extraction.

CONCLUSION

Dicephalus is a rare fetal cause of obstructive dystocia in cattle. In this case, prompt diagnosis and careful per-vaginal manipulation under epidural anaesthesia enabled successful extraction of the dead fetus without fetotomy or caesarean section, followed by an uncomplicated maternal recovery.

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