

DYSTOCIA DUE TO DICEPHALIC MONSTER IN A JERSEY CROSSBRED COW WITH POSTPARTUM DOWNER SYNDROME – A CASE REPORT

R. Kalirajan¹, V. Ramakrishnan^{2*}, U.S.Kalyan³

Krishi Vigyan Kendra,
Tamil Nadu Veterinary and Animal Sciences University
Kundrakudi - 630 206
Sivaganga District

ABSTRACT

A primiparous crossbred Jersey cow was presented with dystocia following prolonged labor and previous faulty manual intervention by untrained personnel, leading to amputation of both fetal forelimbs. Clinical examination revealed vaginal oedema. Per vaginal examination confirmed the presence of a dicephalic fetus. Cesarean section was performed to relieve the obstruction. Post-operatively, the cow exhibited downer cow syndrome due to prior trauma and prolonged recumbency, but recovered with supportive care. Necropsy of the fetus revealed two separate heads and tracheae, converging into a common thoracic cavity with a single set of lungs and one heart. This case highlights the importance of skilled obstetrical management and presents anatomical insights into rare dicephalic conjoined twins in cattle.

Keywords: Dicephalic monster, cesarean section, downer cow

Received : 23.07.2025

Revised : 19.08.2025

Accepted : 03.09.2025

INTRODUCTION

Dystocia is defined as difficult birth which is a common obstetrical emergency in bovines, primarily due to foetopelvic disproportion, fetal maldisposition, fetal anomalies, uterine inertia or uterine torsion. While most dystocias are manageable via vaginal manipulations or traction, certain congenital anomalies such as conjoined

twins may necessitate surgical intervention (Noakes *et al.*, 2019). A monster is the term for a developing fetus that has a developmental abnormality that impacts the functions of many organs (Roberts, 1986). It is believed that the development of a dicephalic fetus may result from the partial or complete fusion of two growing embryos, partial body replication, or anteroposterior compression of the embryonic disc. (El-Sheikh *et al.*, 2010). Dicephalic conjoined twins, are exceedingly rare, with an incidence estimated at 0.01% in cattle (Roberts, 1986). These anomalies often result in obstructive dystocia and are usually incompatible with life.

¹Veterinary Surgeon, Veterinary Hospital, Sedapati Madurai District

²Assistant Professor, *Corresponding Author Email: rkntanuvas@gmail.com

³Assistant Professor, Department of Veterinary Gynaecology and Obstetrics, Madras Veterinary College, Chennai - 600 007

CASE HISTORY AND OBSERVATION

A 3-year-old primiparous Jersey crossbred cow was presented from a field location with a history of prolonged labor (36 h) and unsuccessful delivery attempts. The owner reported intervention by local quacks, during which the fetal forelimbs were amputated. The animal was dull, recumbent, mildly dehydrated and showed signs of exhaustion. Per-vaginal examination revealed marked oedema of the vaginal mucosa and the presence of two well-formed fetal heads at the pelvic brim, suggesting dicephalic conjoined twins. Forelimbs were not palpable. Based on these findings and the irreducible nature of the dystocia, a cesarean section was planned.

TREATMENT

The cow was restrained in right lateral recumbency. A left paralumbar fossa laparotomy was performed under local anaesthesia by inverted L block infiltration with 2% lignocaine Hcl and mild sedation (xylazine HCl 0.05 mg/kg IV). The gravid uterus was exteriorized and incised to deliver the non-viable fetus. The uterus and abdominal wall were sutured in standard fashion. Post-operatively, the cow was treated with intravenous fluids, antibiotics (ceftriaxone @ 20 mg/kg IV), NSAIDs (meloxicam @ 0.5 mg/kg SC), and calcium borogluconate.

RESULT AND DISCUSSION

Gross examination of the fetus confirmed a dicephalic monster (Figure

1) with two distinct heads, two separate cervical vertebrae, and two tracheae leading into a shared thoracic cavity (Figure 2). Internally, the thorax contained a single heart and one set of lungs. Both forelimbs were traumatically amputated. The hind limbs were normal. The digestive tract showed two esophagi merging into a single stomach and intestine.

The cow remained recumbent for 24 hours post-surgery, likely due to calving paralysis and exhaustion. With intensive care including repositioning, calcium therapy, and supportive management, the cow recovered and stood unaided on the third postoperative day.

Dicephalus is a rare congenital anomaly resulting from incomplete embryonic division. Parapagus dicephalus is characterized by two heads and a single trunk, and is commonly associated with cardiac and pulmonary abnormalities (Weaver *et al.*, 2007). Such fetuses are non-viable and invariably lead to dystocia, often necessitating surgical intervention (Jackson, 2004). Faulty obstetrical manipulations, especially by unskilled individuals, can lead to fetal mutilation and maternal trauma, compounding the risk of complications such as uterine rupture or downer cow syndrome (Arthur *et al.*, 2001). The recovery of the cow in this case underscores the importance of timely surgical correction and comprehensive post-operative care. Conjoined twins in cattle have no known hereditary basis but may warrant documentation for epidemiological and teratological records.



Fig.1. External view of the fetus post-extraction, showing the double-headed configuration with common body and intact hind limbs.



Fig. 2. Dicephalic conjoined twin fetus delivered by cesarean section showing two distinct heads with a common thoracic region.

CONCLUSION

Structural abnormalities in the fetus that result in monstrosities can be caused by developmental anomalies of the ovum, sperm, zygote, embryo, or fetus. When mutations are unable to resolve dystocia, one must decide between a caesarean section or a foetotomy in order to alleviate parturition difficulties.

REFERENCES

- Arthur, G.H., Noakes, D.E., Pearson, H and Parkinson, T.J. (2001). *Veterinary Reproduction and Obstetrics* (8th ed.). W.B. Saunders.
- El-Sheikh, H., Hegab, A and Zaabel S. (2010). Dicephalic atlodymus monster associated with hydrops amnii in a buffalo cow: a case report. *Veterinary Research*, **3**: 46-48.
- Jackson, P.G.G. (2004). *Handbook of Veterinary Obstetrics* (2nd ed.). Elsevier.
- Noakes, D.E., Parkinson, T.J and England, G.C.W. (2019). *Veterinary Reproduction and Obstetrics* (10th ed.). Elsevier Health Sciences.
- Roberts, S.J. (1986). *Veterinary Obstetrics and Genital Diseases* (3rd ed.). CBS Publishers and Distributors.
- Weaver, A.D., St Jean, G and Steiner, A. (2007). *Bovine Surgery and Lameness* (2nd ed.). Blackwell Publishing.