

**DYSTOCIA DUE TO MONOCEPHALUS THORACOPHAGUS
TETRABRACHIUS TETRAPUS DICAUDATUS**

IN A PATTANAM SHEEP

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ABSTRACT

A full-term Pattanam sheep was presented with a history of a ruptured water bag the previous night, accompanied by severe straining and the protrusion of two forelimbs and two hind limbs. Vaginal examination revealed a dry birth passage, and the fetal head was not palpable. Furthermore, the limbs could not be separated, raising suspicion of fetal monstrosity. Radiographic evaluation confirmed the presence of a fetal monster characterized by a single head, eight limbs, and two tails, consistent with monocephalus-thoracophagus-tetrabrachius-tetrapus-dicaudatus. The condition was successfully managed through partial fetotomy, enabling vaginal delivery.

Keywords: Pattanam sheep, fetal monster, dystocia, fetotomy and per vaginal delivery

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INTRODUCTION

Dystocia or difficult parturition, is a common reproductive emergency in sheep, often resulting from maternal or fetal factors. Fetal monstrosities are rare congenital anomalies that significantly contribute to obstructive dystocia in ruminants. These

anomalies arise due to errors in embryonic development, leading to conjoined twins or abnormal fetal structures (Roberts, 2004; Arthur *et al.*, 2016). One such rare anomaly, monocephalus-thoracophagus-tetrabrachius-tetrapus-dicaudatus, is characterized by a single head, fused thorax, four forelimbs, four hind limbs, and two tails (Wani *et al.*, 2020). These abnormalities present significant challenges for natural delivery, often necessitating advanced obstetrical interventions such as fetotomy or cesarean section. This case report describes the successful management of dystocia in a Pattanam sheep caused by a fetal monster through partial fetotomy, emphasizing

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the critical role of accurate diagnosis and advanced obstetrical skills in managing such complex cases.

CASE HISTORY AND OBSERVATION

A full-term pregnant Pattanam sheep was referred to the Veterinary Clinical Complex, VCRI Theni, with a history of prolonged, unproductive straining accompanied by the protrusion of two forelimbs and two hind limbs (Fig.1). On clinical examination, the ewe appeared restless, weak, and fatigued due to prolonged labor. Per-vaginal examination revealed a dry birth canal, indicating dehydration and extended labor. Identifiable fetal parts included two forelimbs and two hind limbs; however, the fetal head was not palpable, and the limbs could not be separated, raising suspicion of fetal monstrosity. To confirm the diagnosis, a radiographic examination was performed. The radiograph revealed a single fetal head, four forelimbs, four hind limbs, and two tails, suggesting duplication of the caudal body (Fig.2).

TREATMENT

The ewe was stabilized with 200 mL of intravenous Ringer's lactate to correct dehydration. Epidural anesthesia was administered using 2 ml of 2 per cent lignocaine hydrochloride to reduce straining. The birth canal was lubricated with sterile liquid paraffin to facilitate the procedure. To reduce the size of the fetus, the hind limbs along with lumbar vertebra were removed first using a fetotomy wire. Blunt dissection and gentle traction were

employed to carefully disarticulate and reduce the obstructing fetal parts. Following the partial fetotomy, the fetal trunk and remaining hind limbs were manipulated and successfully delivered vaginally (Fig.3 and 4). The uterus was then lavaged with warm saline to remove debris and minimize the risk of infection. Systemic antibiotics and anti-inflammatory drugs were administered for three days. By day three, the ewe had recovered smoothly.

RESULT AND DISCUSSION

The case was successfully managed through partial fetotomy, allowing the ewe to deliver the malformed fetus vaginally. Post-operative monitoring revealed steady recovery, with the ewe resuming normal feeding behaviour within three hours. Fetal monstrosities like monocephalus-thoracophagus-tetrabrachius-tetrapus-dicaudatus arise from abnormal embryonic development during the early stages of gestation. This anomaly is believed to result from the incomplete division of a single zygote, leading to conjoined twins. Thoracopagus conjoined twins, characterized by fusion at the thorax, are among the most commonly reported forms of fetal monstrosities in domestic animals (Arthur *et al.*, 2016). Contributing factors may include genetic predisposition, environmental influences, and teratogenic agents (Noakes *et al.*, 2018).

In this case, the anomaly likely resulted from incomplete separation of conjoined twins during embryogenesis (Wani *et al.*, 2020). Radiographic imaging

played a critical role in diagnosing the condition, confirming a single head, four forelimbs, four hind limbs, and two tails. This finding aligns with similar reports, such as the case described by Pansuriya *et al.* (2022), where a cow presented with dystocia caused by a dicephalic parapagus tetrabrachius tetrapus twin monster. In both cases, the abnormal fetal structure created mechanical obstruction, necessitating advanced obstetrical intervention. Although caesarean section is a viable option in such cases, fetotomy is often preferred when the fetus is non-viable, as it minimizes trauma and reduces surgical risks to the dam (Jackson, 2004). Radiographic imaging and ultrasonography are essential tools for diagnosing fetal anomalies, enabling clinicians to plan appropriate management strategies effectively.

Dystocia caused by fetal anomalies in small ruminants is well-documented. A retrospective study by Bhattacharyya *et al.* (2015) analyzed 70 cases of dystocia in sheep and goats, revealing that fetal abnormalities, such as malformations or monstrosities, significantly contribute to obstructive labor. These findings emphasize the need for early

detection and timely clinical management to reduce morbidity and mortality rates in such cases. The successful outcome of this case highlights the importance of timely diagnosis using radiography, proper obstetrical intervention through partial fetotomy, and comprehensive post-operative care to ensure maternal recovery.

CONCLUSION

This report presents a rare case of dystocia in a Pattanam sheep caused by monocephalus-thoracophagus-tetrabrachius-tetrapus-dicaudatus, a type of fetal monstrosity. The case not only emphasizes the rarity of thoracopagus tetrabrachius anomalies in sheep but also highlights the critical importance of radiographic diagnosis and successful management through partial fetotomy. This approach ensured the ewe's survival and smooth recovery. Timely diagnosis, appropriate obstetrical techniques, and comprehensive post-operative care are essential for managing similar cases in clinical practice, ensuring favourable outcomes for both the animal and its caretakers.



Fig. 1: Protrusion of foetal parts in Pattanam sheep



Fig.2: Radiographic examination of foetal monster in Pattanam sheep



Fig. 3 Monocephalus-thoracophagus-tetrabrachius-tetrapus-dicaudatus in a Pattanam sheep



Fig. 4 Radiographic examination of monocephalus-thoracophagus-tetrabrachius-tetrapus-dicaudatus in a Pattanam sheep

REFERENCES

- Arthur, G.H., Noakes, D.E., and Pearson, H. (2016). *Veterinary Reproduction and Obstetrics*. 10th ed. Saunders Elsevier.
- Bhattacharyya, H.K., Fazili, M.R., Bhat, F.A., and Buchoo, B.A. (2015). Prevalence of dystocia in sheep and goats: a study of 70 cases (2004-2011). *Journal of Advanced Veterinary Research*, **5**(1): 14-20.
- Jackson, P.G.G. (2004). *Handbook of Veterinary Obstetrics*. 2nd ed. Saunders.
- Noakes, D.E., Parkinson, T.J. and England, G.C.W. (2018). *Veterinary Reproduction and Obstetrics*. 10th ed. Elsevier.
- Pansuriya, D., Patel, C.I., Patel, H. and Bhalodia, S. (2022). Dystocia due to dicephalic parapagustetrabrachiu tetrapus twin monster in a cow: a case report. *Indian Journal of Veterinary Sciences and Biotechnology*, **18**: 45-146.
- Roberts, S.J. (2004). *Veterinary Obstetrics and Genital Diseases*. 2nd ed. CBS Publishers & Distributors.
- Wani, I., Gupta, M. and Kumar, P. (2020). Dystocia due to fetal monstrosity in domestic animals: a review.” *Journal of Veterinary Science and Research*, **5**(2): 45-50.