Buffalo Bulletin (October-December 2025) Vol.44 No.4
https://doi.org/10.56825/bufbu.2025.4444668

DYSTOCIA DUE TO DIPROSPUS PARAPAGUS FETUS – A CASE REPORT

Borra Chandra Prasad[1,*], Manda Srinivas[2] and Tangamani Tamil[2]

Received: 08 November 2021
Accepted: 12 December 2025

ABSTRACT

A ten-month ten day pregnant plueriparous graded Murrah buffalo was presented with issue of difficulty in delivery due to dead diprospus parapagus monster female calf. A dead female diprospus parapagus was relieved by performing caesarian section in a standard manner. Uneventful recovery of the dam was noticed.

Keywords: *Bubalus bubalis,* buffaloes, diprospus parapagus, caesarean

INTRODUCTION

Congenital abnormalities are mostly due to genetic or surrounding environmental or by combination of genes and milieu (Singh *et al*., 1988). Teratogens may act concurrently upon various tissues during growth. (Rafid, 2010). Inherited genetic variants causing congenital malformations in livestock hinder genetic progress and lead to economic losses for breeders through animal mortality or impaired reproductive and productive traits (Sara *et al*., 2017). While the precise mechanism remains uncertain, the leading theory suggests that embryonic fission and the development of two organizing centers are key factors (Machin, 1993). This study reports about a rare case of Diprospus parapagus in a buffaloe.

CASE HISTORY

A 7-year pregnant buffalo in its third parturition was assigned to obstetrical unit with the history of straining for past six hours but unable to deliver the fetus.

Upon vaginal palpation, it was found out that the fetus was in anterior presentation, dorso-sacral position with extended forelimbs, and two palpable heads joined at the region of neck. The fetus was dead and confirmed to be a dicephalic dead fetus. Traction of the fetus was performed after amputating right fore limb at shoulder joint but failed, and per vaginal delivery was ruled out. It was decided to perform cesarean section to relieve a dead dicephalic malformed female fetus. Caesarean section was performed in standard manner.

[1]Department of Veterinary Clinical Complex, NTR College of Veterinary Science (Gannavaram), Sri Venkateswara Veterinary University, Andhra Pradesh, India, *E-mail: cpmail1@rediffmail.com
[2]Department of Veterinary Gynaecology and Obstetrics, NTR College of Veterinary Science (Gannavaram), Sri Venkateswara Veterinary University, Andhra Pradesh, India

Figure 1. Diprospus parapagus fetus.

Figure 2. Micrognatia.

RESULTS AND DISCUSSIONS

The external evaluation of the calf revealed two pairs (four) of nostrils, tetra-ophthalamus, two mouths, each with a tongue but only two ears. (Figure 1) Ears were absent on the medial side of head. The external thorax, abdomen and pelvis were normal. The lateral external ears normally developed.

The lower jaw was shorter when compared to the upper jaw. (Micrognathia) (Figure 2). The facial bones have developed normally in both heads, and two tracheas were running separately. Disporus monsters are monocephalus monsters having partial duplication of the frontal region, nose and mouth. Monostrosities are mainly due to developmental abnormalities of the ovum, embryo or fetus result in structural abnormalitie.

Congenital defects are caused by a combination of genetic and environmental factors, such as infections, viruses, drugs, poisons, certain plants, mineral salts, vitamin deficiencies (A, D, E), hormonal issues, and physical problems. (Mazzulo *et al*., 2003; Jones and Hunt, 1983). Embryonic duplication is a birth defect caused by the abnormal splitting of the germinal arealeading to doubling of body structures in the fetus. Duplications of cranium are among the most frequent cases (Roberts, 2002).

Diprosopus may be caused by the incomplete splitting of a zygote in the late embryonic development (Noden and De Lahunta, 1985). Anterior duplication is more common in swine and ruminants whereas, fusion of varying degree of fetal parts is seen in the conjoined monsters twins (Arthur *et al*., 2001). Fetotomy or caesarean section is the last resort for relieving dystocia due to conjoined monsters (Shukla *et al*., 2011).

REFERENCES

Arthur, G.H., D.E. Noakes, Pearson, H. and T.J. Parkinson. 2001. *The Veterinary Reproduction and Obstetrics*, 8th ed. W.B. Saunders Co. Ltd. London, UK. p. 118.

Jones, T.C. and R.D. Hunt. 1983. *Veterinary Pathology*, 5th ed. Lea and Febiger, Philadelphia, USA. p. 115.

Machin, G.A. 1993. Conjoined twins: Implications for blastogenesis. *Birth Defects Orig. Artic. Ser*., **29**(1): 141-179.

Mazzullo, G., A. Germanà, G. De Vico and G. Germanà. 2003. Diprosopiasis in a lamb. A casereport. *Anat. Histol. Embryol*., **32**(1): 60-62. DOI: https://doi.org/10.1046/j.1439-0264.2003.00438.x

Noden, D.M. and A. De Lahunta. 1985. The *Embryology of Domestic Animals: Developmental Mechanisms and Malformations*. Williams and Wilkins, Baltimore, USA. p. 109-152

Rafid Majeed Naeem Hussein. 2010. Congenital anomalies in cattle and buffalo within Mudaina city in Basrah province between period 2007-2009. *Kufa Journal For Veterinary Medical Sciences*, **1**(1): 207-218. DOI: https://doi.org/10.36326/kjvs/2010/v1i14210

Roberts, S.J. 2002. *Veterinary Obstetrics and Genital Diseases*. CBS Publishers and Distributors, New Delhi, India. p. 49-80, 227-223.

Sara, A.,F. Ciotola, E.D. Anza, C. Angelo, L. Zicarelli and V. Peretti. 2017. Congenital malformations in River buffalo (*Bubalus bubalis*). *Animals*, **12**(9): 2-15. DOI: https://doi.org/ 10.3390/ani7020009

Shukla, S.P., Q. Mudasirm and S.P. Nema. 2011.

Dystocia due to a conjoined twin monster foetus in a female buffalo. *Buffalo Bull*., **30**(1): 12-13. Available on: https://kukrdb.lib.ku.ac.th/journal/BuffaloBulletin/search_detail/result/286314

Singh, A.P., S.Y.S. Al-Bahash and M.S. Al-Badry. 1988. A clinical study on congenital anomalies in farm animals in Mosul (Iraq). *Iraqi Journal of Veterinary Sciences*, **1**(1-2): 116-134.