

A DICEPHALUS TETRABRACHIUS THORACOPHAGUS TETRAPUS DICAUDATUS CONJOINED MONSTER CALF IN MARATHAWADI BUFFALO: A CASE REPORT

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Received: 04 September 2020

Accepted: 26 March 2023

ABSTRACT

Fetal anomalies and monstrosities are the most common cause of dystocia in bovines. Conjoined twins are usually monozygotic in origin and occur due to incomplete division of one embryo into two at the primitive streak of the developmental stage depending upon the site of fusion or non-separation. Reports on such anomalies in buffalo seem to be meager. A rare case of dystocia due to dicephalus, tetrabrachius, thoracophagus, tetrapus, dicaudatus, conjoined female calf was resolved with the use of six-way traction by considering the internal pelvimetry.

Keywords: *Bubalus bubalis*, buffaloes, dystocia, dicephalus, tetrabrachius, conjoined monster, pelvimetry

INTRODUCTION

Fetal anomalies and monstrosities are results in distortion of body configuration and becomes one of the important reasons of dystocia

in bovines. Monsters are mostly encountered in cattle with an overall incidence of one in hundred thousand bovine births (Roberts, 1971). Conjoined twins are usually monozygotic in origin and occur due to incomplete division of one embryo into two at the primitive streak of the developmental stage. These duplications may arise during the primitive streak elongation or regression (Noden and Lathunta, 1985), resulting in expression of variation from duplication of some part to nearly complete separation of two individuals, joined at few places. Depending upon the site of fusion or non-separation, the types of the twin may differ *viz.* thoracopagus (40%), omphalopagus (33%), pyopagus (18%), cephalopagus (2%) and ischiopagus (2%; Fernando, 1993). Different cases of conjoined twins have been reported earlier *viz.* conjoined sternopagus twin monster in Mehsani buffalo (Bhoi, 2009), dicephalus sternopagus tetrabrachius tetrapus dicaudatus monster in a Murrah buffalo (Singh *et al.*, 2013). Also, a case of dicephalus sternopagus tetrabrachius tetrapus dicaudatus monster in a Murrah buffalo (Singh *et al.*, 2013). But both the cases were relieved using caesarian section/Laperohysterotomy. The

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present case report focused on novel six way coordinated traction approach for delivering the fetus by considering the internal pelvimetry of the Marathawadi buffalo.

CASE HISTORY AND OBSERVATIONS

A Marathawadi buffalo ageing 8 years, weighing around 450 kg in her third parity with was brought at Teaching Veterinary Clinical Complex (TVCC), College of Veterinary and Animal Sciences (COVAS), Udgir, Maharashtra Animal and Fishery Sciences University, Maharashtra, India. She has the history of straining for the previous 11 to 12 h but unable to deliver fetus. Both the water bags were ruptured. The case was handled by local two veterinarians over the period of 8 to 10 h and further referred to the clinic for caesarian section operation. Careful per-vaginal examination with proper lubrication revealed twin fetuses with two heads were in anterior longitudinal presentation, dorso-sacral position with both heads and neck with ventrally joined thorax placed near the pelvic brim and one forelimb of each fetus was extended in birth canal and another each forelimb was flexed at carpal joint and locked in pelvis.

Per-vaginal delivery of conjoined twin fetuses was attempted in standing position after considering the proper cervical dilatation and assessing the internal pelvimetric dimensions of the buffalo. The proper lubrication was made with four to five liters of one per cent carboxy methyl cellulose (CMC) solution. Before the use of traction, the flexed forelimbs were corrected, and rope truss loop was tied to the fetlock. One head was pulled into birth canal using slight coordinated traction by fixing small blunt eye hook to the medial canthus of right eye. Likewise, second head was also pulled out by putting another blunt eye hook inside the

medial canthus of left eye of the fetus and gentle coordinated traction was applied which resulted in presence of another head in birth canal. Then rope loop was fastened behind both the heads separately and the extended forelimbs.

Alternate coordinated traction was applied on one head to another head then towards forelimbs. Both the heads along with extended forelimbs were pulled into the birth canal, followed by the traction on corrected flexed forelimbs in forward and downward direction of buffalo. Fetus was expelled out from the cervix and dicephalus tetrabrachius thoracophagus tetrapus dicaudatus fetus was delivered per vaginal using six-way traction method. After the delivery, rapid contractions were started resulted in immediately expulsion of placenta (Figure 5). Post delivery per vaginal examination was carried out to check tear and bleeding. After confirmation of absence of tear and internal uterine bleeding, four intra uterine pessaries were placed.

Within next 5 to 10 minutes, Buffalo started grazing (Figure 6) with normal rumination, drinking of water and defecation which shows the normal physiological functioning of the body. After successful delivery of the conjoined monster calf, supportive treatment was given to the buffalo which includes injectables; methylergometrine 5 ml i/m once to control internal bleeding if any as well as to have rapid involution of uterus, Calcium borogluconate 1 ml/kg along with Dextrose-5 4 lit I/v once, systemic antibiotic Enrofloxacin 3 mg/kg I/m, Antihistaminic pheniramine maleate 12 ml i/m, Anti-inflammatory flunixin meglumine 1 ml/33 kg body weight i/v for next three days. Anionic oral supplementation 50 gm along with 200 gm of sugar jaggery orally was advised for next 5 days. Buffalo showed uneventful recovery within next five days.

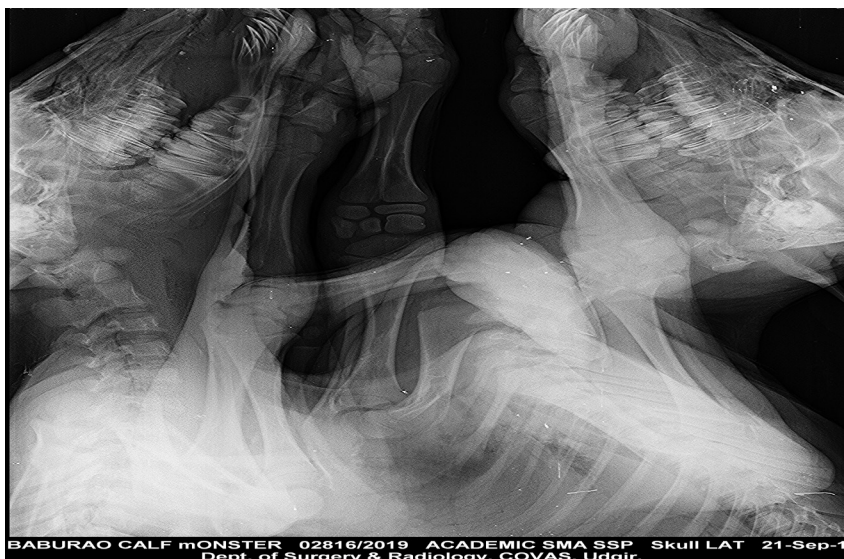


Figure 1. A dicephalus tetrabrachius thoracophagus tetrapus dicaudatus conjoined monster calf.



Figure 2. A dicephalus tetrabrachius thoracophagus tetrapus dicaudatus conjoined monster calf.



Figure 3. A dicephalus tetrabrachius thoracophagus tetrapus dicaudatus conjoined monster calf.



Figure 4. A dicephalus tetrabrachius thoracophagus tetrapus ticaudatus conjoined monster calf.



Figure 5. Shedded placenta.



Figure 6. Marathawadi buffalo.

DESCRIPTION OF MONSTER

Detailed morphological and radiographic examination of conjoined fetus revealed that both the fetuses were female and had separate structural set with complete development includes; one each of head and neck (dicephalic) with the normal eyes and ears, fused at their thoracic region (thoracopagus), had pair of forelimbs each (tetrabrachius), pair of hindlimbs each (tetrapus) and two separate tails (diacaudatus) fused at sternum and separated from lower abdominal cavity (Figure 1, 2, 3 and 4). Thus, classifying the fetus to be as Dicephalus, Thoracopagus, Tetrapus, Diacaudatus conjoined twin female monster. Dystocia due to a dicephalus thoraco-sternopagus conjoined twin monster (Bhoi *et al.*, 2009; Singh *et al.*, 2013) and Monocephalic Thoracopagus tetrabrachius tetrapus monster in Murrah Buffalo (Sachan, *et al.*, 2016) have been reported as rare cases in buffaloes and suggested caesarean section may be the treatment of choice in fetal monstrosities. A novel six way coordinated traction approach for delivering the fetus by considering the internal pelvimetry, size of the fetus and space in the pelvic cavity for manipulation can be tried as method for salvaging animal from caesarean section.

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