Short Communication

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Dicephalous Derodymus Tetrabrachius Tetrapus Omphalopagus Dicaudatus Monster with Single Twin Limb Ankylosis in a Murrah Buffalo

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ABSTRACT

A 7 year old pluriparous Murrah buffalo with history of dystocia was presented at Obstetrics unit, GADVASU, Ludhiana. Per-vaginal examination revealed the presence of four fore-limbs, two heads suggesting dystocia due to congenital twins. Following further examination, fetotomy was decided as operation of choice to deliver the fetus. Under epidural anaesthesia, partial fetotomy with single cut near the joining of twins was done leading to delivery of Dicephalous Derodymus Tetrabrachius Tetrapus Omphalopagus Dicaudatus fetal monster with limbs ankylosis in only one fetus.

Keywords: Ankylosis, Conjoined, Omphalopagus, Twin.

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INTRODUCTION

Dystocia or difficult birth leads to suffering of dam and fetus sometimes may even cause death. Dystocia due to fetal cause is the most common cause of difficult births (Bennett and Gregory, 2001). Out of which, 7.9-12.8% incidences have been observed due to fetal monsters in buffalo (Phogat *et al.,* 1992; Singla and Sharma, 1992). Developmental disturbance in the organs or systems of body lead to fetal monsters (Vegad, 2007). Among the fetal monsters conjoined twins, also known as Siamese twins, occur as a low but not a rare incidence of dystocia. According to Bhar and Distle (2005), incidences due to congenital twins causing difficult births has been observed nearly 0.51% in bovines. Siamese twins have been named according to their joining body parts with joining at umbilical region named as Omphalopagus. This case report presents the successful vaginal delivery of Dicephalous Derodymus Tetrabrachius Tetrapus Omphalopagus Dicaudatus fetal monster with one of twins having fully ankylosed limbs through single fetotomy cut.

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CASE HISTORY AND OBSERVATIONS

A Murrah buffalo aged about 7 years experiencing severe straining was presented at Obstetrics unit, Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana in sternal recumbency. According to history, gestation of animal had completed and water bag had already ruptured due to manipulation by local vet. All physical parameters were in normal range with temperature 102.5° C. Per-vaginal examination revealed fully dilated cervix with four fore-limbs in the birth canal along with ankylosis of two limbs out of them. Further examination revealed the presence of two heads, one positioned in the birth canal and the other exhibiting severe backward deviation, each connected to separate thoracic cavities. After assessing the fetus and the birth canal, fetotomy was chosen as the optimal procedure to deliver the fetus without needing to apply further traction.

An epidural injection containing 5 ml of lignocaine hydrochloride (2%) was administered to reduce the abdominal straining. After the ample lubrication of the birth canal with 2% carboxy methyl cellulose (Carmellose Na, WDT, Garbsen, Germany), head of Thygesen fetotome was passed in the birth canal with the wire looping around the single fetus passing up to abdomen of twins joining. Fetotomy cut was given at abdomen leading to delivery of single twin up to abdomen (Fig. 1). Following further lubrication and manipulation, posture of the head of the other twin was corrected thus making an anchor for traction. With the rotation of posterior part and severe traction, the remaining fetus was delivered. On examining the birth canal and uterus after delivery, only minor lacerations were there with no significant tear. Fetal membranes were manually removed due the complete separation of cotyledons from caruncles. Complete examination of the monster revealed conjoined twins having distinct heads (Dicephalous) with two distinct necks (Derodymus), four fore-limbs (Tetrabrachius), four hind limbs (Tetrapus) and two separate pelvis (Dicaudatus) with twins joining at the umbilical region (Omphalopagus) presenting as Dicephalous Derodymus Tetrabrachius Tetrapus Omphalopagus Dicaudatus monster. All four limbs of the one of twins were fully ankylosed presenting it as a unique conjoined twin monster.

TREATMENT AND DISCUSSION

After successful delivery, post-operative treatment including inj. Calcium boro-gluconate (Mifex) 450 ml I/V once, Oxytocin 40 IU in 1 liter of normal saline I/V once, Ceftiofur sodium 1 gm I/M for 5 days, flunixin meglumine 1000 mg I/M for 3 days and inj. Ergovet (Methylergometrine maleate) 10 ml I/M for 3 days was prescribed. After successful delivery and treatment, animal was discharged from hospital in standing position. Conjoined twins always cause dystocia at complete gestation due to their absolute large size. Conjoined twins are the monozygotic twins having same sex arising from single ovum (Simon *et al*., 2009). Conjoining of the twins can occur due to environmental, genetic or infectious causes but most monstrosities are related to the infectious and congenital defects. Assisted reproductive techniques like Intra-cytoplasmic sperm injection, in-vitro fertilization may also increase incidence of conjoined twins (Romero *et al*., 1988). Conjoined twins are formed due to structural or functional partial duplication of single ovum during the embryonic stage (Roberts, 1986; Kumar and Reddy, 2008). According to Finnberg (1994), embryonic disc starts to differentiate on 13thday of the conceptus and delayed splitting will lead to sharing of bodies of the twins along with their fetal membranes. Dystocia due to conjoined twins though uncommon, but previously have been reported in buffalo. In buffalo (Dhami *et al*., 2000; Uranker *et al.,*1994) and in cattle (Sharma *et al*., 2013; Singh *et al*., 2022) had reported these twins but this is the first case report presenting the conjoined monster with ankylosis of limbs of one of the conjoined twins in buffalo. In conclusion, early diagnosis of the fetal monsters is paramount for determining the obstetrical procedure of choice. Among obstetrical interventions, fetotomy stands out as an optimal approach for delivering deceased conjoined twins, obviating the necessity for a caesarean section and allowing the animal to maintain reproductive viability with minimal complications.

Fig. 1: Conjoined twins

CONCLUSION

Under epidural anaesthesia, partial fetotomy with single cut near the joining of twins successfully delivered a Dicephalous Derodymus Tetrabrachius Tetrapus Omphalopagus Dicaudatus fetal monster with limbs ankylosis in only one fetus in a murrah buffalo.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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