

Delivery of monocephalic thoraco-omphalopagus monster through fetotomy in Murrah buffalo

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Abstract

A pluriparous full-term pregnant Murrah buffalo was intermittently straining for last twelve hours but failed to deliver the foetus. Per-vaginal examination revealed six limbs along with one attachment at the level of cranial to pelvic indicating the monstrosity of the foetus. By fetotomy, monocephalic thoraco-omphalopagus tetra brachius tetrapus dicaudatus monster was delivered successfully.

Keywords: Buffalo, Dystocia, Fetotomy, Monocephalic, Monster

Highlights

- This communication presented a very rare monster case which causes dystocia.
- This report also proposed that such type of cases may be resolved by avoiding C-section.

Foetal anomalies and monstrosities commonly cause dystocia in bovines and other livestock (Singh *et al.*, 2020) and are diagnosed in 2-4% of births (Megahed, 2015). Monsters are abnormal foetuses that usually have a distorted appearance because of developmental disturbance of various organs and systems. Conjoined twins are monsters which are mostly caused due to genetic factors which result in dystocia. Most often conjoined twins with partial duplication of extremities and fusion in the anterior abdomen are encountered in bovine (Kumar *et al.*, 2014). Most of the time monsters cannot be delivered without caesarean section (Gupta *et al.*, 2011) but worthless nature of foetal monsters, fetotomy, whether partial or complete, to achieve vaginal delivery should be given primary consideration (Vermunt, 2019). The present report communicates the management of dystocia due to a monster foetus (monocephalus thoraco-omphalopagus tetrabrachius tetrapus dicaudatus) in a Murrah buffalo by fetotomy.

A full-term pregnant Murrah buffalo, about seven years old at her third parity, was presented at Teaching Veterinary Clinical Complex, DUVASU, Mathura (U.P.), with a history of intermittent straining for the last 12 hours. The water bag was ruptured, and there was no progress in parturition. Primarily, the case was handled by a field veterinarian by applying force traction but failed to deliver the foetus. The animal was active with an almost normal range of all

physiological parameters. There was moderate straining and loosened sacrosciatic ligament. On thorough gynaeco-clinical examination dry, fully dilated cervix and a dead foetus was palpated. Two hind limbs were presented in the vagina. The head was not palpable, but two more hind limbs along with two forelimbs were palpated deep inside the uterus. On confirmation of the monstrosity of the foetus, it was decided to perform fetotomy to save the life of the buffalo.

The buffalo was restrained in lateral recumbency after giving low epidural anaesthesia with 2% lignocaine hydrochloride @ 5 mL to avoid abdominal straining. Intramuscular administration of inj. dexamethasone @ 40 mg total dose and inj. tranexamic acid @ 5 mg/kg body wt. was done. Percutaneous fetotomy was performed using Thygeson's double barrel fetotome after sufficient lubrication of the birth canal with liquid paraffin. Detruncation was performed at the level of the lower abdomen (cranial to pelvic). The amputated portion was removed with force traction on both hind limbs, which were in the birth canal, by using Moore's obstetrical chain. The remaining portion was also taken out by applying force traction on two other hind limbs as well as in support using Williams long handle hook on thoracic region. The foetuses were delivered along with the foetal membrane with least bleeding and without any tearing in the genitalia. Further, the animal was treated with inj. ceftriaxone @ 10 mg/kg body wt. intramuscularly (IM),

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inj. meloxicam @ 0.3 mg/kg body wt., IM, inj. pheniramine maleate @ 227.5 mg, IM, inj. B-complex @ 10 mL, inj. oxytocin @ 75 IU, IM and intrauterine bolus oxytetracycline @ 6 boli per day for next 3 days. Ringer lactate (RL), Dextrose normal saline (DNS) @ 3 L of each and Calcium borogluconate @ 450 mL were given intravenously. The gross examination of the foetuses revealed a dead conjoined monocephalus twin with four fore limbs (tetrabrachius), four hind limbs (tetrapus) and two pelvis (dicaudatus) with all ankylosed joints (Fig. 1). Postmortem examination revealed single heart, lung, liver, gallbladder and spleen but two pairs of kidneys (Fig. 2).

Developmental abnormalities of the ovum, sperm, zygote, embryo or fetus may result in structural abnormalities in the foetus which lead to monstrosities (Singh *et al.*, 2020). Conjoined twins result from incomplete subdivisions of the embryonic axis that occur at a relatively later phase of development (Ravikumar *et al.*, 2012). Conjoined twins are always identical twins of the same sex originating due to incomplete division of one fertilized egg (Kumar *et al.*, 2014). In the present case also both foetuses have the same sex (female). As there was no history of monstrosity in prior calving, the present case seemed to be a non-inherited teratogenic developmental defect. Monocephalus thoracopagus tetrabrachius tetrapus dicaudatus foetus has also been reported in

Murrah buffalo (Sachan *et al.*, 2016), Nagpuri buffalo (Gahlod *et al.*, 2017), Holstein Friesian crossbred cow (Singh *et al.*, 2020) and doe (Kumar *et al.*, 2018). Delivery in almost all the cases was done by caesarean section, but in this present case, the conjoined twin monster was delivered per-vaginally by fetotomy. Animals subjected to caesarean have been found to have a lower survival rate (45.1%) as compared to those with/without partial fetotomy (Singh *et al.*, 2013). Therefore, fetotomy may be a better alternative to caesarean section depending on the status of individual case.

Conflict of interest: Authors declare that there is no conflict of interest regarding the present work.

Authors contribution: AKS: Handled the case as well as written manuscript; MK, JKA: Helped in case handling; VS: Writing manuscript as well as corrections process; AS: Finally checked this work.

Data availability statement: Necessary data is there in relation to this case, and upon request, it would be presented.

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