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Clinical Article

PER-VAGINAL DELIVERY OF A LIVE DICEPHALIC FETUS IN A MURRAH BUFFALO

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SUMMARY

The present case study reports a rare case of dystocia due to dicephalic fetus in a pluriparous Murrah buffalo which was relieved per-vaginally by obstetrical maneuvers. Dicephalic fetus is characterized by having two heads which are responsible for dystocia.

Keywords: Dicephalic fetus, Dystocia, Murrah buffalo, Pluriparous

The fetal monstrosities are caused by a variety of environmental and biological factors or agents called teratogens. Organogenesis is the period of high susceptibility to teratogens. Radioactive substances such as X-rays, temperature variations, hormonal disturbances, infectious agents and nutrient deficiencies etc. may be the potential teratogenic agents. Generally, fetal monsters lead to dystocia due to feto-maternal disproportion. Dicephalus monster is a kind of conjoined twin which is a result of anomalous growth of embryo (Colburn *et al.*, 1997). Although uncommon in most herds, inherited congenital anomalies are probably observed in all breeds of cattle, but reports in buffaloes are meager (Singh *et al.*, 2018). Abnormal duplication of germinal area in fetus will give rise to congenital fetal abnormalities with partial duplication of body structure (Robert, 2004). The present case study reports a rare case of dystocia due to dicephalic live fetus and its successful per-vaginal delivery in a pluriparous Murrah buffalo.

A seven year old pluriparous Murrah buffalo with a history of rupture of both the water bags 3 hours ago with intermittent straining was presented to the Veterinary Clinical Complex, Hisar. The case was previously handled with failure by field veterinarian who attempted simultaneous traction on one head and both forelimbs and referred as the case as dystocia due to conjoint twins. The animal was active and both the forelimbs of fetal were projecting outside vulva. Per-vaginal examination revealed live fetus with duplication of neck, head and mouth where both the necks were joined at thoracic inlet. Both the fetal heads were in birth canal. There was enough space for manipulation, so it was decided to attempt per-vaginal delivery. Epidural anaesthesia was administered using 2 percent lignocaine hydrochloride (5 ml) in first inter-coccygeal space. After proper lubrication, both the forelegs were pushed back and both the heads were tied with loop of snares and alternate traction on each head followed by simultaneous crossed traction till the heads crossed cervix. Then, both the forelegs were also brought near to vulva and tied with snares and 4 point traction (traction was applied on both heads with eye hooks and on each forelimb with snares) was applied which resulted successful per-vaginal delivery of live female dicephalic fetus (Fig. 1).

Fig. 1. Dicephalic monster

The calf died within 15 minutes after parturition. Radiographically, the dicephalic fetus was characterized by the fusion of two necks at thoracic inlet with double cervical vertebrae (Fig. 2) and heads. So, the fetus was

Fig. 2. Radiograph showing double cervical vertebrae

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having double neck, trachea and oesophaghus and rests of the organs were normal. Post-obstetrically, the dam was administered with Calcium-borogluconate 450 ml i.v., Oxytocin 50IU diluted in 500 ml NSS slow i.v. and Cloprostenol- 500 µg i.m. once. Injection Moxifloxacin 25 ml (100 mg/ml), Ascorbic acid 30 ml (250 mg/ml), Vitamin-Bcomplex 10 ml and Flunixinme glumine 20 ml (50 mg/ml) were also administered intramuscularly for 5 days.

Dicephalic monsters have been reported in buffaloes (Singh *et al.*, 2013, 2018) by fetotomy/caesarean section and in cattle by per-vaginal delivery (Ganesan *et al.*, 2019). It is believed that reason behind conjoint twins is failure of twins to separate after the 13th day of fertilization (Srivastva *et al.*, 2008). In the present case also, we could be able to deliver the dicephalic fetus through per-vaginum due to complete dilatation of cervix and large bony pelvis.

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