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Clinical Article

PER-VAGINAL DELIVERY OF SCHISTOSOMUS REFLEXUS FOETAL MONSTER CO-TWINED WITH LIVE CALF IN A HOLSTEIN-FRIESIAN CROSSBRED COW AT FIELD LEVEL

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SUMMARY

A rare case of dystocia due to Schistosomus reflexus foetal monster co-twined with a normal live calf in a Holstein-Friesian crossbred cow and its per-vaginal delivery is reported in this communication.

Keywords: Cow, Foetal monster, Schistosomus reflexus

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Schistosomus reflexus is a rare congenital fetal monstrosity commonly seen in cattle and occasionally in other species (Knight, 1996). It is characterized by the presence of exposed thoraco-abdominal viscera (Schistosomus) and acute angulation of vertebral column (reflexus) i.e., spinal inversion either dorsoflexion or retroflexion with or without ankylosis, and tail lies close to the head (Ozcan *et al.*, 2003). The monsters displaying both visceral exposure and spinal inversion are considered to be true Schistosomus reflexus (Roberts, 2004). Furthermore, the anterior and lateral positioning of the pelvic bones, sacrum and hind limbs, fissure of the thoracic and abdominal walls, and limb ankylosis may be observed (Roberts, 2004). These fetal monsters will cause dystocia with their free-floating viscera, four limbs and head all together, presenting in the cervical canal (Jana and Ghosh, 2001). The present paper reports a rare case of dystocia due to Schistosomus reflexus foetal monster co-twined with a normal live calf in a Holstein-Friesian crossbred cow and its successful per-vaginal delivery.

A seven years old, full term pregnant Holstein-Friesian crossbred cow in her fourth parity was presented with the history of straining, ruptured water bag without any further progress in parturition since four hours. Physical examination revealed that all the clinical parameters were normal with 38.2 °C body temperature, 72 beats/min heart rate along with persistent straining. Per-vaginal examination revealed fully dilated cervix and the foetus at anterior longitudinal presentation, dorso-sacral position, bilateral shoulder flexion and extended head with presence of foetal reflexes.

Under low caudal epidural anaesthesia with 4 ml of 2% Lignocaine hydrochloride and sufficient lubrication of the birth passage, the obstetrical mutations were carried out by involving repulsion of the foetus into the birth canal following adjustment of the extremities by correcting the shoulder flexion. Then, a normal live female calf was delivered by applying snares on the limbs with manual traction. Further examination of birth passage revealed presence of another foetus at posterior presentation, extended hind limbs with exposed foetal intestinal loops. A dead female Schistosomus reflexus fetal monster was delivered successfully through per-vaginum by standard obstetrical mutations (Fig. 1). Then, four Nurea-M boli were placed intrauterine and the dam was administered with Streptopenicillin @ 5g, Meloxicam @ 0.2mg/kg BW,

Fig. 1. Normal live female calf with a Schistosomus reflexus monster

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Chlorpheniramine maleate @ 0.5mg/kg BW and 10 ml Vit. B Complex intramuscularly for the next three days and the cow had an uneventful recovery.

On detailed examination of the monster, the foetus was malformed with exposed abdominal viscera, marked retroflexion of spine, anterior and lateral positioning of the pelvic bones, sacrum and hind limbs, and it was confirmed to be a true Schistosomus reflexus (Fig. 1).

The incidence of Schistosomus reflexus ranges from 0.1% (Sloss and Johnston, 1967) to 1.3% (Knight, 1996) out of which 56.7% were treated by fetotomy, 25.6% by caesarean section and 3.3% by simple traction and none of the cases reported with normal delivery (Newman, 2008). This defect is associated with genetic factors like inheritance of autosomal recessive gene having incomplete penetrance, mutations, chromosomal anomalies, infectious agents, teratogens and environmental factors or the combination of all these factors affecting the embryo (Noakes *et al.*, 2019). In the developing embryo, the lateral edges of somatic disk curve upwards instead of downwards, leading to this anomaly. Schistosomus reflexus has been recorded previously in bovine twin births by Knight (1996) and Cavalieri and Farin (1999). Small sized monster can be delivered through obstetrical procedure such as application of forced traction using plentiful lubrication of birth canal (Jana and Jana, 2013). Partial fetotomy of the fetal parts is indicated if the spinal curvature is acute and thus preventing passage of the foetus through the birth canal (Selvaraju *et al.*, 2013). Per vaginal delivery with sufficient lubrication and obstetrical mutation will favour early recovery of dam during the post-partum period whereas the fetotomy and caesarean section may have unfruitful complications and so recovery may be questionable. In cases of emphysematous foetus and dam with lack of space in the vaginal cavity, which are difficult to handle per vaginally by using forced traction, fetotomy and cesarean section (Dutt *et al.*, 2019) are better alternative for removal of fetal monster. In the present case, per-vaginal delivery was successful by sufficient lubrication of birth canal and obstetrical mutation techniques.

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