



Obstetrical Management of Dystocia due to Schistosoma Reflexus in A Murrah Buffalo

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ABSTRACT

Present case report describes resolving a case of dystocia due to Schistosoma reflexus in a Murrah buffalo following obstetrical manoeuvre.

Introduction

A very rare birth defect called Schistosomus reflexus (SR) causes the thoracic and abdominal organs to be exposed. The foetus also has a lot of spinal angulation, which makes the vertebral column curve in a clear way at the bottom. Ruminants most frequently exhibit reflexus (Bezek and Frazer, 1994), while various species have reported the presence of a congenital schistocoelia (Pivnick et al., 1998). SR has been frequently reported in cattle, buffalo, and occasionally in sheep, goats, and other species (Robert, 1971; Rajoria et al., 2023) with an occurrence of 0.01 to 1.3% (Sloss, 1967; Knight, 1996) worldwide. SR occurs as early as the post-gastrulation embryo and involves the intermediate mesoderm. This condition belongs to a family of deformities involving failure of complete closure of the ventral aspect of the fetal body wall. In humans, thoraco-abdominal syndrome (TAS) displays striking similarities with the SR monster (Pivnick et al., 1998). Furthermore, there is a possibility of a genetic cause in which the fetus carries

recessive genes from dam as well as sire, leading to defective embryonic development. However, only the cases that display both visceral exposure and spinal inversion are considered true SR (Laughton et al., 2005). The exact aetiology of this anomaly is unknown, but it may be due to genetic factors, mutations, chromosomal anomalies, infectious agents, environmental factors, or a combination of all these factors (Noakes et al., 2019).

Case history and observations

The Referral Veterinary Polyclinic received a primiparous Murrah buffalo, which had been straining in the last 15 h at full term of gestation. The conjunctival mucous membrane was congested, and the animal was completely exhausted. The gynaecologist saw a fully dilated cervix and a foetus in the posterior longitudinal presentation, with protruding foetal viscera and one hind limb in the vagina and the vulva being able to be felt.

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Gynaeco-clinical fetal intestine and exposed visceral organs through the partially closed ventral body wall of the fetus. The case was diagnosed as Schistosoma.

Treatment and discussion

Upon arrival, we first restrained the animal in sternal recumbency, then cleansed the perianal region with 0.1% potassium permanganate, administered caudal epidural anaesthesia using 5 ml of lignocaine hydrochloride (Xylocaine®), and lubricated the birth canal with ad libidum liquid paraffin. After preparing the animal, we corrected and removed the other flexed hindlimb from the vagina, applied a gentle, two-way coordinated traction using an obstetrical snare, and delivered a malformed, dead male foetus with SR (Fig. 1).



Fig. 1: Schistosoma reflexus fetus in Murrah buffalo

As part of postoperative care following treatment which includes DNS 3000 ml i/v, RL 2000 ml IV, and an intramuscular injection of the antibiotic Ceftiofur sodium at 2.2/kg body weight and Meloxicam injection i/m @ 0.5 mg/kg were given. The animal was discharged after 3 to 4 h of delivery, advising the farmer to adhere to the prescribed treatment and provide palatable feed with limited access to drinking water. The case's follow-up ensured that the dam was recovered successfully within 8 to 10 days.

Dystocia may arise due to maternal or foetal factors. The foetal cause of dystocia is a major contributor to total bovine dystocia (Kumar et al., 2018). In fact, SR is a rare but important fetal cause, resulting in significant losses for cattle owners. Fetopelvic disproportion and malposture caused dystocia in the present case (Youngquist and Threlfall, 2007). The definite cause of SR has not yet been established, but several authors have suggested that genetic defects and the transfer of an autosomal recessive gene with incomplete penetrance to a developing embryo are

the congenital causes responsible for such a monstrosity (Laughton et al., 2005). The present case confirms Schistosomus reflexus, which is defined by certain features, such as the ventral curvature of the vertebral column and viscera that are visible with stiff joints. Usually, mutational methods cannot deliver the defective foetus with SR, necessitating either a fetotomy or a caesarean section. Judicial obstetrical manoeuvres, such as applying traction with ample lubrication with liquid paraffin and/or sodium carboxymethylcellulose, can deliver SR (Jana and Jana, 2013). Usually, mutational methods do not deliver the defective foetus with SR, necessitating either a fetotomy or a caesarean section.

According to the previous study, Schistosomus reflexus caused 90 (1.3%) of the more than 6900 cases of bovine dystocia. Of these, 3912 (56.7%) underwent embryotomy treatment, 1766 (25.6%) underwent caesarean section treatment, and 227 (3.3%) underwent simple traction treatment. No case of Schistosomus reflexus resulted in a normal delivery. An obstetrical mutation, a fetotomy, or a caesarean section can correct a Schistosoma reflexus foetus that presents its extremities with ankylosis of joints. Singh et al. (2018) recommend a partial fetotomy of the foetal parts. This procedure is recommended for cases where the pelvis and pelvic area are large. When fetotomy is not possible, a caesarean operation is the only choice to deliver this kind of monster fetus. Thus, the present case describes the successful delivery of the SR monster to a primiparous Murrah buffalo using traction and mutation techniques.

Conclusions

The present case reports the successful management of dystocia due to SR, in which one dead male monster foetus was delivered and the dam recovered successfully, resulting in a positive outcome.

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Conflict of interest

The authors declare no competing interests.

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