

Dystocia due to Schistosomus Reflexus Foetal Monstrosity in a Jaffarabadi Buffalo: A Case Report

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Among buffalo breeds, Jaffarabadi is the heaviest and most commonly suffers from dystocia for a variety of reasons, including uterine torsion, incomplete cervical dilatation, an oversized foetus, dropsical conditions of the foetus and foetal membranes, and congenital foetal monstrosities such as schistosomus reflexus. Several authors reported the prevalence of the schistosomus reflexus foetal monster in many species, *i.e.*, cattle, buffalo, sheep, goat, dog, and equine (Kumar *et al.*, 2019^{a,b}; Duarte *et al.*, 2022; Deepak *et al.*, 2023; Harika *et al.*, 2023; Yadav *et al.*, 2024). The presence of a deformed spine and exposed abdominal and thoracic viscera allows for the gross identification of schistosomus reflexus. Anomalies of the ovum, embryo, or foetus that result in skeletal developmental abnormalities are typically cited as the etiology for the emergence of foetal monstrosities, however, definite etiology is still ambiguous (Munif *et al.*, 2023). The majority of affected foetuses are not viable. Congenital defects are seen as economically significant since they hinder spontaneous foetal delivery. Dystocia is inevitable in the cases of the foetal monstrosities amongst farm animals (Borakhatariya *et al.*, 2017; Borakhatariya *et al.*, 2020). In such instances, cases can be managed by Caesarean section when there is insufficient space in the birth canal to apply manual obstetrical mutations, or by partial or complete foetotomy for per-vaginum delivery. Such cases need to be treated promptly because if they are not, the dead foetus may develop emphysema, which could lead to toxemia and the collapse of the dam. An unusual case of dystocia due to schistosomus reflexus foetal monster clinically managed with Caesarean section in a Jaffarabadi buffalo is described in this case report.

CASE HISTORY AND OBSERVATIONS

A full-term pluriparous Jaffarabadi buffalo, in her third parity, approached the Veterinary Clinical Complex, Veterinary College, Kamdhenu University, Junagadh, Gujarat, evincing 12 h constant straining that failed to deliver the foetus. The animal was referred for additional veterinary management after a local quack attempted to deliver the foetus unsuccessfully. The anamnesis revealed breeding by artificial insemination without the pedigree information

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available with the owner. Upon presentation, the buffalo was stable yet continued to display milder, non-productive abdominal straining. The physical gross examination showed a protruding amniotic bag, and the herniated abdominal viscera from the vulva, including the small intestine, gall bladder, and hepatic lobes of the foetus (Fig. 1A). The dam's vital physiological parameters were all within normal range. The vaginal canal was found to be completely engaged with the foetal viscera without foetal head and extremities during the obstetrical examination that left insufficient room for foetal manipulation. The case was tentatively diagnosed as dystocia due to schistosomus reflexus foetal monster.

OBSTETRICAL MANAGEMENT AND DISCUSSION

The perineal area and protruded mass were thoroughly scrubbed with lukewarm water and potassium permanganate antiseptic solution. Prior to any manipulation, the posterior epidural anaesthesia was achieved with 2% Lignocaine hydrochloride given at the first intercoccygeal space. The birth canal was lubricated using copious quantity of sodium

carboxyl methyl cellulose (CBC) gel, and then attempts were made to deliver the foetus by vaginal delivery. However, as the foetal herniated viscera had occupied the whole birth canal and repulsion could not produce an adequate space for a foetotomy, a Caesarean section was opted for to manage the dystocia.

The animal was given 10 mL of Inj. Dexamethasone (Zenex Animal Health), pre-operatively. A dead foetal monster was then delivered through a Caesarean section following standard aseptically obstetrical procedure (Fig. 1B). Even during the Caesarean section, it was quite difficult to remove the foetus because of its closely aligned head and limbs. Using a cotton snare tied at the limb extremities, the monstrous foetus was pulled out. Inj. Normal saline (NS) 3 L, Inj. Dextrose Normal saline (DNS) 2 L, Inj. Oxytetracycline (Zenex Animal Health) 70 mL, Inj. Tranexamic acid (Vetco Pharma) 10 mL, and Inj. Flunixin Meglumine (Sharveshvari Pharma) 15 mL were administered intravenously to the animal during the surgical manoeuvre. Additionally, the other supportive medications administered intramuscularly included 10 mL of Inj. Chlorpheniramine maleate (Avilin, MSD Health care) and 10 mL of Inj. Tribivet (Intas Pharma). Apart from these, the animal was injected with a total dose of Inj. 20 IU Oxytocin, parentally. The buffalo was able to stand and walk unassisted within five minutes of the obstetrical manoeuvre (Fig. 1C). The periodic anti-septic (povidone-iodine) dressing of the surgical site, and analgesics and antibiotics administration was advised for five days, consecutively. The animal made an uneventful recovery and the skin stitches were removed on day 12 post-operatively.

The retrieved foetus was a deformed monster calf that was dead. The viscera of the abdomen and thorax of the extracted foetus monster (Fig. 1B) were completely exposed with the absence of the thoracic and abdomino-pelvic skeleton (complete failure of closure of ventral body wall). No anomalies were observed amongst the exposed visceral organs. The shortened vertebral column was revealed.

Notably, limbs were positioned near the head, and the distal joints of both limbs were ankylosed. Based on the aforesaid observations, the monster was diagnosed as schistosomus reflexus. Similar observations of schistosomus monster were documented by numerous authors (Kumar *et al.*, 2019^{a,b}; Munif *et al.*, 2023). There are two ways that the schistosomus foetal monster can manifest during parturition: either as an extremities presentation, in which the foetal extremities will found in the birth canal (Sheetal *et al.*, 2018; Kumar *et al.*, 2019^{a,b}; Harika *et al.*, 2023; Munif *et al.*, 2023), or as a visceral presentation, in which the exposed viscera will emerge from the vaginal canal, as was the present case.

Although a number of authors (Kumar *et al.*, 2019^{a,b}; Manali *et al.*, 2024; Reshman *et al.*, 2024; Yadav *et al.*, 2024) have documented successful per-vaginal delivery of the schistosomus reflexus foetal monster through either foetotomy or mutations, the case presented was handled by Caesarean section because of the oversized monster and restricted space that prevented per-vaginal manipulations. In a similar way, numerous authors (Azawi *et al.*, 2012; Sheetal *et al.*, 2018; Munif *et al.*, 2023; Parmar *et al.*, 2024) have documented foetal delivery through Caesarean section.

The presented report addresses the occurrence and successful management of an uncommon instance of schistosomus reflexus via laparohysterotomy in a Jaffarabadi buffalo.

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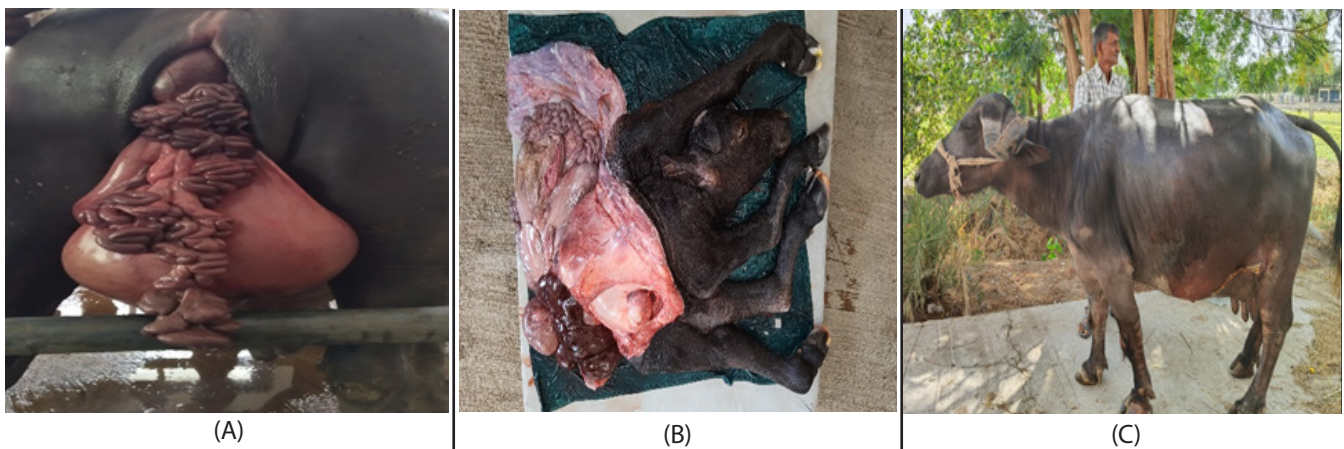


Fig. 1: (A) Protruded foetal viscera, (B) Schistosomus foetal monster, (C) Post-operative recovered buffalo

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