CASE REPORT

Dystocia Due to Schistosomus Reflexus in a Jersey Crossbred Heifer Delivered by Caesarean Section

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Schistosomus reflexus is a fatal congenital disability and has some peculiar anatomical features such as spinal inversion, exposure of abdominal viscera through the ventral abdominal fissure, limb ankylosis, abnormal positioning of limbs adjacent to the skull, and hypoplasia of thoracic organs and diaphragm (Windsor, 2019). It is a common fetal congenital disorder in ruminants (Selvaraju *et al.,* 2010), but occurrences were rare in heifers (Varudharajan *et al.,* 2019). The present report explains the successful management of dystocia due to Schistosomus reflexus in a Jersey crossbred heifer by Caesarean section.

Case History and Clinical Observations

A two-and-a-half-year-old Jersey crossbred heifer was brought to the Veterinary Clinical Complex, VCRI, Namakkal, in its first gestation with dystocia history in the past 6 hours. The owner reported that a field veterinarian attended the case, but the attempt was futile. The clinical examination revealed protrusion of fetal intestinal contents through vulval passage (Fig. 1). On vaginal examination, complete cervical dilatation with abnormal fetal mass was observed, and the uterus was tightly contracted over the monster. Based on the observation and vaginal examination, the case was tentatively diagnosed as Schistosomus reflexus.

Clinical Management and Discussion

The animal was restrained in Travis with epidural anesthesia. The vaginal passage was lubricated by using cetrimide cream. Since the fetal limbs were not palpable, a long obstetrical hook was applied over the fetal mass for extraction, but the traction failed to deliver the fetus through per vaginum. Hence, it was decided to perform Caesarean on its right lateral recumbency. Based on abdominal palpation of the fetus, the surgical site in the lower-left flank was demarked and prepared aseptically. Then under the inverted 'L' block, the abdominal muscles and peritoneum were incised, and the omentum was moved cranially. Finally, the monster fetus was removed following uterine incision. After that uterus was sutured with two layers of Cushing pattern with no. 2 catgut, and all other abdominal muscles were sutured with a

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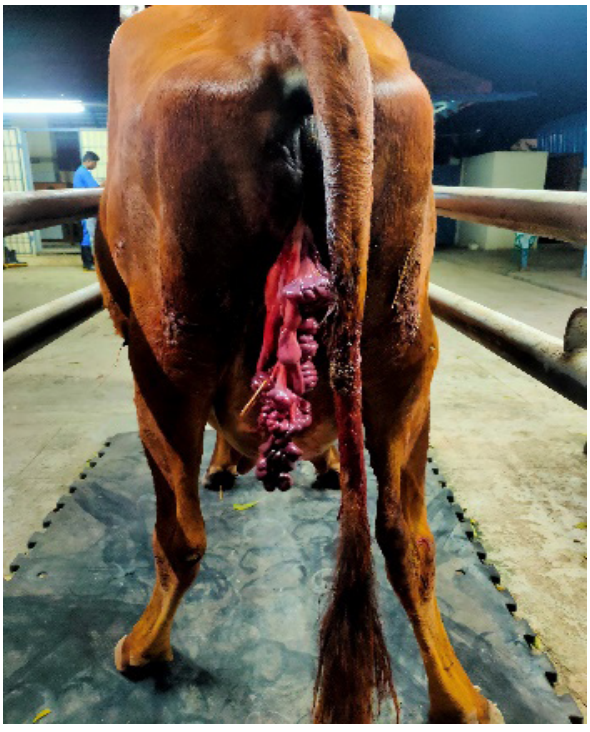

Fig. 1: Protrusion of fetal abdominal viscera through the vulva

Fig. 2: Schistosomus reflexus monster in Jersey heifer

Fig. 3: Invagination of fetal skin with on its body

Fig. 4: Abnormal positioning of limbs adjacent to the skull

continuous interlocking pattern; the skin was sutured with a cross mattress. The animal was treated intravenously with inj. Dextrose (1 liter), Ringers lactate (2 litre), inj. Metronidazole (3000 mg), inj. Ceftriaxone (6 g) and inj. Flunixine meglumine (500 mg) and intramuscularly with Chlorpheniramine maleate (120 mg). The antibiotics, anti-inflammatory, and antihistaminics were continued for five days. The suture was removed, and the heifer was discharged on day 10 post-operatively after assessing the physiological parameters within the normal range.

Detailed examination of fetal monster revealed ventral curvature of the spine, protrusion of abdominal viscera through the ventral fissure, ankylosis of all the four limbs (Fig. 2), deformed incomplete diaphragm, and enlarged liver. Similar findings were reported by Selvaraju *et al*. (2013), Prakash *et al.* (2017), and Varudharajan *et al.* (2019). Additionally, there was an inversion of the skin of the fetus in folded form over the thoracic region (Fig. 3), which caused difficulty in diagnosing the condition during a vaginal examination. Radiographical examination of monster revealed marked ventral curvature of the spine and abnormal joints of fetal limbs (Fig. 4). The exact etiology for schistosomus reflexus was unknown (Jana and Ghosh, 2001); it's an intermediate mesoderm defect that occurs during the early part of fetal life, such as after the gastrulation of the embryo and possibly due to genetic defect (Windsor, 2019). In the present case, vaginal delivery could not be performed due to lack of pelvic space for manipulation since the affected animal was a heifer. However, vaginal delivery with schistosomus reflexus fetus was reported by Selvaraju *et al*. (2013), Velladurai *et al.* (2015), Prakash *et al.* (2017), and Varudharajan *et al.* (2019) in various breeds of cows, and by Caesarean section in a heifer by Manokaran *et al.* (2018). Thus, it is inferred that in the event of failure of mutation, forced extraction and fetotomy, a Caesarean section may be performed to save the dam's life.

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