

## Case Report

### Schistosomus Reflexus Syndrome, a Congenital Defect in Ruminants; Occurrence and Management through Caesarean Section in Dairy Cow

Mukti Barua<sup>3\*</sup>, Farhad Hossain<sup>2</sup>, Md. Zohorul Islam<sup>1</sup>, Kamrul Islam<sup>1</sup>

<sup>1</sup>Department of Microbiology, <sup>2</sup>District Artificial Insemination (AI) centre, Chittagong, Bangladesh, <sup>3</sup>Department of Animal Science and Animal Nutrition, Faculty of Veterinary Medicine, Chittagong Veterinary and Animal Sciences University (CVASU) Bangladesh.

\*Corresponding author: [mukti.barua@yahoo.com](mailto:mukti.barua@yahoo.com)

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#### ABSTRACT

Schistosomus reflexus (SR) is a congenital birth defect resulting in the malformation of the whole body. This malformed calves unable to pass through the birth canal and must be recuperated by caesarean section or fetotomy. This anomaly frequently observed in ruminants and its characteristic features include spinal inversion, exposure of the abdominal organs because of a large opening in the ventral abdominal wall, crooked and improperly positioned limbs adjacent to the skull. Recovery from Schistosomus reflexus (SR) was carried out by caesarean section and finally the dam was recovered after a continuous treatment regimen. Investigation from preliminary analysis of related cases depicts that SR has a genetic aetiology.

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Schistosomus reflexus (SR) is a major congenital fatal anomalies primarily observed in ruminants. However, dystocia due to this monster is comparatively ordinary in large ruminants like cattle and buffalo than small ruminants (Suthar et al., 2011). These congenital anomalies are reported to be encountered during embryonic developmental stage in domestic animals (Özsoy et al., 2009). Typical SR depicts acute angulations of spinal column as a consequence the head, limbs and tail are in close proximity resembling a distinctive ventral convex curvature, limb ankylosis and failure of the closure of all or part of the ventral wall of the fetal body resulting viscera out (Prasad et al., 2012).

A three years old crossbred dairy cow carrying full term was examined. The dam had history of artificial insemination

and for the past 15h was evincing unsuccessful labor pain. Dead fetus with fully exposed abdominal viscera particularly liver and intestine in posterior presentation was confirmed by per-vaginal palpation. To manage dystocia due to schistosomus reflexus monster caesarean section was performed. Following local infiltration (inverted “L” block) of anesthetics; 2% lignocaine hydrochloride (Jasocaine®) in the left flank region, the cow was positioned at standing condition (Figure 1). In addition to this Diazepam (Sedil®) was given at a dose rate of 0.5 mg/ kg through intravenous route along with isotonic saline (0.9% NaCl) at the left jugular vein. An eight cm long vertical incision was given in the left flank region (Figure 2). At first rumen was exteriorized and pushed with pressure. Then uterus was explored & incision was given at the horn.



Figure 1: Administration of anesthetics



Figure 2: Incision site (Left flank)



Figure 3: Suturing of incised area



Figure 4: Schistosomus reflexus fetus



Figure 5: Healing of sutured area



Figure 6: Recovered cow

Anamnesis revealed normal rectal temperature (102.5 F) and respiratory rate of about 35/min. The cow was slightly dehydrated and abdominal straining had ceased. In this case, SR had multiple congenital anomalies. All organs and systems presented in an irregular orientation. Morphologically, there were inversion of spinal canal, ankylosed fetal limbs, angulated lumbar region and abnormal 'S' shaped curve of the thoracic region (Figure 4). The diaphragm was intact and the lungs were atrophied. The congested abdominal viscera viz. stomach, intestines, liver etc. were exposed out of the abdominal cavity. These findings were supported by (Laughton et al., 2005). Caesarean section was employed to manage dystocia due to schistosomus reflexus. It was very difficult to expel the fetus out because all the limbs and head were held closely in same direction. The dead fetus turned out by holding two limbs along with head. The uterine wall was sutured through Lembert followed by Czerny, Peritoneum and Muscles by Simple continuous interlock and a Cross-mattress pattern was used to suture Skin (Figure 3). The dam recovered uneventfully following administration of isotonic saline followed by seven days treatment with antibiotic (Streptopenicillin; streptomycin 11mg/kg and

procaine penicillin 50000iu/kg daily), anti-inflammatory (ketoprofen, 2mg/kg daily) and anti-histaminic (Pheneramine melete, 1mg/kg daily). On the other hand, Neobacrin ointment containing bacitracin/neomycin applied at the sutured area daily until complete healing (Figure 5, 6). Fetal monster with herniation of abdominal viscera and skeletal defects is referred to as Schistosomus reflexus (Dennis et al., 1965). This is possibly the first case of atypical SR reported in dairy cow at Chittagong city of Bangladesh.

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