

A CASE OF SCHISTOSOMA REFLEXUS IN A MURRAH BUFFALO AND ITS SUCCESSFUL MANAGEMENT

**Shashikant Gupta*, Avaneesh Kumar Singh, Brijesh Kumar Yadav, Jitendra Agrawal
and Atul Saxena**

Department of Veterinary Gynaecology and Obstetrics, College of Veterinary Science and
Animal Husbandry, U.P. Pandit Deen Dayal Upadhyaya Pashu Chikitsa Vigyan
Vishwavidyalaya Evam Go Anusandhan Sansthan, Mathura-281001, Uttar Pradesh
E-mail: shashi25793@gmail.com (*Corresponding author)

Abstract: This report describes the case of a dystocia in Murrah buffalo due to schistosoma reflexus monster fetus and it's successful per-vaginal delivery by using Thygeson's fetotome.

Keywords: Buffalo, Dystocia, Fetotomy, Schistosoma reflexus, Fetus.

Introduction

Schistosomus reflexus is a developmental defect characterized by a marked ventral curvature of the spine, deformed pelvis and the body and chest walls bent laterally with exposed thoracic and abdominal viscera (Roberts, 2004). Schistosomus reflexus is a rare fatal congenital disorder primarily observed in ruminants (Suthar et al., 2011) having incidence rate of 0.01- 1.3% (Knight1996; Sloss and Johnston, 1967) out of total bovine dystocia occurring worldwide. It was suggested that the Schistosomus reflexus occurred as early as the postgastrulation embryo and involved the intermediate mesoderm, with preliminary pedigree analysis indicating a possible genetic aetiology where fetus carries recessive gene from dam as well as sire, leading to defective embryonic development (Laughton et al. 2005). Fetotomy or caesarean section is mandatory for delivery of a fully grown schistosomus reflexus monster while, per-vaginal expulsion without any obstetrical assistance is noticed in small sized monster fetuses (Kalita et al., 2004). Present case reports the successful per-vaginal delivery of a schistosomus reflexus monster by fetotomy in a Murrah buffalo.

Case history and clinical observations

A full term pregnant murrah buffalo in her second parity was presented in VCC Mathura with complaint that visceral organ were coming outside of vagina. According to the owner gestation period was complete and water bag ruptured in the midnight. After rupture of water bag, few organs came exterior to vagina. Then a paravet also examined the case and misdiagnosed as tearing of uterus. On gyneaco-clinical examination, some visceral organs

were hanging outside of vagina. General condition of the animal seemed good. Per-vaginal examination revealed that cervix was completely dilated and visceral organs were exposed due to incomplete closure of ventral abdominal wall. There was acute angulation of vertebral column of fetus, therefore, all four limbs were near to head of the fetus. Therefore, the case was diagnosed as schistosoma reflexus monster.

Treatment and discussion

In this case of schistosoma reflexus monster, normal per-vaginal delivery was not possible, therefore, it was decided to go for fetotomy using Thygeson's fetotome. Fetotome was partially threaded. Wire loop was made around the mid vertebral column. Head of fetotome was fixed to side of vertebral column dorsally. Within 15-20 minute of effort, fetus was sectioned into two parts. So that, size of the fetus reduced and now it was possible to take out the separated fetal body. Uterus was checked for tearing but it was intact. No tearing was inside the uterus. Anatomical observations of the delivered monster fetus revealed acute angulation of the vertebral column; hence all the limbs and head were together. All four limbs were ankylosed, ventral abdominal wall was not completely closed with exposed viscera (Figure 1). After that, uterus was cleaned with normal saline solution and further intrauterine therapy was suggested. Animal was treated with antimicrobial, antihistaminic, analgesic and fluid therapy parentally for 5 days. Calcium magnesium Borogluconate 450 ml was also given intravenously.

Schistosomus reflexus is heritable genetic defect and various studies have suggested that Schistosomus reflexus occurs mainly due to transfer of autosomal recessive gene having incomplete penetrance to developing embryo (Laughton et al., 2005). Schistosomus reflexus causes dystocia due to defective formation of spinal cord and exposure of viscera in cattle and buffaloes. If Schistosoma reflexus presents by its extremities with ankylosis of joints than it creates excessive fetal diameter and prevent normal delivery (Noakes et al., 2009). Either caesarian section or fetotomy is warranted to relieve this kind of dystocia (Roberts, 2004). About 56.7% cases were treated by embryotomy, 25.6% by caesarean section, 3.3% by simple traction and none of the case reported with normal delivery (Knight, 1996). The defective fetus is not likely to be expelled usually by mutational methods, and must be removed from the uterus either by fetotomy or cesarean section. Partial fetotomy of the fetal parts is suggested (Singh et al., 2018) if the spinal curvature is acute and thus preventing passage of the fetus through the birth canal. In the present case also the fetus was delivered by sectioning the monster fetus into two parts with the help of Thygeson's fetotome.

References

- [1] Kalita, D., Bhuyan, D., Mukit, A. and Islam, S. (2004). Dystocia due to Schistosomus reflexus in a goat. *Indian J. Anim. Reprod.*, **25** (1): 76-77.
- [2] Knight, R.P. (1996). The occurrence of schistosomus reflexus in bovine dystocia. *Aust. Vet. J.*, **73**: 105–107.
- [3] Laughton, K.W., Fisher, K.R.S., Halina, W.G. and Partlow, G.D. (2005). Schistosomusreflexus Syndrome: A heritable defect in ruminants. *Anat. Histol. Embryol.*, **34**: 312–318.
- [4] Noakes, D.E., Parkinson, T.J and England, G.C.W. (2009). Dystocia due to faulty position and presentation, twins and fetal monster. In: *Veterinary Reproduction and Obstetrics*. 9 ed., Elsevier publisher; United States. pp. 304
- [5] Roberts, S.J. (2004). *Veterinary Obstetrics and genital diseases*. 2 ed., Edwards Brothers, Michigan. Pp: 70.
- [6] Singh, N., Singh R., Singh N. and Dhindsa, S. (2018). Schistosomus reflexus accompanied by left brachium Amelia and contracture of remaining limbs in a crossbred cattle calf. *J. of Entomo. and Zoo. Studies*, **6**(6): 1277-1279.
- [7] Sloss, V.E and Johnston, D.E. (1967). The cause and treatment of dystocia in beef cattle in western Victoria. *Aust. Vet. J.*, **43**: 13–21.
- [8] Suthar, D.N., Sharma, V.K., Dabas, V.S. and Bhoi, D.B. (2011). Per-vaginal handling of Schistosomus reflexus as a cause of dystocia in a Goat. *Veterinary World*, **4**(7): 330-331.



Fig.1: Schistosomus reflexus fetus with ankylosed limbs and exposed viscera