Case Report

Dystocia Due to *Schistosomus reflexus* Monster in a Sahiwal Cow: A Case Report

Amit Kumar[1*], Gyan Singh[2], V. Arjun[1], Hariom[1], V. K. Jain[2] and R. K. Chandolia[1]

College of Veterinary Sciences, Lala Lajpat Rai University of Veterinary and Animal Sciences, Hisar-125004, Haryana, INDIA

[1]Department of Veterinary Gynecology and Obstetrics
[2]Department of Veterinary Clinical Complex

***Corresponding author:** amitkajal7@gmail.com

Rec. Date:	Nov 01, 2019 06:55
Accept Date:	Dec 18, 2019 13:37
DOI	10.5455/ijlr.20191101065540

Abstract

A six-year old pluriparous Sahiwal cow at full term with the history of straining for the last 10 hours was presented to Veterinary Clinical Complex. The case was diagnosed as dystocia due to Schistosoma reflexus based on clinical examination. Successful per-vaginal management of dystocia due to the Schistosomus reflexus monster in a Sahiwal cow is reported here.

Key words: Cow, Dystocia, Monster, Sahiwal, *Schistosoma reflexus*

How to cite: Kumar, A., Singh, G., Arjun, V., Hariom, H., Jain, V., & Chandolia, R. (2020). Dystocia Due to Schistosomus Reflexus Monster in a Sahiwal Cow: A Case Report. International Journal of Livestock Research, 10(1), 84-87. doi: 10.5455/ijlr.20191101065540

Introduction

Inherited congenital malformations currently exist in all breeds of cattle and propagated as a consequence of specific trait selection. The occurrence of inherited anomalies has become frequent and economically important in some breeds (Whitlock *et al*., 2010). A variety of malformations responsible for development of specific fetal phenotypes and conjoined twins have been described as sporadic causes of dystocia in cattle (Youngquist and Threlfall, 2007). The incidence of fetal monsters is relatively high in the cow which is generally of the distorted and celosomian types, *schistosomus reflexus* and *perosomus elumbis* being the commonest. *Schistosoma reflexus* is a rare type fetal monstrosity primarily seen in cattle characterized by presence of exposed thoraco-abdominal viscera (Schistosomus) and acute angulation of vertebral column (reflexus) such that tail lies close to the head (Rao *et al*., 1993). Unless fetotomy or a caesarean section is performed,

the cow usually dies. Such occurrences are costly to the cattle industry and farmer because of dead offspring, loss of milk production and cost of fetal extraction (Laughton *et al*., 2005).

Case History and Clinical Observations

A pluriparous six-year-old Sahiwal cow at full term with the history of straining since last 10 hours was presented to Veterinary Clinical Complex. Clinically, the fetal intestines were protruding out of vulva (Fig.1). Per-vaginal examination revealed cervix fully dilated that facilitated palpation of a normal sized dead *Schistosoma reflexus* fetus in anterior presentation dorso-sacral position. Thus, the case was diagnosed as dystocia due to *Schistosoma reflexus*.

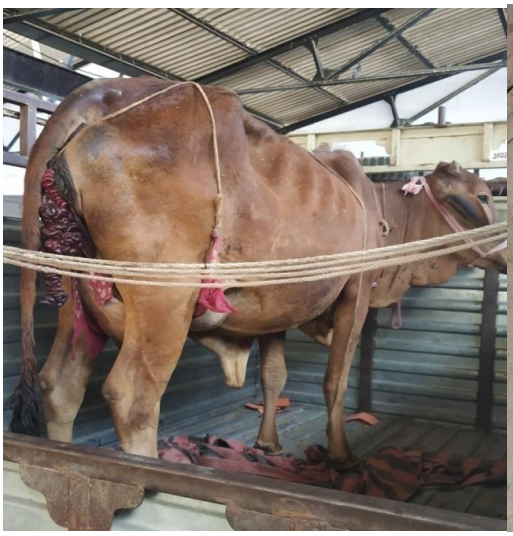

Fig.1

Fig.2

Treatment and Discussion

Since the genital tract was sufficiently relaxed and lubricated, the fetus was delivered per-vaginum after lubrication of birth passage with lukewarm liquid paraffin and epidural anaesthesia (5ml, Lignocaine hydrochloride, 2%). The successful delivery was made by mild traction with hand on the forelimbs along with simultaneous adjustment of the other fetal parts using mutational methods. Subsequently, the after births were pulled out and four boli of Furea were placed intra-uterine. There was absence of any apparent injury to the genital tract of the dam. Parentally, the animal was treated vaginal with antibiotic, analgesic and antihistaminic in prescribed doses. The removed fetus was malformed with marked ventral curvature of spine, lateral bending of fetal body and chest wall exposing abdominal viscera (Fig. 2) and was diagnosed to be a case of true *Schistosomus reflexus*. Parentally, animal was treated with antibiotic, analgesic, antihistaminic and fluid therapy.

DOI 10.5455/ijlr.20191101065540

Fetal monster with herniation of abdominal viscera and skeletal defects is described as *Schistosomus reflexus* (Dennis and Mayer, 1965). It is most common in cattle and buffaloes (Rao *et al*., 1993 and Srivastava *et al*., 1998). The incidence of *Schistosomus reflexus* ranges from 0.1% (Sloss and Johnston, 1967) to 1.3 % (Knight, 1996) out of which 56.7 % were treated by embryotomy, 25.6% by caesarean section and 3.3% by simple traction and none of the case reported with normal delivery (Newman, 2008). *Schistosomus reflexus* is a genetic defect affecting embryo and earlier studies suggested that it occurs due to inheritance of autosomal recessive gene having incomplete penetrance into the population (Noakes *et al*., 2002 and Laughton *et al*., 2005). However, its definitive aetiology still remains unclear, currently this defect is associated with genetic factors, mutations, chromosomal anomalies, infectious agents, and environmental factors or the combination of all the factors listed (Noakes *et al*., 2002). Although, small size monster (*Schistosomus reflexus*) can be delivered through obstetrical procedure such as application of forced traction with plentiful lubrication of birth canal with lubricants (Jana and Jana, 2013). But in those cases where *Schistosomus reflexus* presents by its extremities and along with ankylosis of joints than it creates excessive fetal diameter and prevent normal delivery (Noakes *et al*., 2002). Partial fetotomy of the fetal parts is indicated if the spinal curvature is acute and thus preventing passage of the fetus through the birth canal. The malformed fetus is not likely to be pulled by traditional methods and must be removed from the uterus by either fetotomy, mutational methods (Chakraborty *et al.*, 2011) or caesarean section; however, in complicated cases there may be need of C-section for removing fetus safely (Newman, 2008 and Patel *et al.*, 2015).

Summary

Present communication reports about mutational approach for relieving dystocia due to *Schistosoma reflexus* monster in a Sahiwal cow.

References

1. Chakraborty, Dipanjan & Nath, A & Roy, S & Mukhopadhaya, Sunit & Ganguly, Subha. (2011). Rare Case Report of Dystocia Due to Suspected Schistosomus Reflexus Infected Foetus in Jamunapari Doe. *International Journal of Livestock Research*. 1. p52. 10.5455/ijlr.20120204085806.
2. Dennis, S.M., Mayer, E.P. (1965). Schistosomus reflexus in a sheep. *Vet. Rec.* 77(47): 1386-1387.
3. Jana, D. and Jana, M. (2013). Studies on *Schistosomus reflexus* in indigenous cattle in tropical West Bengal, India. *Explor. Anim. Med. Res.* 3(1): 74-77.
4. Knight, R.P. (1996). The occurrence of *Schistosomus reflexus* in bovine dystocia. *Aust. Vet .J.* 73(3): 105-107.
5. Laughton, K.W., Fisher, K.R., Halina, W.G. and Partlow, G.D. (2005). *Schistosomus reflexus* syndrome: a heritable defect in ruminants. *Anat. Histol. Embryol.* 34: 312-318

 DOI 10.5455/ijlr.20191101065540

6. Morrow, D.A. (1986). Congenital defects affecting bovine reproduction. In: Current Therapy in Theriogenology. 2nd edn. W.B. Saunders publisher; Philadelphia Toronto, USA. pp. 180
7. Newman, K.D. (2008). Bovine C-section in the Field. *Vet. Clin. Food Anim.* 24: 273– 293
8. 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. 9th Edn. Elsevier publisher; United States. pp. 304.
9. Noakes, D.E., Parkinson, T.J., England, G.C.W. and Arthur, G.H. (2002). Arthur's veterinary reproduction and obstetrics. 8th Edn. Elsevier Sci. Ltd., pp: 129-212
10. Padma Rao, V., Ramchandraiah, K., Mohan Reddy, A. R., Venkata Subbiah, D. and Chandrasekhar, B. (1993). *Schistosomus reflexus* in a monocephalus tripus dibrachius calf. *Indian Vet. J.* 70: 1083.
11. Patel, Akhil & Yadav, Sanjay & Yadav, Dushyant & Sonker, Vipin & Saxena, Atul. (2015). Dystocia Due to Schistosoma Reflexus in a Hariana Cow. *International J. of Livestock Research*. 5(4). p122-124.10.5455/ijlr.20150413085920.
12. Roberts, S.J. (1986). Veterinary Obstetrics and Genital diseases. 3rd Edn. Woodstock: Roberts
13. Sloss, V.E. and Johnston, D.E. (1967). The cause and treatment of dystocia in beef cattle in western Victoria. *Aust. Vet. J.* 43(1): 13-21.
14. Srivastava, K.K., Sharma, A.K., Ahlawat, S.P.S. and Maithy, S.K. (1998). *Schistosomus reflexus Perosomus elumbis* in Holstein Friesian cow. *Indian J. Anim. Reprod.* 19(1):75.
15. Whitlock, B.K. (2010). Heritable Birth Defects of Cattle. Applied Reproductive Strategies. Conference Proceedings Nashville, TN. Pp.146-153.
16. Youngquist, R.S. and Threlfall, W.R. (2007). Current Therapy in Large Animal Thereogenology, 2nd edn. Saunders-Philadelphia, U.S.A. Pp 313-468.

DOI 10.5455/ijlr.20191101065540