



E-ISSN: 2320-7078

P-ISSN: 2349-6800

JEZS 2018; 6(5): 921-922

© 2018 JEZS

Received: 16-07-2018

Accepted: 19-08-2018

Akshay Kumar

Department of Veterinary
Gynaecology and Obstetrics,
College of Veterinary Science and
Animal Husbandry, DUVASU,
Mathura, Uttar Pradesh, India

Dileep Kumar Yadav

Department of Veterinary
Gynaecology and Obstetrics,
College of Veterinary Science and
Animal Husbandry, DUVASU,
Mathura, Uttar Pradesh, India

Vikas Sachan

Department of Veterinary
Gynaecology and Obstetrics,
College of Veterinary Science and
Animal Husbandry, DUVASU,
Mathura, Uttar Pradesh, India

Jitendra Kumar Agrawal

Department of Veterinary
Gynaecology and Obstetrics,
College of Veterinary Science and
Animal Husbandry, DUVASU,
Mathura, Uttar Pradesh, India

Vijay Singh

Department of Veterinary
Gynaecology and Obstetrics,
College of Veterinary and Animal
Science, SVPUAT, Meerut,
Uttar Pradesh, India

Correspondence**Akshay Kumar**

Department of Veterinary
Gynaecology and Obstetrics,
College of Veterinary Science and
Animal Husbandry, DUVASU,
Mathura, Uttar Pradesh, India

Dystocia due to *Schistosoma reflexus* in a crossbred cattle: A case report

Akshay Kumar, Dileep Kumar Yadav, Vikas Sachan, Jitendra Kumar Agrawal and Vijay Singh

Abstract

Monstrosity is a developmental anomaly of ovum, embryo or fetus that can cause great distortion of the individual e.g. *Schistosoma reflexus*, *Perosmus elumbis* and multiple ankylosis etc. these conditions generally resulting in difficulty in parturition. Amongst monstrosities, *Schistosoma reflexus* is congenital defect characterized with marked ventral curvature of spine leading to exposed abdominal viscera. Fetotomy or caesarean section are the most common obstetrical procedures to relieve such type of monstrosity. Present case study report dystocia due to *Schistosoma reflexus* in a cattle and its successful management through fetotomy.

Keywords: Cattle, dystocia, *Schistosoma reflexus*, fetotomy, monstrosity, congenital, fetal monster

Introduction

Difficulty in giving birth or abnormal birth is referred to as Dystocia (Youngquist *et al.*, 2007) [18] and needs human intervention (Blood *et al.*, 2011) [2]. Either fetal or maternal factors are responsible for dystocia. The fetal factors include oversized fetus, lamb malpresentation, malposition, postural defects and congenital abnormalities (Aitken, 2008) [11] and the maternal factors include over feeding of dam during pregnancy, uterine inertia and small diameter of pelvic canal (Pugh *et al.*, 2012) [12]. Any type of dystocia, irrespective of the cause, needs immediate intervention. Any delay may lead to necrotic metritis which may be fatal to dam (Mee, 2008; Christos *et al.*, 2012) [10, 4]. Dystocia cases can either be handled medically or surgically (Scott, 2006) [15]. Medical management is advised when the dam and the fetuses are stable and there is proper fetal position, presentation and posture with no obstruction (Noakes, 2009) [11]. Obstructive dystocia (those accompanied by shock or systemic illness, uterine inertia, prolonged active labor or failure in medical management) require cesarean section (Majeed *et al.*, 1993) [9].

Fetal monstrosity may be due to developmental anomaly of ovum, embryo or fetus that can cause great distortion of the individual, generally resulting in dystocia (Vegad, 2007) [17]. *Schistosomus reflexus* is a rare fatal congenital abnormality in ruminants characterized by spinal inversion, limb ankylosis, exposed visceral organs (mainly abdominal or thoracic), and marked ventral curvature of the spinal column due to the inversion of spinal cord i.e. reflexus (Roberts, 1986) [14]. It is most commonly reported in cattle with prevalence ranging between 0.01-1.3% and is much lesser in ewes and doe (Roberts, 1986; Sloss and Johnston, 1967 and Knight 1996) [14, 16, 6]. In India, occurrence of *Schistosoma reflexus* in bovines was reported by Rao *et al* (1993) [13] and Jana and Ghosh (2001) [5]. Primarily the *Schistosomus reflexus* seems to be associated with a genetic aetiology (Laughton and Fisher, 2005) [7] and may occur as early as the post-gastrulation embryo and involves the intermediate mesoderm. There are various reports of *Schistosoma reflexus* occurring in concordance with twin fetus with viable normal calf (Knight, 1996) [6], twin fetus with freemartin (Cavalieri and Farin, 1999) [3], but all are associated with dystocia.

Case history and Clinical signs

An adult 7.5yr old crossbred cattle was presented in the Teaching Veterinary Clinical Complex (TVCC), Veterinary College, Mathura with the history of full term gestation and labour for 14 hours with no progression of birth of fetus. Large portion of intestine of fetus (identified on the base of size) was hanging outside the vulva of the dam.

Clinical examination revealed that the cow had tachycardia and pale mucous membrane was evident. Per-vaginal examination revealed that the cervix was fully dilated with both fetal forelimbs present in the birth canal and the abdominal viscera of fetus hanging outside. Detailed examination revealed open ventral portion of the fetus with palpation of the thoracic cage, fetal head could also be palpated within the uterus (Fig.1). The case was diagnosed as fetal monster due to *Schistosoma reflexus*.

Treatment and Discussion

The therapeutic plan for this case was to remove the dead fetus via fetotomy method. 3L of 5% Dextrose fluid was administered intravenously to prevent shock during fetal extraction and to correct the dehydration status. Flunixin meglumine dosed at 2.2 mg/kg b.wt. was first administered intramuscularly as analgesic and anti-inflammatory. Caudal epidural anesthesia was performed between first and second intercoccygeal space using 5 mL 2% Lignocaine hydrochloride. Subsequently liquid paraffin was pumped into the uterus to create a pseudo amniotic bag for easy manipulation of the fetus. Dystocia was corrected using the Thygesen's fetotome. Initially, The head of the fetus was amputated and fetus was bisected in the area of angulation from the trunk region. Then fetus was removed in two parts i.e. one having both fore limbs and anterior part of the trunk and another having both hind limb and posterior part of the trunk. Morphologically, there were ankylosed foetal limbs. The dam was treated with inj. Dextrose Normal Saline 3 liter followed by antibiotic, antihistaminic and anti-inflammatory drugs. Animal was discharged with advice of continuing the same treatment for three days along with intrauterine medication. The case recovered successfully.

Conclusively, *Schistosoma reflexus* is a most uncommon type of monster which rarely occurs in cattle. *Schistosomus reflexus* occurs as early as the post-gastrulation embryo and involves the intermediate mesoderm i.e. this condition has genetic aetiology. The Dystocia due to such monstrosities is generally relieved by fetotomy or caesarean section. In present case fetotomy is preferred according to the economical condition of animal owner as well as to avoid any major post-operative complication because of the caesarean section.

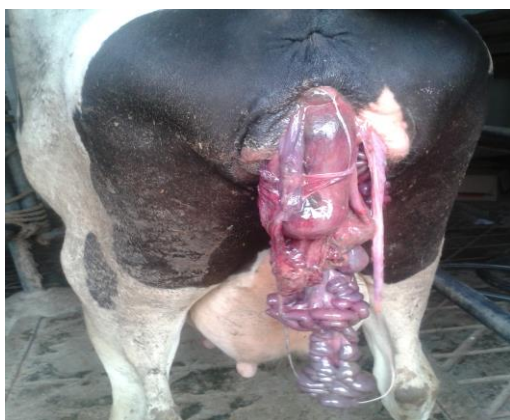


Fig 1.

References

1. Aitken RJ, Iulius GND, McLachlan RI. Biological and clinical significance of DNA damage in the male germ line. *International Journal of Andrology*. 2008; 32(1):46-56.

2. Blood DC, Studdert VP, Gay CC. *Saunders Comprehensive Veterinary Dictionary* (4th Edition). London: Saunders, 2011.
3. Cavalieri J, Farin PW. Birth of a Holstein freemartin calf co-twinning to *Schistosomus fetus*. *Theriogenology*. 1999; 52:815-826
4. Christos NB, Lazaridis L, Karagiannis I, Kiossis E, Tsousis G, Psychas V *et al*. Prolonged dystocia, uterine necrosis, and ovariohysterectomy in a Chios ewe. *Turkish Journal of Veterinary and Animal Sciences*, 2012, 36.
5. Jana D, Ghosh M. Dystocia due to foetal monster with *Schistosomus reflexus* in ectopic viscera- a case report. *Indian Veterinary Journal*. 2001; 78:333-334.
6. Knight RP. The occurrence of *Schistosomus reflexus* in bovine dystocia. *Australian Veterinary Journal*. 1996; 73:105-107
7. Laughton KW, Fisher KR, Halina WG, Partlow GD. *Schistosomus reflexus* syndrome: A heritable defect in ruminants. *Anatomia Histologia Embryologia*. 2005; 34:312-318.
8. Majeed AF, Taha MB. Obstetrical disorder and their treatment in Iraqi Awassi ewes. *Small Ruminant Research*. 1995; 17:65-69.
9. Majeed AF, Taha MB. Azawi OI Cesarean section in Iraqi Awassi ewes: A case study. *Theriogenology*. 1993; 40:435-439.
10. Mee JF. Prevalence and risk factors for dystocia in dairy cattle: A review. *The Veterinary Journal*. 2008; 176:93-101
11. Noakes DE. *Arthur's veterinary reproduction and obstetrics*. Saunders WB, 2009, 404-405.
12. Pugh DG, Baird AN. *Sheep and goat medicine*. Elsevier Health Sciences, 2012.
13. Rao VP, Ramachandraiah K, Mohan Reddy ARD, Venkata Subbaiah K, Chandrasekaran WB. *Schistosomus reflexus* is a monocephalous tripus dibrachias calf. *Indian Veterinary Journal*. 1993; 70:1083-1084.
14. Roberts SJ. *Veterinary obstetrics and genital diseases*, 3rd Edn. Woodstock: Roberts. 1986, 488.
15. Scott PR. *Sheep medicine*. Manson Publishing, 2006.
16. Sloss VE, Johnston DE. The cause and treatment of dystocia in beef cattle in western Victoria. *Australian Veterinary Journal*. 1967; 43:13-21
17. Vegad JL. *Textbook of Veterinary General Pathology*, 2nd ed. International book distribution Company Lucknow, U.P., India, 2007
18. Youngquist RS, Norman S. *Current Therapy in Large Animal Theriogenology* (2nd Edition). Elsevier Health Sciences. 2007, 42.