



ISSN: 2456-2912

NAAS Rating (2026): 4.61

VET 2026; 11(7): 274-276

© 2026 VET

www.veterinarypaper.com

Received: 24-05-2026

Accepted: 28-06-2026

Sagar Y Chikkalli

Assistant Professor, Department of Veterinary Gynaecology and Obstetrics, Veterinary Clinical Complex, Lokmangal Veterinary College, Wadal, Solapur, Maharashtra, India

Banoth Vennela

Assistant professor, Veterinary Gynaecology and Obstetrics, Veterinary Clinical Complex, Arawali Veterinary College, Sikar, Rajasthan, India

Vibha Shrihari Mowade

Assistant Professor, Veterinary Medicine, Veterinary Clinical Complex, M. B. Veterinary College, Dungarpur, Rajasthan, India

Ravi Dombar

Veterinary Surgeon, Private Pet Practitioner, Pets first, Kalyannagar, Bangalore, Karnataka, India

Ashok Khalate

Assistant Professor, Department of Veterinary Medicine, Veterinary Clinical Complex, Lokmangal Veterinary college, Wadal, Solapur, Maharashtra, India

Corresponding Author:

Sagar Y Chikkalli

Assistant Professor, Department of Veterinary Gynaecology and Obstetrics, Veterinary Clinical Complex, Lokmangal Veterinary College, Wadal, Solapur, Maharashtra, India

Successful surgical management of *Schistosomus reflexus* fetal monster in crossbreed Deoni cattle: A case report

Sagar Y Chikkalli, Banoth Vennela, Vibha Shrihari Mowade, Ravi Dombar and Ashok Khalate

DOI: <https://www.doi.org/10.22271/veterinary.2026.v11.i7d.3636>

Abstract

Schistosoma reflexum (SR) is a lethal congenital malformation characterized by severe spinal retroflexion, thoracoabdominoschisis with visceral exposure are developmental anomalies that originate during gestation and may arise during either the embryonic or foetal stage. A 7yr old Crossbreed Deoni cattle was presented at Gynaeco-clinical ward, VCC, COVAS, Udgir with history of full term gestation with rupture of water bag 5 hrs prior and straining since 24 hrs with failure of delivery of fetus per-vaginum. The animal was examined at field level and both hind limbs were pulled by the local paravet. Per-vaginal examination revealed fetus in a Vento-transverse presentation, Cephalo-sacral position with all four limbs and head extended in birth canal. Since per-vaginal delivery was not possible, caesarean section was performed as per the standard protocol. Animal treated with NSAID and antibiotics for five days. Animal had an uneventful recovery. The fetal monster was enumerated as "*Schistosomus reflexus*" with marked ventral curvature of the spine, deformed pelvis and the body was noticed.

Keywords: *Schistosomus reflex*, monster, dystocia, caesarian.

1. Introduction

The term "schistosomus" refers to the exposure of the viscera of the abdomen (usually) and thorax (sometimes), whereas "reflexus" describes a considerable angulation of the vertebral column that places the tail near the head. *Schistosomus reflexus* monster is an often reported cause of dystocia in cattle (Pandey *et al.*, 2015) ^[6]. In livestock, these abnormalities can involve structural or functional defects that compromise both viability and productivity (Albarella *et al.*, 2017) ^[1]. SR is a lethal syndromic congenital syndrome characterized by a pronounced U-shaped retroflexion of the spine, accompanied by thoracoschisis and abdominoschisis leading to the externalization of abdominal viscera (Jacinto *et al.*, 2024) ^[5]. Developmental abnormalities affecting the ovum, embryo, or fetus cause fetal monstrosities, which cause severe structural deformity (Vegad, 2007) ^[10], resulting in the dystocia. Although the exact cause of this malformation is still unknown, predisposing factors are thought to include genetic factors (such as recessive genes from the dam, sire, or both) that affect embryonic development, mutations, chromosomal abnormalities, exogenous factors (such as infectious and environmental agents), and teratogenic effects (Azawi *et al.*, 2012) ^[2]. *Schistosomus reflexus* imposes substantial economic burdens on cattle production by reducing the number of live calves born, lowering milk yield, increasing infertility, prolonging the calving interval, and escalating veterinary and obstetrical management costs associated with dystocia. This study reports a case of dystocia in a crossbreed deoni cattle and characterize *Schistosomus reflexus* in a dead calf after the caesarean section.

2. Case history and clinical observation

A 7-year-old pluriparous, full-term pregnant crossbred deoni cow with a term gestation period was presented to the Department of Animal Reproduction, Gynaecology and Obstetrics,

Veterinary Clinical Complex (VCC), College of Veterinary and Animal Sciences (COVAS), Udgir, with a history of prolonged straining for approximately 8 hours without successful fetal delivery. The animal had exhibited inappetence during this period and had previously been attended by a local paravet. However, attempts to deliver the fetus were unsuccessful. Severe oedema of the vulva was observed. Following routine restraint and aseptic preparation of the perineal region, a thorough per-vaginal examination revealed a vaginal passage appearing dry and oedematous and dead fetus in ventro-transverse presentation with a cephalo-sacral position, while the head and all four limbs were extended within the birth canal. Fetal death was confirmed by the absence of reflex responses. Clinical examination showed a subnormal rectal temperature (98.8°F), whereas all other physiological parameters were within normal limits. Owing to the severe fetal congenital abnormality and resultant fetomaternal disproportion, vaginal delivery could not be achieved, necessitating an alternative obstetrical approach. The case was diagnosed as a foetal monster due to *Schistosomus reflexus*.

3. Surgical Treatment

Before proceeding to surgical intervention, the animal was stabilized with intravenous (IV) 1000mL of 0.9% NaCl (normal saline), inj. Ceftriaxone - Tazobactam (3375 mg), Inj. Chlorpheniramine maleate 10 ml IM, Inj. Flunixin Meglumine 10 ml IM. Caesarean section was performed under local infiltration and sedation using diazepam using standard procedures. The operative site (Ventro-lateral) was aseptically prepared by shaving and scrubbing and local infiltration anesthesia using 180 ml of 2% lignocaine and 5 ml of 2% lignocaine was administered epidurally. The skin was incised and separated from the subcutaneous layer. The muscles were then incised taking care to avoid major vessels. After separation of muscles by blunt dissection the peritoneum which is white glistening layer was incised. The omental fat which covered the uterus was then pushed anteriorly. The voluminous uterus was located, packed on the sides by surgical drapes to avoid spillage of uterine content. Then uterus was incised over the greater curvature avoiding the cotyledons. Then fetus was removed and margin of uterus were washed with sterile normal saline. The placenta was all so removed. The furea bolus was placed as peccarie in uterus and sutured using absorbable suture material catgut no. 1 using Cushing followed by lambert suture pattern. Before replacing the uterus back into the abdomen 3 ml of Inj. oxytocin was administered at the myometrium layer. The contaminants that entered in the peritoneum were removed by infusing the peritoneal cavity with normal saline and scooping out the contents manually. Before abdominal closure, a combination of penicillin and streptomycin was used as a solution to pour on the incised abdominal wound to prevent infection. The muscles and peritoneal layers were sutured using catgut no. 2 in ford interlocking pattern. The skin was sutured in horizontal mattresses pattern using nylon. Polymixin B spray was applied over the suture line and the cow was able to stand within 12 min of surgery. Animal was then given supportive therapy with Inj. Calcium borogluconate 200 ml (slow) IV and Inj. B₁, B₆, B₁₂ 10 ml IV. As per the characteristic features, the fetus was diagnosed as *Schistosomus reflexus*. Postoperatively, the cow was provided with 1000 mL of DNS and 1000 ml of Intalyle. The other

supportive medications included Inj. Ceftriaxone-Tazobactam at the rate of 10 mg/kg b.wt daily for rest 4 days followed by Inj. Flunixin meglumine at the rate of 2.2 mg/kg b.wt for 3 days and Inj. Chlorpheniramine maleate at the rate of 1mg/kg b.wt for 5 days, and Additionally, slow IV 250 mL Inj. Calcium Borogluconate was administered. On the third postoperative day, Inj. Ivermectin was administered subcutaneously at a dose rate of 0.2 mg/kg body weight as a prophylactic measure against myiasis. The postoperative recovery was uneventful, and the skin sutures were removed on the 18 postoperative day. The cow showed satisfactory wound healing and remained clinically healthy without any postoperative complications.



Fig 1: (A) Eye, (B) Protruded Tongue, (C) Ankylosed Limbs, (D) Spleen, (E) Small Intestine, (F) Large Intestine, (G) Urinary Bladder, (H) Abomasum (I) Short and contracted tail

4. Results and Discussion

In the present case, fetotomy was considered impractical because of marked edema of the birth canal and the severely exhausted condition of the dam. Therefore, a caesarean section was elected to preserve the life of the animal. Following standard surgical procedures, a caesarean section was performed, resulting in the delivery of a dead fetal monster weighing 27.2 kg with indistinct external genitalia. Gross examination of the fetus revealed extensive visceral eventration due to the complete absence of the thoracic and abdominopelvic body walls, with exposed hypoplastic heart and lungs. Additional congenital abnormalities included diaphragmatic hypoplasia, complete costal aplasia (absence of ribs and associated costal cartilages), and exposed, underdeveloped gastrointestinal viscera associated with abnormal fetal presentation. Musculoskeletal deformities comprised ankylosis of all four limbs resembling arthrogryposis, positioning of the limbs adjacent to the skull, a markedly shortened and ventrally convex vertebral column consistent with severe spinal dorsiflexion, a rudimentary and contracted tail, approximation of the sacrum to the cranial region, and protrusion of the tongue (Figure 1). Based on these characteristic gross morphological features, the fetus was diagnosed as a case of *Schistosomus reflexus*. SR is occasionally reported in Hostein-Friesian, Jersey, Hariana, and Sahiwal breeds. (Sheetal *et al.*, 2018; Sarath *et al.*, 2021) [8, 7]. The exact etiology of this congenital anomaly remains uncertain, However, it is presumed to result from genetic abnormalities affecting embryonic development during the post-gastrulation stage, particularly involving the intermediate mesoderm. Previous studies have suggested that mutations in Murine genes are associated with severe malformations of the ventral body wall and visceral organs (Laughton *et al.*, 2005) [4]. *Schistosomus reflexus* is believed to have a genetic basis, with the defect likely inherited as an autosomal recessive trait.

Identification of the underlying genetic abnormalities can be facilitated through molecular techniques, particularly single nucleotide polymorphism (SNP)-based genetic mapping (Charlier *et al.*, 2008) [3]. To minimize the risk of recurrence, sires with a documented history of producing offspring affected by *Schistosomus reflexus* are generally not recommended for breeding purposes (Sitali *et al.*, 2014) [9]. In the present case, the dystocia was successfully managed by caesarean section, which is in agreement with previous reports recommending this surgical approach for the management of *Schistosomus reflexus*-associated dystocia (Youngquist *et al.*, 2007; Sheetal *et al.*, 2018) [12, 8]. The fetal carcass was disposed of according to the institutional carcass disposal guidelines. Vaginal delivery of fetuses affected with *Schistosomus reflexus* is often extremely difficult because of the severe congenital deformities and abnormal fetal conformation. Depending on the clinical condition of the dam and the degree of fetal deformity, fetotomy or caesarean section is generally recommended. In the present case, considering the maternal condition and the impossibility of fetotomy, the dystocia was successfully managed by caesarean section following standard surgical protocols.

5. Conclusion

Schistosomus reflexus is a rare congenital fetal anomaly that can cause severe dystocia in cattle. When fetotomy is not feasible because of extensive fetal deformities and poor maternal condition, caesarean section is a safe and effective life-saving procedure. This case highlights the importance of timely diagnosis, appropriate surgical intervention, and consideration of genetic factors in reducing the occurrence of this congenital defect.

6. Acknowledgment

The authors sincerely thank the faculty members of the Departments of Veterinary Gynaecology and Obstetrics, Veterinary Clinical Complex (VCC), as well as the Dean of the Lokmangal Veterinary College, Wadala, Maharashtra, for providing the necessary facilities and support.

Conflict of Interest

The authors declare that they have no conflicts of interest.

Financial Support

Not available

References

- Albarella S, Ciotola F, D'Anza E, Coletta A, Zicarelli L, Peretti V. Congenital malformations in river buffalo (*Bubalus bubalis*). *Animals*. 2017;7(2):9. doi:10.3390/ani7020009.
- Azawi O, Ahmed O, Abass S. *Schistosomus reflexus* foetus in cross breed Iraqi cow: A case report. *Iraqi Journal of Veterinary Sciences*. 2012;26(2):103-104. doi:10.33899/IJVS.2012.67481.
- Charlier C, Coppieters W, Rollin F, *et al.* Highly effective SNP-based association mapping and management of recessive defects in livestock. *Nature Genetics*. 2008;40:449-454. doi:10.1038/ng.96.
- Laughton KW, Fisher KRS, Halina WG, Partlow GD. *Schistosomus reflexus* syndrome: A heritable defect in ruminants. *Anatomia, Histologia, Embryologia*. 2005;34:312-318. doi:10.1111/j.1439-0264.2005.00624.x.
- Jacinto JGP, Häfliger IM, Letko A, *et al.* Multiple independent de novo mutations are associated with the development of *Schistosoma reflexus*, a lethal syndrome in cattle. *Veterinary Journal*. 2024;304:106069. doi:10.1016/j.tvjl.2024.106069.
- Pandey AK, Singh G, Kumar S, Sunder S. Dystocia due to *Schistosomus reflexus* monster in a Haryana cow: A case report. *Veterinary Practitioner*. 2015;16:135.
- Sarath T, Pugazharasi C, Arunmozhi N, Sureshkumar R, Jayaganthan P. Dystocia due to *Schistosomus reflexus* fetal monster in a Jersey crossbred cow. *Indian Journal of Veterinary and Animal Sciences Research*. 2021;50(6):91-93.
- Sheetal SK, Patil AD, Sahatpure SK, Gahlod BM, Akhre SB. Management of dystocia due to *Schistosoma reflexus* in a crossbred cow. *Veterinary Science Research*. 2018;3(3):000161.
- Sitali MC, Mwaanga ES, Zulu VC, Mwanza AM. *Schistosomus reflexus* from a Holstein-Friesian cow: Case report. *Theriogenology Insight*. 2014;4(2):65-70. doi:10.5958/2277-3371.2014.00735.9.
- Vegad JL. Text book of veterinary general pathology. 2nd ed. Lucknow: IBD Co.; 2007. p. 545.
- Yadav HP, Shah N, Brijesh Kumar B, Saxena A. Dystocia due to *Schistosoma reflexus* and its management through fetotomy: A case report. *Indian Journal of Veterinary Science and Biotechnology*. 2017;13(1):91-93. doi:10.21887/ijvsbt.v13i01.8745.
- Youngquist RS, Threlfall WR. Current therapy in large animal theriogenology. 2nd Ed. Philadelphia: Saunders; 2007. p. 313-468.

How to Cite This Article

Chikkalli SY, Vennela B, Mowade VB, Dombar R, Khalate A. Successful surgical management of *Schistosomus reflexus* fetal monster in crossbreed Deoni cattle: A case report. *International Journal of Veterinary Sciences and Animal Husbandry*. 2026;11(7):274-276.

Creative Commons (CC) License

This is an open-access journal, and articles are distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 International (CC BY-NC-SA 4.0) License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.