

Episiotomy in Nellore Brown Ewe Successfully Relieved Dystocia Due to Vulvo Vestibular Constriction

Bhandhavi M.V.S.S.S.^{1,*}, Jyothi K.², Sudheer Kumar M.¹, Megha Varna P.¹, Satish Chandra M.¹

Abstract

A full term pregnant, primiparous ewe was presented to the Department of Veterinary Clinical Complex, College of Veterinary Science, Proddatur with the history of non-progressive straining persisting for the past 24 hours. The owner reported that attempts had previously been made by local quacks to assist in the delivery, but all the efforts proved unsuccessful, and the condition remained unresolved. The ewe had not shown any signs of improvement following the unskilled intervention. The clinical observations revealed that the vital parameters were within normal physiological limits (rectal temperature, respiratory rate, heart rate were all normal). The conjunctival mucous membrane appeared pale pink. Feed and water intake was normal, and the ewe was found to be alert and responsive. A detailed per vaginal examination was performed, which revealed a significant constriction at the vulvo-vestibular junction. Further palpation identified that one limb was extended into the cervix, and there was evidence of incomplete cervical dilation, which contributed to the dystocia. After complete dilation of cervix using PGE₂, episiotomy was performed under caudal epidural anaesthesia and the dead female foetus was successfully delivered per vagina. Post-operative care was provided, and the ewe exhibited uneventful recovery without any complications. The case highlights the importance of timely veterinary intervention, and the risks associated with unskilled obstetrical handling in field conditions.

Keyword: Primiparous, episiotomy, incomplete cervical dilation, PGE₂, Dystocia

INTRODUCTION

Dystocia refers to difficult birth or abnormal delivery, where the dam or foetus experiences complications during the parturition process [1]. The incidence of dystocia in small ruminants is lower than in large ruminants. Dystocia occurs when first or second stages of parturition are delayed, or when the first stage fails to progress to the second stage or when there is no progress made within 30 minutes to 1 hour after the initiation of second stage of parturition [2–4]. During the first stage of parturition ewe separates herself from flock, appears restless, paws the ground and straining begins [4, 5]. Second

*Author for Correspondence

Bhandhavi M.V.S.S.S
E-mail: bhandhavi19@gmail.com

¹Scholar, Department of Veterinary Gynaecology and Obstetrics, College of Veterinary Science, Proddatur, Andhra Pradesh, India

²Assistant Professor and Head, Department of Veterinary Gynaecology and Obstetrics, College of Veterinary Science, Proddatur, Andhra Pradesh, India

Received Date: April 09, 2025

Accepted Date: May 10, 2025

Published Date: May 14, 2025

Citation: Bhandhavi M.V.S.S.S., Jyothi K., Sudheer Kumar M., Megha Varna P., Satish Chandra M. Episiotomy in Nellore Brown Ewe Successfully Relieved Dystocia Due to Vulvo Vestibular Constriction. *Research and Reviews: Journal of Veterinary Science and Technology*. 2025; 14(2): 30–34p.

stage of parturition involves expulsion of foetus with vigorous straining [4]. Once the contractions become strong enough, the delivery of the foetus must occur within 30 minutes to one hour otherwise, there may be dystocia, and a prompt obstetrical intervention is necessary [4, 5]. In the third stage, expulsion of placenta takes place within 3–6 hours after last lamb is born [4, 5]. In small ruminants' dystocia may be of fetal or maternal origin [6–8]. Foetal causes of dystocia are more numerous and are due to abnormal presentation, position and posture, due to excessive size of the fetus and disease or congenital defects [7, 8]. Maternal causes of dystocia in ewes include failure of the cervix to dilate (ring womb), uterine inertia, uterine torsion, uterine rupture, inguinal hernia,

narrow pelvis and pelvic fracture [7–9]. Dystocia due to incomplete relaxation of the posterior vagina and vulva is common finding in dairy heifers than other animals [10]. Duration of dystocia significantly affects the survival rate of both foetus and ewe [11]. Timely diagnosis and appropriate intervention are critical to avoid complications and ensure favourable outcomes. The present paper reports a case of constricted vulvo vestibular junction in an ewe and its successful treatment by surgical intervention.

CASE HISTORY AND OBSERVATIONS

A Nellore Brown primiparous ewe, weighing 30 kg was presented to the Department of Veterinary Clinical Complex, College of Veterinary Science, Proddatur with the history of unproductive straining since past 24 hours after the expulsion of foetal fluids. As per the history, feed and water intake of the animal was normal. The clinical observations revealed that ewe had normal temperature (103.5°F), normal heart rate (73 beats per minute), normal respiratory rate (40 breaths per minute), pale pink conjunctival mucus membrane and the animal was active and alert. Per vaginal examination revealed that vaginal opening was narrower with constriction at vestibular junction admitting only two fingers and cervix also incompletely relaxed with one finger dilatation. Based on these findings, the condition was diagnosed as dystocia due to incomplete cervical dilation (ring womb) and constricted vagina.

TREATMENT AND RESULT

The therapeutic protocol was focused on cervical dilation initially. The animal was treated with inj. Dexalab (Dexamethasone Phosphate, Laborate, Himachal Pradesh) @ 12 mg intramuscularly, inj. Cloprol (Cloprostenol sodium, Oxen, Gujarat) @ 0.5 ml intramuscularly and DNS administered intravenously @ 10 ml per kg body weight. The PGE2 preparation, Misoprost-200 (Misoprostol, Cipla, Mumbai) tablet @ 200 mcg was administered per vaginally. Next day, per vaginal examination revealed the presence of foetal head in the birth canal indicating the complete dilation of cervix however, posterior vagina was constricted. Foetus was found to be dead as there were no reflexes. As the vulvo vestibular junction was constricted it was decided to relieve the dystocia by performing the episiotomy.

Caudal epidural anaesthesia was performed between 1st and 2nd intercoccygeal space [2, 12] using 0.5 ml LOX 2% (Lignocaine hydrochloride, Neon, Mumbai) before starting the procedure to desensitize perineum for obstetrical manipulation. The site of injection was identified by moving the tail up and down in a pump-like manner. The site in the dorsal midline was prepared aseptically. A 22G needle was used to penetrate the intervertebral space. The needle was directed slightly in the cranial direction and then advanced slowly. Lack of resistance or popping sensation usually indicates that epidural space was entered. Once the needle was placed in the epidural space, the anaesthetic solution was injected slowly. The animal was restrained in right lateral recumbency and an incision of 2 cm at 11 O'clock position on left dorso lateral side of vulva and another incision of 2 cm at 4 O'clock position on right ventral side of vulva was taken after placing haemostats in "V" shape to arrest bleeding (Figures 1 and 2). Vaginal examination revealed dead fetus in anterior-longitudinal presentation, dorso pubic position with bilateral shoulder flexion. After adequate lubrication with carboxy methyl cellulose, the fetus was rotated in clockwise direction and on application of traction, dead female fetus was delivered per vaginally (Figures 3(a) and 3(b)). The uterus was examined post-delivery to rule out additional fetuses.

The ewe was administered with antibiotic injection Taxim (Cefotaxime sodium, Alkem, Mumbai) @ 15 mg per kg body weight intramuscularly, inj. Meloxicam (Meloxicam, Himalaya Meditek, Dehradun) @ 0.3 mg per kg body weight intramuscularly, inj. Texableed (Tranexamic acid, Psychotropics, Uttarakhand) @ 5 mg per kg body weight, and advised Replanta @ 25gm BID per oral. The ewe recovered uneventfully, and placenta was expelled after 24 hours.

An abnormally small vulva is one of the causes of dystocia [13], in heifers and in such cases episiotomy or caesarean operation may be required to allow delivery [10]. Stenosis of the vulva and vestibule may be the result of immaturity or may be a heritable defect in some breeds [14]. An episiotomy should be performed if the vulva does not dilate appropriately [10]. Abdullah (2015) [15] and Pandey (2018) [2] also performed episiotomy to manage dystocia in ewes with limited vaginal

space, achieving successful outcomes like our findings. Dystocia due to infantile vulva in a goat was reported by Hemalatha (2018) [16] where an episiotomy was performed with 3 inches incision at 1 O'clock position on right dorso lateral side of vulva. Episiotomy was performed in an indigenous cow with stenosis of birth canal by Himanshu (2023) [17] to deliver the foetus per vaginally. Dalal (2016) [18] reported a case of dystocia in crossbred heifer due to vulvar stenosis and persistent hymen where an episiotomy and excision of transverse band of persistent hymen was performed to facilitate the delivery of foetus.



Figure 1. Application of haemostats in “V” shape to control bleeding.



Figure 2. An incision of 2 cm at 11 O'clock position on left dorso lateral side of vulva.



Figure 3. (a) Fetal head was taken out per vaginally by applying traction after performing episiotomy, (b) A dead female foetus was delivered per vaginally.

CONCLUSIONS

It can be concluded that when the vulvo vestibular junction is constricted while the cervix remains relaxed, performing an episiotomy can alleviate dystocia and potentially prevent the need for a cesarean section. This case underscores the importance of prompt veterinary care and appropriate obstetrical intervention in managing dystocia.

REFERENCES

1. Ali AMH. Causes and management of dystocia in small ruminants in Saudi Arabia. *J Agric Vet Sci.* 2011;4(2):95–108.
2. Pandey AK, Mudasir M, Wani JM, Kumar S, Kumar S. Management of dystocia in sheep – a case report. *Int J Curr Microbiol Appl Sci.* 2018;7(10):1800–3.
3. Cowley J, Stockler J, Maxwell H. A review of small ruminant Cesarean section: case selection, surgical techniques, care of the neonates, and postoperative care of the dam. *Clin Theriogenol.* 2023;15:70–81.
4. Ismail ZB. Dystocia in sheep and goats: outcome and fertility following surgical and non-surgical management. *Maced Vet Rev.* 2017;40(1):91–6.
5. Safdar AHA, Kor NM. Parturition mechanisms in ruminants: a complete overview. *Eur J Exp Biol.* 2014;4(3):211–8.
6. Ahmed A, Balarabe AT, Jibril A, Sidi S, Jimoh AA, Gobe RM. Incidence and causes of dystocia in small ruminants in Sokoto Metropolis, Northwestern, Nigeria. *Sch J Agric Vet Sci.* 2017;4(3):114–8.
7. Jacobson C, Bruce M, Kenyon PR, Lockwood A, Miller D, Refshauge G, et al. A review of dystocia in sheep. *Small Rumin Res.* 2020;192:106209.
8. Purohit GN. Dystocia in the sheep and goat – a review. *Indian J Small Rumin.* 2006;12(1):1–12.
9. Aitken ID, editor. *Diseases of Sheep.* 4th ed. Oxford: Blackwell; 2007.
10. Noakes DE, Parkinson TJ, England GCW, editors. *Veterinary Reproduction and Obstetrics.* 10th ed. London: Saunders (Elsevier); 2019. 848 p.
11. Bhattacharyya HK, Bhat FA, Buchoo BA. Prevalence of dystocia in sheep and goats: A study of 70 cases (2004–2011). *J Adv Vet Res.* 2015;5(1):14–20.
12. Galatos AD. Anesthesia and analgesia in sheep and goats. *Vet Clin North Am Food Anim Pract.* 2011;27(1):47.
13. Purohit GN, Barolia Y, Shekhar C, Kumar P. Maternal dystocia in cows and buffaloes: A review. *Open J Anim Sci.* 2011;1(2):41–53.
14. Norman S, Youngquist RS. Parturition and dystocia. In: Youngquist RS, Threlfall WR, editors. *Current Therapy in Large Animal Theriogenology.* 2nd ed. St. Louis, MO: Saunders (Elsevier); 2007. p. 310–35.

15. Abdullah FF, Chung EL, Sadiq MA, Abba Y, Tijjani A, Mohammed K, et al. Management of fetal dystocia caused by carpal flexion in ewe: a case report. *J Adv Vet Anim Res.* 2015;2(2):225–8.
16. Hemalatha H, Murugavel K, Antoine D, Kantharaj S, Raju MS. Episiotomy to relieve dystocia due to infantile vulva in a goat. *Indian J Anim Reprod.* 2018;39(2):74–5.
17. Behera H, Patra BK, Das J, Narayan Prasad UVS, Naik M. Delivery of dead foetus by episiotomy in an indigenous cow. *Indian J Anim Reprod.* 2023;44(2):101–3.
18. Dalal J, Saini A, Gunwant P, Pandey AK, Singh G, Chandolia RK. Episiotomy to relieve dystocia due to vulvar stenosis and persistent hymen in a crossbred cow heifer. *Indian J Anim Reprod.* 2016;37(2).