CASE REPORT Bhartiya Krishi Anusandhan Patrika, Volume 39 Issue 3-4: 348-350 (September and December 2024)

Non-surgical Management of Uterine Torsion in Goat: A Report of Five Cases

Akshay Sharma[1], Pravesh Kumar[1], Amit Kumar Sharma[1], Ankit Kumar Ahuja[1], Jahanvi Sharma[1], Pururava Sharma[1], Pankaj Sood[1]

10.18805/BKAP726

ABSTRACT

Background: Uterine torsion is a relatively infrequent occurrence in goats, with reported incidence rates ranging between 1.8% to 2.0%. Accurate diagnosis of this condition poses a notable challenge due to inherent limitations associated with traditional palpation techniques, namely trans-rectal and trans-vaginal examinations. Moreover, the resemblance of clinical signs to incomplete cervical dilation compounds the diagnostic conundrum, necessitating more precise diagnostic modalities. Trans abdominal sonography has been introduced for diagnosis but is not considered completely reliable for confirming the condition. Laparohysterotomy is considered the treatment of choice. Besides, Modified Schaffer's Method has also been used for the correction of torsion and has proven competent.

Methods: Trans-vaginal examination for the diagnosis of the condition followed by correction using Modified Schaffer's Method was attempted in every case. As per the circumstance, a mutation in necessary cases followed by forced extraction was attempted for the removal of the fetus.

Result: The non-surgical detorsion approach proved effective, allowing transvaginal palpation of the fetus in the birth canal in all cases, relieving maternal discomfort from dystocia. Additionally, this method eliminated the need for laparohysterotomy, thus mitigating the risk to the goat.

Key words: Goat, Modified schaffer's method, Non-surgical management, Uterine torsion.

INTRODUCTION

Uterine Torsion is defined as the rotation of uterus on its longitudinal axis. It is most prevalent in cattle and buffalo with occasional occurrence in bitches, queens, ewes, does and mares and rarely found in sow (Roberts, 1986). The disorder is mostly associated with late first stage or early second stage of parturition. The limited access pertaining to trans-rectal and trans-vaginal examination in small ruminants pose a challenge in diagnosis of the condition (Sharun and Erdogan, 2019). The management of condition involves laparohysterotomy. The efficacy of Modified Schaffer's Method in correcting uterine torsion is supported by evidence from several studies. Balasubramanian *et al*. (2013); Biswal *et al*. (2015); Sharma *et al*. (2018); Chahar *et al*. (2018) and Ramteke *et al*. (2023) have all reported successful outcomes using this approach. These findings underscore the reliability and competence of Modified Schaffer's Method as a non-surgical intervention for uterine torsion in goats.

MATERIALS AND METHODS

The study entails an analysis of five cases of dystocia presented at the Department of Veterinary Gynaecology and Obstetrics. Upon trans-vaginal examination, uterine torsion was identified as the underlying cause of dystocia. The corrective approach employed in each case involved the application of Modified Schaffer's Method, also known as the Plank on Flank technique, utilizing a flank measuring 6″ × 7″ × 1″.

[1]Department of Veterinary Gynaecology and Obstetrics, DGCN College of Veterinary and Animal Sciences, Chaudhary Sarwan Kumar Himachal Pradesh Agriculture University, Palampur-176 062, Himachal Pradesh, India.

Corresponding Author: Pururava Sharma, Department of Veterinary Gynaecology and Obstetrics, DGCN College of Veterinary and Animal Sciences, Chaudhary Sarwan Kumar Himachal Pradesh Agriculture University, Palampur-176 062, Himachal Pradesh, India. Email: pururavasharma@gmail.com

How to cite this article: Sharma, A., Kumar, P., Sharma, A.K., Ahuja, A.K., Sharma, J., Sharma, P. and Sood, P. (2024). Non-surgical Management of Uterine Torsion in Goat: A Report of Five Cases. Bhartiya Krishi Anusandhan Patrika. 39(3-4): 348-350. doi: 10.18805/BKAP726.

Submitted: 15-03-2024 **Accepted:** 26-06-2024 **Online:** 30-09-2024

Prior to the correction procedure, meticulous stabilization protocols were implemented. This included the administration of antibiotics, analgesics, corticosteroids and intravenous infusions, tailored to the individual condition of each goat. The aim was to establish a stable physiological environment conducive to the corrective intervention. The correction process itself involved the execution of repeated rolls towards the side of the torsion, with the number of rolls determined by the severity of the torsion. Notably, the intervention protocol adhered to a strict limit of three rolls per case to mitigate the risk of iatrogenic complications.Following each roll, a comprehensive trans-vaginal examination was conducted

Table 1: Clinical gynaecological examination.

Case number	Parity	Signs of pain	Gestation length	Duration	Side and site of torsion	Degree of torsion
1.	Primiparous	Present	Full term	>48 hrs	Right side and post cervical	120°-130°
2.	Four	Present	Full term	<24 hrs	Right side and post cervical	90°-120°
3.	Three	Present	Full term	<24 hrs	Right side and post cervical	180°-270°
4.	Nulliparous	Present	Unknown	>48 hrs	Right side and post cervical	90°-120°
5.	Three	Present	Full term	<24 hrs	Left side and post cervical	90°-180°

Table 2: Outcome of cases.

Case number	Number of rolls given	Obstetrical intervention alongside rolling of dam	Number and sex of kid (s)	Viability of kid (s)
1.	Two	No	1 (Female)	Stillborn
2.	Two	Correction of flexed forelimbs	1 (Male)	Stillborn
3.	Three	No	1 (Male)	Stillborn
4.	One	Correction of left lateral deviation of head and neck	1 (Male)	Stillborn
5.	Two	No	3 (2 Male and 1 Female)	Male: Live Female: Stillborn

to evaluate the efficacy of the corrective maneuvers and to assess any incremental improvements in uterine alignment. Subsequent to successful correction, obstetrical mutation techniques were employed, facilitating the manual removal of the fetus in accordance with established principles governing dystocia management.

Clinical gynaecological observations

All the cases presented after detailed anamnesis were examined for clinical signs and followed by gynaecological examination. The detailed data has been tabulated in Table 1.

RESULTS AND DISCUSSION

Detorsion using the non-surgical approach of Modified Schaffer's Method proved successful, without any exception in the management of uterine torsion. 40% of the cases required obstetrical mutations. 80% of cases were associated with singleton pregnancy and the fetus was stillborn in all such pregnancies. One doe had a triplet pregnancy, which delivered two live males and one stillborn female. Table 2 summarizes the outcome of the detorsion.

Modified Schaffer's method as described in bovines (Ghuman, 2010; Ghosh *et al*., 2013; Sutaria *et al*., 2015; Deka *et al*., 2022) and small ruminants (Balasubramanian *et al*., 2013; Biswal *et al*., 2015; Sharma *et al*., 2018; Chahar, 2018; Ramteke *et al*., 2023); was opted for correction of uterine torsion. Besides modified schaffer's method, laparohysterectomy (Shukla *et al*., 2007), swing rotation technique (Prabharan *et al*., 2021) is also used for managing the condition. Diagnosing uterine torsion in small ruminants presents challenges due to limited accessibility for thorough examinations such as trans-vaginal and trans-rectal assessments (Sharun and Erdogan, 2019). While transabdominal ultrasonography has been utilized, it does not consistently confirm the condition (Wehrend *et al*., 2002). Research by Baria *et al*. (2023) indicates that in goats, uterine torsion typically occurs on the right side and involves the post-cervical region. Moreover, the majority of torsion cases in goats involve singleton pregnancies with multiple parities.

CONCLUSION

It can be concluded that modified schaffer's method can be effectively used to manage uterine torsion with 100% efficacy. The efficacy of managing uterine torsion through the Modified Schaffer's Method is unequivocally demonstrated by its consistent success rate of 100%. This non-surgical approach has proven to be highly effective, providing a reliable solution for this challenging obstetric condition. By effectively resolving torsion without resorting to surgery, the Modified Schaffer's Method offers a safer and less invasive alternative for both veterinary practitioners and dam.

In peroration, the Modified Schaffer's Method stands as a highly effective and reliable approach for managing uterine torsion, offering a non-surgical alternative with a remarkable success rate Its proven efficacy, adaptability and safety make it an indispensable tool in the veterinary arsenal for addressing this challenging obstetric complication.

Conflict of interest

All authors declare that they have no conflicts of interest.

REFERENCES

Balasubramanian, S., Sathiamoorthy, T., Raja, S. and Manokaran, S. (2013). Successful non-surgical correction method for uterine torsion in goats. Indian Journal of Field Veterinarians (The). 9(1): 71-72.

Baria, V.R., Chauhan, P.M., Suthar, B.N., Patel, R.M. and Prajapati, A.S. (2023). Retrospective analysis of clinical attributes related to uterine torsion in goats. Indian Journal of Veterinary Sciences and Biotechnology. 19(2): 23-27.

Biswal, S.S., Balasubramanian, S., Das, A.K., Umamageswari, J. and Cecilia, J. (2015). Correction of uterine torsion using modified Schaffer's method in a goat. International Journal of Livestock Research. 5(1): 36-38.

Chahar, S.K., Dholpuria, S. and Choudhary, A.K. (2018). Management of uterine torsion in goat: A case report. International Journal of Applied Engineering Research. 13(13): 11034-11034.

Deka, R., Baruti, M., Bhuyan, M., Roy, J., Kalita, A., Rongmei, S.D. and Hegde, A.K. (2022). Management of uterine torsion in a holstein friesian cow: A case report. The Pharma Innovation Journal. 11(4): 90-92.

Ghosh, S.K., Singh, M., Prasad, J.K., Kumar, A. and Rajoriya, J.S. (2013). Uterine torsion in bovines-a review. Intas Polivet. 14(1): 16-20.

Ghuman, S.P.S. (2010). Uterine torsion in bovines: A review. Indian Journal of Animal Sciences. 80(4): 289-305.

Prabaharan, V., Kumar S.S. and Prakash S. (2021). A Novel 'Swing-rotation'approach for the correction of post-cervical uterine torsion in a doe. The Pharma Innovation Journal. 10(8): 1190-1191.

Ramteke, S.S., Koli, A.B., Natkar, S.B., Yewle, L.V. and Patil, A.D. (2023). Successful management of left sided post-cervical uterine torsion in goat with modified schaffer's method. Animal Reproduction Update. 3(1): 12-13.

Roberts, S.J. (1986). Diagnosis and treatment of the various types of dystocia. Veterinary Obstetrics and Genital Diseases (Theriogenology). Woodstock, Edwards Brothers Inc. pp. 213-217, 230-233, 337-343, 357-359.

Sharma, A., Singh, M., Kumar, P. and Gupta, S. (2018). Management of uterine torsion in a goat by modified Schaffer's method. Journal of Bio Innovation. 7(5): 753-755.

Sharun, K. and Erdoğan, G. (2019). A review: Obstetrical emergencies in small ruminants. Alexandria Journal for Veterinary Sciences. 62(1): 1-16.

Shukla, M.K., Siddiquee, G.M. and Nair, R. (2007). Clinical management of uterine torsion in a goat. The Indian Journal of Veterinary Research. 16(2): 29-31.

Sutaria, T.V., Kapadiya, P.S., Nakhashi, H.C., Chauhan, P.M., Suthar, B.N. and Sharma, V.K. (2015). Study on treatment efficacy of uterine torsion in Mehsana buffaloes. Ruminant Science. 4(1): 109-111.

Wehrend, A., Bostedt, H. and Burkhardt, E. (2002). The use of trans-abdominal B mode ultrasonography to diagnose intra-partum uterine torsion in the ewe. The Veterinary Journal. 164(1): 69-70.