SUCCESSFUL NON-SURGICAL CORRECTION METHOD FOR UTERINE TORSION IN GOATS

S.Balasubramanian, T.Sathiamoorthy , S. Raja and S. Manokaran

Department of Animal Reproduction, Gynaecology and Obstetrics

Madras Veterinary College, TNVASU, TamilNadu, Chennai-600 007.

Corresponding author : E mail - argoraja@gmail.com

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In goats, the gravid horn is in the shape of an arc or U-shaped loop with the vagina and ovary at the respective end of the arc. Uterine torsion signifies the rotation of this arc on its transverse axis, though observed in all animals (Noakes *et al*., 2001), report on its occurrence in goats is scarce. In general, detorsion procedures described include simple rolling of the dam and C-section. In the present communication, a simple non-surgical method, a modified Schaffer's technique adopted in cattle, for successful correction of uterine torsion in goats is reported.

HISTORY AND CLINICAL EXAMINATION

During the period 2008 – 2010, out of 123 dystocia cases in goats presented to the large animal obstetrics unit of Madras Veterinary College, 4 non-descript goats diagnosed as having uterine torsion formed the material for this study.

Case I: Per vaginal examination revealed a strong twist of cranial vaginal mucosa running towards left side resulting in abrupt vaginal passage and finger could not be passed. The case was thus, diagnosed as post-cervical left side torsion of >180°.

Case II & III: Per vaginal examination of case II revealed left side twist of cranial vaginal mucosa but one finger could be negotiated through the twist. Case III revealed a pink and moist vaginal mucus membrane with no abnormality detectable on vulval lips. However, digital examination revealed that vaginal fold was running towards left side but one finger could be negotiated through the twist. These 2 cases were diagnosed as post-cervical left side uterine torsion of >90°.

Case IV: Per vaginal examination revealed a strong twist towards left side and one finger could be passed with difficulty but not able to palpate any parts of the fetus. The case was diagnosed as left side post-cervical uterine torsion of ~180°.

OBSTETRICAL APPROACH

The clinical cases were casted over the examination table on lateral recumbency of the side of torsion, with both the forelegs and both the hind legs held separately by assistants. A writing pad of 35.5 cm length x 23.5 cm breadth x 0.3 cm thickness was placed over the flank region in the area where the fetal mass was palpable and held in position by the obstetrician in order to fix the uterus from externally (Fig.1). Each animal was then slowly and steadily rolled towards the same side of torsion, as per modified Schaffer's technique used in bovines. Correction was judged by relieving of the vaginal folds and appearance of water bag through the vulva. Single rotation was sufficient for case II and III, while case I and IV required two complete rotations. Per vaginal examination following correction revealed each had two dead fetuses in the left horn in case I and IV, respectively. Case II had bicornual pregnancy with two fetuses in the left horn and one fetus in the right horn. Whereas case III, had a single live fetus in the left horn in anterior longitudinal presentation, dorso-sacral position with right shoulder flexion. After correction by mutational operation, fetuses were delivered per vaginal by judicious application of traction. No evidence of tear/laceration was noticed following delivery. All goats were administered with injection oxytocin 15 IU, and inj. Chlorpheniramine maleate 2 ml intramuscularly and 5% Dextrose Normal Saline 150 ml intravenously post-operatively.

Fig.1: *Placement of a writing pad over the right lower abdomen for correction of left side uterine torsion in a goat*

DISCUSSION

In goats, the cause of low incidence of uterine torsion may be associated with the sub-lumbar attachment of mesometrium rather than the sub-ilial as in cows (Frazer *et al.*, 1996). Since only complicated cases of dystocia were referred to the hospital, figure might not reflect the true incidence of uterine torsion as a major cause of dystocia in goats. Uterine torsion probably occurs during early part of second stage of labor or the later part of the first stage because the cervix was found to be dilated immediately after the torsion was relieved. The predisposing causes for uterine torsion in above discussed cases might be associated with non-functional right horn (case I and IV) or unequal fetal number in uterine horn (case III) as suggested by Roberts (1971). Though twinning in ruminants tends to prevent the torsion, a case of torsion (case II) in which bicornual pregnancy was recorded. The probable cause of this unusual finding might be associated with the rolling habit of goats and the uterine instability due to unequal number of fetuses in uterine horns.

The degree of uterine torsion recorded in this study was 90° to 360°, while Kumar *et al*. (1992) and Sood *et al*. (2002) have recorded 90° and 120°, respectively. All the four cases recorded were post-cervical left uterine torsion, unlike those reported independently by Kumar *et al*. (1992) and Sood *et al*. (2002).

A simple method for correction of uterine torsion in small ruminants, which is a modified Schaffer's method adopted in cattle required less number of animal handlers (maximum three) and was 100 per cent successful. The use of a writing pad provided a wider surface area for better fixation of uterus and allowed application of uniform pressure throughout the flank unlike the unequal pressure generated by use of hands as suggested by Kumar *et al.* (1992). By this method, successful delivery of fetus was thus possible with dam survival rate of 100 per cent and fetus survival rate of 33 per cent.

In conclusion, simple non-surgical method, a modified Schaffer's technique adopted in cattle, can be adopted successfully in goat for correction of uterine torsion.

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