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Case Report

Successful Surgical Management of Uterine Torsion with Imperfect Cervical Dilatation in a Pattanam Ewe

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Abstract

A two and half year old Pattanam Ewe was brought to Veterinary Clinical Complex, Veterinary College and Research Institute, Orathanadu with the history of prolonged gestation. Per-vaginal examination revealed twisting of vaginal fold spirally downward and forward towards) the right side. Cervix was not palpable. Based on vaginal examination the case was diagnosed as post cervical right-side uterine torsion. Uterine torsion was successfully corrected by modified Schaffer' s method. After detorsion per-vaginal examination revealed one finger dilatation of cervix. Hence, it was, decided to facilitate the cervical dilatation by administration of Dextrose, synthetic prostaglandins and dexamethasone. The animal was repeatedly examined for the dilatation of the cervix daily for 2 days but animal did not respond to the treatment. Therefore, Caesarean section was performed as per standard procedure and a live female fetus was delivered. Post operatively the animal was treated with antibiotic, anti-inflammatory, antihistamines for seven days and the animal had an uneventful recovery.

Keywords: Caesarean Section, Ewe, Imperfect Cervical Dilatation, Uterine Torsion

Introduction

Dystocia causes economic losses with increasing perinatal deaths, high incidences of puerperal diseases and infertility in small ruminants (Noakes *et al.,* 2009). Uterine torsion is a maternal dystocia characterized by rotation of the uterus along its longitudinal axis during (later part of first stage or early part of second stage labor). It has been reported to occur in all domestic animals, seen most commonly in bovines and occasionally in goats due to frequent bicornual pregnancy (Roberts, 1971). In small ruminant's maternal dystocia due to uterine torsion is occasional and accounts for 2% of etiological factors. Most torsion occurs during the later phase of first stage or the early phase of second stage of parturition (Jackson, 2004)**.** Most frequent cause of dystocia in these species is abnormal fetal position (50-56%), obstruction of the birth canal in sheep (35%), and fetus or maternal disproportions in goats (20%) (Jackson, 2004).

Ring womb or imperfect dilatation of cervix is a common condition that leads to dystocia in goat (Engum and Lyngset, 1970) and sheep (Ward, 1975). The ring womb was found to be more in young animals at their first parturition and was also found to be associated with vaginal prolapse in goats (Majeed and Taha, 1989). $PGF_2\alpha$ or its analogues can produce effective cervical dilatation and hence can be used for the management of ring womb in small ruminants. Ring womb in does can be treated successfully with prostaglandin analogue, but after the event of unsuccessful treatment, the C-section is the only option (Kalim *et al.,* 2015 and Gahlot *et al.,* 2017). Uterine torsion can be confused with incomplete cervical dilatation due to the limitations of pervaginal examination in small ruminants. In such cases, uterine torsion can be diagnosed in the C-section when the uterus will be visible grossly (Scott, 2011). Several authors have reported the use of Modified Schaffer's method (Plank method) for the management of uterine torsion in small ruminants (Biswal *et al.,* 2015). Causes of dystocia like incomplete cervical dilatation/ring womb, irreducible malpresentation, feto-pelvic disparity, fetal emphysema and monsters have to be managed by caesarean section (Kumar *et al.,* 2013). In the present communication, successful surgical management of uterine torsion in ewe was reported.

Case History and Observation

A two and half year old Pattanam ewe was brought to Veterinary Clinical Complex, Veterinary College and Research Institute, Orathanadu with the history of prolonged gestation. Gross examination revealed that the animal was dull, depressed and anorectic for the past five days. Per-vaginal examination revealed twisting of vaginal fold spirally downward and forward to the right side. Cervix was not palpable. Based on vaginal examination it was diagnosed as post cervical right-side uterine torsion. Ewe was casted on a sand area on right lateral recumbency~~)~~ towards the side of torsion and a wooden plank (size 4'x6"x0.5") was placed over the flank region (Fig. 1). In order to fix the uterus externally one person applied pressure using his hands at the flank region uterine torsion was successfully corrected by modified Schaffer's method by rolling the animal slowly towards the right side (Fig. 2). After detorsion, per-vaginal examination revealed one finger dilatation of cervix.

Figure 1: Fixing of the Plank

Figure 2: Rolling towards right side

Treatment and Discussion

Since detorsion yielded only one finger dilatation of the cervix, it was~~,~~ decided to facilitate the cervical dilatation by administering 25 % Dextrose – 100 ml I/V, Injection Calcium borogluconate 50 ml I/V, Injection Cloprostenol -250 µg I/M and Injection Dexamethasone 20 mg I/M. The animal was periodically examined for the dilatation of the cervix daily for 2 days but animal didn't respond to the treatment. Finally, it was decided to perform the caesarean section to save the life of the ewe. The animal was casted in right lateral recumbency, surgery was

accomplished under para -vertebral nerve block using 2% Lignocaine Hcl and a live female lamb was removed from the uterus. After removal of live fetus one complete rotation (180^{o}) was made to detort uterus. After that, the uterus was flushed with normal saline and 2 % povidone solution. The uterine incision, abdominal muscles and skin were closed as per standard procedures. The ewe was treated post-operatively as outpatient in with (Enrofloxacin) 2 ml, i/m, 10 IU of Oxytocin i/m, Flunixin meglumine @1.1mg/kg b.wt i/m, Chlorphenaramine maleate @ 0.5mg/kg b.wt i/m, Meloxicam @ 0.5mg/kg b.wt i/m for five days and skin sutures were removed after 7 days. (Fig. 3) and the animal had an uneventful recovery.

Figure 3: Animal during the follow up

Exact mechanism which causes failure of cervical ripening is still unknown. Alteration in hormonal concentration including steroids, prostaglandin and relaxin at term may be a factor in poor cervical ripening or cervical dilatation (Gahlot *et al.,* 2017). Glucose, phosphorus and calcium deficiency is considered as important predisposing causes of ring womb or imperfect cervical dilatation in sheep (Al-Sultan and Majeed, 1996). Clinical cases of cervical dilatation failure have to be treated as emergencies to safeguard the life of fetus and dam by caesarean section *(*Sharun and Erdogan, 2019*).* Torsion of uterus is a problem of late first stage or early second stage of labor due to instability of uterus which results from greater curvature of organ being dorsal and uterus being disposed anterior to its sub-ilial suspension by broad ligaments. Torsion may also occur due to running of animal, loss of fetal fluids and movements of animals up and down the hill (Roberts, 1971). Caesarean section is considered as the only treatment option when per-vaginal delivery of fetus is not possible. Caesarean section is easier to perform in small ruminants when compared to large ruminants. Finally, it can be concluded that cases of post cervical uterine torsion that respond partially to detorsion and medical management resulting in imperfect cervical dilatation shall be subjected to an immediate emergency caesarean section to safeguard both the dam and the fetus.

Conclusion

In the present study, successful surgical management of post cervical right-side uterine torsion in Pattanam ewe was reported.

Conflict of Interests

There is no conflict of interest.

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