

*Case Report***Management of Post-Partum Uterine Eversion in a Doe Using Retention Sutures****K. M. Manjusha¹, Khan Sharun^{1*}, C. V. Haritha², S. S. Asha Lekshmi³, A. T. Faslu Rahman⁴, K. S. Jisna⁵ and M. S. Sivaprasad³**

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Abstract

A case of total uterine eversion (uterine prolapse) in a doe and its successful management is described. The prolapsed uterine mass was carefully assessed and debris were removed by washing with mild potassium permanganate solution. Epidural anesthesia was achieved by infiltration of 2% lignocaine solution into the sacro-coccygeal vertebral space to prevent straining during correction of the prolapsed organ. The prolapsed masses were replaced back into the normal anatomical position after properly restraining the animal with hindquarters raised. Buhner's suture was done in order to prevent recurrence. Antibiotics, analgesic and tetanus toxoid, were administered intramuscularly. The retention suture was removed after 10 days. There was no incidence of recurrence and the doe recovered uneventfully.

Key words: Doe, Epidural Anesthesia, Post-Partum, Retention Sutures, Uterine Eversion**How to cite:** Manjusha, K., Sharun, K., Haritha, C., Lekshmi, S., Rahman, A., Jisna, K., & Sivaprasad, M. (2020). Management of Post-Partum Uterine Eversion in a Doe Using Retention Sutures. International Journal of Livestock Research, 10(1), 88-93. doi: 10.5455/ijlr.20191112061926**Introduction**

Obstetrical emergencies are common in small ruminants like sheep and goat. A great understanding of their pathophysiology will help in the timely intervention (Sharun and Erdogan, 2019). Uterine prolapse can occur in most of the animal species but cow and ewe are most commonly affected compared to doe whereas mares are rarely affected (Roberts, 1986). It is an alarming situation in which the uterus is prolapsed through the vagina and hence requires immediate intervention (Noakes *et al.*, 2001). Uterine prolapse usually occurs shortly after parturition or within few hours when the cervix is relaxed and the uterine tonicity is less (Hanie, 2006). There can also be some rare cases of uterine prolapse that occurs 24 hours postpartum and in such

conditions chances of complications are more due to partial closure of cervix that makes the correction impossible to perform (Fubini and Ducharme, 2006).

Soon after the occurrence, the prolapsed tissue appears to be normal in texture but gets damaged within few hours. The complications associated with uterine prolapse include internal bleeding that lead to hypovolemic shock and tearing of the prolapsed uterus (Potter, 2008). The uterus will be hanging from the vulva often below animal's hock making it more susceptible to injury (Senthilkumar *et al.*, 2017). Prolapse occurs during the last stage of labor when the fetus is pushed out and the fetal membranes have been separated from maternal parts (Noakes *et al.*, 2001). Success of treatment depends on the type of case, the duration of the case, the degree of damage and contamination. Other than the commonly used Buhner's suture, trans-vulval horizontal mattress retention sutures using nylon can be applied after replacing the prolapsed uterus to prevent any further recurrence (Sonu *et al.*, 2019). Modified vaginal retention suture can also be used for this purpose (Patra *et al.*, 2015).

The present report describes a case of uterine eversion in a doe and its successful management using retention sutures.

Case History and Observations

A nondescript doe weighing around 30 kg was brought to Veterinary Hospital, Kozhinjampara with the history of kidding a single dead kid which was forcefully pulled out by the owner. Following the delivery, the animal exhibited continuous straining and later the uterus was found to be everted (Figure 1). The prolapsed mass was hanging out of vulva and the fetal cotyledons were tightly attached to the maternal part. The prolapsed uterus was found to be congested and edematous. On physical examination all the parameters were found to be within the normal range. The case was diagnosed as post-partum total uterine prolapse (uterine eversion) based on the history and clinical signs.



Fig. 1: The prolapsed uterus hanging from the vulva



Fig. 2: Application of magnesium sulphate crystals on the prolapsed mass to relieve the edema

Treatment

The prolapsed mass was washed with clean water followed by 0.1% potassium permanganate solution. Magnesium sulphate crystals were applied over the prolapsed mass in order to relieve the edema (Fig. 2). The distended bladder was evacuated by raising the prolapsed mass to the level of vulva. The fetal cotyledons were separated from the maternal caruncles carefully to avoid any further damages. The prolapsed mass was again washed using potassium permanganate solution. For correcting the prolapse, the hind quarters were elevated with the help of two assistants that facilitated the easy placement of uterus into normal anatomical position by the surgeon. The prolapsed mass was replaced into the pelvic cavity by applying pressure with palm (Fig. 3).

Buhner's suture was applied to prevent further recurrence of the prolapse (Fig. 4). The owner was also advised to apply Lorexane® spray (a product of Virbac Animal Health India Private Limited). Antibiotic therapy was initiated by administering ceftriaxone at the dose rate of 10 mg/kg bodyweight intramuscularly for five days along with anti-inflammatory drug meloxicam at the dose rate of 0.3 mg/kg body weight intramuscularly for three days. The doe was also given a dose of tetanus toxoid intramuscularly as a prophylactic measure. The vulval retention sutures were removed after 10 days. The animal made an uneventful recovery



Fig. 3: Repositioning the uterus using both hands



Fig. 4: After correction of the prolapse Buhner's suture is applied to prevent recurrence

Discussion

Prolapse or eversion of uterus is also called as 'casting of withers' or 'casting of calf bed' and is a common complication of third stage of labor in cow, buffalo, doe and ewe. The uterine eversion is a complication of non-hereditary origin. The uterus will be hanging from the vulva often below the animal's hock (Roberts, 1986). The correct cause of uterine eversion is not clear but hyperestrogenism, hypocalcaemia, dystocia, poor uterine tonicity and prolonged straining can be the contributing factors (Noakes *et al.*, 2001). The aim of the treatment should be the replacement of uterus back to its normal anatomical position so that it is retained. The animal should be examined for any signs of toxemia like tachypnea, tachycardia, lack of appetite and congested mucus membrane.

Everted uterus is highly prone to mechanical injury and trauma and environmental contamination that may lead to high maternal morbidity and can lead to death of the animal attributing to injuries, laceration, subsequent blood loss, tissue necrosis, bacterial contamination, sometimes urinary incontinence, hypocalcaemia, and shock (Jana and Ghosh, 2004). Care has to be taken while replacing the prolapsed mass. Trauma to the uterus can result in possible utero-peritoneal adhesion in the subsequent pregnancy resulting in uterine adhesion that may end up in dystocia (Sharun *et al.*, 2018). In ruminants the prolapse is generally a complete inversion of the gravid horn (Arthur *et al.*, 1989). Prompt treatment of the condition is essential to prevent toxemia and death of the animal. Fecal contamination of prolapsed uterus may increase the risk of toxemia (Bharti and Rajnish, 2014). The hindquarters of the animal can be elevated to ease the pressure exerted by the visceral organs thus facilitating easy replacement of the prolapsed mass (Velladurai *et al.*, 2016). The complication caused by uterine eversion, along with irritation and swelling of the exposed mucosa will result in more severe prolapse (Kamalakar *et al.*, 2017). The uterine eversion should be considered as an emergency and require immediate treatment, failure to correct may result in hindrance to the blood supply resulting in edema, cyanosis and later on can even develop into gangrene (Kapadiya *et al.*, 2015).

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