

Uterine Prolapse in a Doe Goat: A Case Report

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Abstract: This study reports a case of uterine prolapse in a doe goat. The animal was brought to the hospital with complaint of prolapse of the uterus. The everted organ was carefully assessed and gross debris removed by washing with dilute chlorhexidine solution. Epidural anaesthesia was achieved using lignocain solution. The prolapsed uterus was replaced and retention suture was placed on the vulva to prevent re prolapse. Oxytocin, dexamethasone, broad-spectrum antibiotics (penicillin and streptomycin) were administered intramuscularly. The animal was hospitalized for closed monitoring. There was no recurrence. Sutures were removed and the animal was discharged from the hospital.

Key words: Antibiotics, epidural anaesthesia, lignocain, oxytocin, suture, uterine prolapse

INTRODUCTION

Post partum uterine prolapsed occurs in all large animal species. It is most common in the cow and ewe, less common in the doe goat and rare in the mare. It is simply an eversion of the uterus which turns inside out as it passes through the vagina. Prolapse of the uterus generally occurs immediately after or a few hours of parturition when the cervix is open and the uterus lacks tone (Hanie, 2006). Prolapse that occur more than 24 h post partum is extremely rare and is complicated by partial closure of the cervix, making replacement difficult or even impossible (Fubini and Ducharme, 2006). The prolapse is visible as a large mass protruding from the vulva, often hanging down below the animal's hock. The placenta may likely be retained during this period (Roberts, 1982). It normally occurs during the third stage of labour at a time when the fetus has been expelled and the fetal cotyledons have separated from the maternal caruncles (Noakes *et al.*, 2001).

The etiology of uterine prolapse is unknown, But many factors have been associated (Hanie, 2006; Jackson, 2004). These includes conditions such as poor uterine tone, Increased straining caused by pain or discomfort after parturition, Excessive traction at assisted parturition, The weight of retained fetal membranes, Conditions that increased intra abdominal pressure including tympany and excessive estrogen content in the feed.

Animals with uterine prolapse treated promptly recovers without complication while delay treatment could result in death of the animal in a matter of hour or

so from internal haemorrhage caused by the weight of the organ which tears the mesovarium and artery (Noakes *et al.*, 2001). Success of treatment depends on the type of case, the duration of the case, the degree of damage and contamination. This study, therefore, aims at highlighting the management of uterine prolapse in small ruminants.

CASE REPORT

A 1½ year old West African dwarf goat weighing 13 kg was presented for evaluation and treatment of a prolapsed uterus (Fig. 1) which the owner noticed soon after the goat had kidded three days ago. History further revealed that this was her first pregnancy and the flock size is 10 goats. The owner normally allowed the goats out in the morning but lock them up in the pen at night.

A thorough physical examination was carried out and the vital parameters were: Temperature 39.9°C, Heart rate 126 beats/min, Respiratory rate 79 cycles/min and pulse rate 126 beats/min. The ocular mucous membrane was pinkish and the prolapsed uterus was swollen, necrotic and stained with faecal materials and debris.

Epidural anesthesia was achieved by infiltration of 2 mL of lidocaine solution into the first intercoccygeal vertebrae (Fig. 2) to prevent straining during replacement of the prolapsed organ. After allowing 5 min for the anaesthetics to take effect, sensitivity around the perineal region was assessed by pricking with a needle. The debris and faecal materials were gently removed and the prolapsed uterus was washed with warm dilute chlorhexidine solution (Hosie, 1993). The necrotic area



Fig. 1: Prolapsed uterus (arrow)



Fig. 4: Retention sutures on the vulva after replacement of the prolapsed uterus (arrow)



Fig. 2: Epidural anesthesia (arrow)



Fig. 3: Replacement of the prolapsed uterus

was debrided. The doe was then placed on sternal recumbency and the two hind limbs were pulled out behind her. Then using both hands with moderate force the prolapsed uterus was gently pushed in through the vagina (Fig. 3). The body was first pushed in followed by the horns. Horizontal mattress sutures using nylon size 0 was placed in the vulva as a retention technique to hold the uterus in place (Fig. 4).

Oxytocin 10 iu, Procain penicillin 20,000 i.u/kg and streptomycin 10 mg/kg were administered for 5 days. Dexamethasone 1 mg/kg was given for 3 days. The vulva retention suture was removed after 7 days.

The vital parameters which were above normal values when the animal was first presented were monitored on daily basis and normal values were attained on the third day of treatment.

DISCUSSION

Prolapse of the uterus normally occur during the third stage of labour at a time when the fetus has been expelled and the fetal cotyledons has separated from the maternal caruncles (Noakes *et al.*, 2001).

The goal in the treatment of uterine prolapse is replacement of the organ followed by a method to keep it in the retained position.

A full clinical examination of animals with uterine prolapse must be undertaken as signs of toxemia like inappetence, an increased respiratory rate, raised pulse and congested mucous membranes may be consisted with metritis. Vascular compromise, trauma and faecal contamination may also increase toxin intake across the uterine mucosa. However, careful removal of these materials, after soaking with warm dilute antiseptic solution is usually successful causing only minor capillary bleeding. Vigorous attempts to remove superficial contamination should be avoided as they may prove

counterproductive by increasing toxin uptake (Scott and Gessert, 1998).

A caudal epidural anaesthesia is essential before replacement of a uterine prolapse as it decreases straining and desensitizes the perineum (Hanie, 2006). This requires the area over the tail head to the second coccygeal vertebrae to be clipped and surgically prepared. The space between the first and second inter coccygeal vertebrae is then identified by digital palpation during slight vertical movement of the tail. The lignocain is then injected into the space between the first and second intercoccygeal vertebrae.

Injection of a combination of xylazine and lignocaine (at 0.07 and 0.5 mg/kg, respectively) at the first intercoccygeal site is another option that will also provide adequate analgesia to permit replacement of uterine prolapse after 5 to 10 min (Scott and Gessert, 1998).

The uterine prolapse can be replaced with the animal in standing or recumbent position (Hanie, 2006). Once the uterus is replaced, the operators hand should be inserted to the tip of both uterine horns to be sure that no remaining invagination could incite abdominal straining and re prolapse (Fubini and Ducharme, 2006). If the uterus is completely and fully replaced all the way to the tips of the uterine horns, the prolapse is unlikely to occur (Hanie, 2006). Once the uterus is in its normal position, oxytocin 10 i.u intramuscularly should be administered to increase uterine tone. It has also been reported that most animals with uterine prolapse are hypocalcaemic (Fubini and Ducharme, 2006). Where signs of hypocalcaemia are noticed such animals should therefore, be given calcium borogluconate.

An injectable broad spectrum antibiotics once administered for three to five days after replacement of the prolapsed will prevent secondary bacterial infection (Borobia-Belsue, 2006; Hosie, 1993; Plunkett, 2000). Dexamethasone is normally given to reduce the uterine swelling. Animals with uterine prolapse that were properly managed can conceive again without problems.

Complications develop when lacerations, necrosis and infections are present or when treatment is delayed.

Shock, hemorrhage and thromboembolism are potential sequelae of a prolonged prolapse (Noakes *et al.*, 2001).

The high vital parameters witnessed in this case when the animal was first brought could be as a result of metritis caused by secondary bacterial infection especially as the animal was brought for treatment after three days of occurrence of the prolapse. Treatment with broad spectrum antibiotics (penicillin 20,000 i.u/kg and streptomycin 10 mg/kg) was responsible for the lowering of the vital parameters to the normal values after three days of treatment.

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