

CLINICAL MANAGEMENT OF POST-PARTUM TOTAL UTERINE PROLAPSE WITH UTERINE RUPTURE FOLLOWING FORCED REPOSITIONING IN A NON-DESCRIPT GOAT

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Abstract: This study reports a case of uterine prolapse with uterine rupture in a doe goat. The animal was brought to the hospital with the history of prolapse of the uterus. The prolapsed mass was carefully assessed and gross debris was removed by washing with two per cent potassium permanganate solution. Epidural anaesthesia was achieved using lignocaine solution. The prolapsed uterus was replaced and found a tear in the dorsal wall of the uterus due to rough handling and weak muscles of the uterus. The uterine mass was re-everted and the tear was sutured and the repositioned correctly. The animal was treated with broad-spectrum antibiotics, analgesic, antihistamines were administered intramuscularly. The animal was treated for 3 more days as outpatient and the animal was discharged from the hospital.

Keywords: Goat, Uterine prolapse, Uterine rupture suture.

Introduction

The goat is one of the most fertile species among our domestic animals. Prolapse of uterus is a common complication of third stage of labour in ruminant species but comparatively less common in caprines and rare in mare (Noakes *et al.*, 2009; Wachida and Kisani, 2011) Within few minutes to few hours of delivery of new born the postpartum uterine prolapse may occur which uterus is everted out (Hanie, 2006).

Etiology of uterine prolapse is unknown, but many factors have been associated with it (Noakes *et al.*, 2009). These includes poor uterine tone, increased straining caused by pain or discomfort after parturition, by excessive traction at assisted parturition or by the weight of retained fetal membranes, conditions such as tympany and excessive estrogen content in feed leads to increased intra-abdominal pressure leading to uterine prolapse.

Immediately after occurrence of prolapse, the tissues appear almost normal, but with as the time advances it become enlarged and edematous. Some animals may develop hypovolaemic shock secondary to internal blood loss, laceration of the prolapsed organ or incarceration of

abdominal viscera (Potter, 2008). Success of treatment depends on the type of case, duration of case, degree of damage and contamination. The present report puts on a case of the management of uterine prolapse with uterine rupture in goat and its successful clinical management.

History and clinical observations

A 2½ year old non descriptive goat was presented for evaluation and treatment of a prolapsed uterus which the owner noticed soon after the goat had kidded five hours ago. A thorough physical examination was carried out and the vital parameters were: Temperature 38.9°C, Heart rate 118 beats/min, Respiratory rate 68 cycles/min and pulse rate 112 beats/min. The congestive mucous membrane was pinkish and the prolapsed uterus was swollen, necrotic and stained with faecal materials and debris (Fig. 1).

Clinical Management

Epidural anesthesia was done by infiltration of 2 mL of lignocaine solution into the first intercoccygeal vertebrae 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 prolapsed uterus was cleaned, washed with weak potassium permanganate solution (1%) very gentle washing was done. The blood clots, necrosed part, faeces, straw were removed completely from prolapsed mass. A total of 2 litres of hypertonic saline solution was poured over the prolapsed mass for 10 minutes slowly. With these efforts, prolapsed was shrunk and size was reduced. The doe was then placed on sterna 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. After repositioning of the uterus, vaginal examination reveals a tear on the dorsal part of the uterus upto a length of 10 cm was observed (Fig. 2). This may be due to the weakened uterine muscle and forced repositioning may lead to this condition. Hence, the uterus was re-everted from the pelvic cavity to the outside through the vulva and rupture was sutured with lambert and cushing suture methods (Fig. 3) and the uterus was again repositioned carefully after sufficient application of the lubricants (Fig. 4).

After complete repositioning of prolapsed mass, the animal was treated with fluid therapy, *viz.* dextrose normal saline @ 100 ml I/V and Multivitamin @ 1 ml I/M, chlorphenaramine maleate @ 1 ml I/M total dose, Meloxicam @ 0.5 mg/kg b.wt., I/M, Oxytocin 20IU I/M for 3 successive days.

Discussion

The above procedure was found to be very effective in handling a complicated case of uterine prolapse with uterine rupture in a goat. Uterine prolapse is associated with onset of uterine inertia during 3rd stage of labour and its sequel is haemorrhage, shock, septic metritis, peritonitis, infertility or death (Arthur *et al.* 1996). Some animals will develop hypovolaemic shock secondary to internal blood loss, laceration of prolapsed organ or incarceration of abdominal viscera (Potter, 2008). The protruding tissues with their circulation impaired are prone to injury and infection. The resultant irritation causes expulsive straining efforts thus increasing severity of prolapse. Thrombosis, ulceration and necrosis of prolapsed organ, accompanied by toxemia and severe straining lead to anorexia, rapid deterioration in body condition and occasionally death. Complications of shock due to exposure of visceral organ might be responsible for death of animals (Noakes *et al.*, 2009).

Handling of prolapsed organ invariably leads to tenesmus and therefore epidural anesthesia is mandatory which desensitized perineum, thus providing easy and painless manipulation of prolapsed mass. Application of ice packs caused softening of prolapsed mass and also moistened it, thus making manipulation and repositioning much easier. (Tyagi and Singh, 2002).

The prognosis of prolapsed uterus normally favourable for uncomplicated case where there has been no serious damage to uterus. The animal made to stand and uterus not severely injured prognosis for life of animal is good. In other cases with the animal unable to rise and condition complicated by shock, internal haemorrhage of intestines, the prognosis is usually from very poor to hopeless (Roberts, 1971; Burgess, 1975).

Complications develop when lacerations, necrosis and infection are present or when treatment is delayed. Shock, haemorrhage and thrombo-embolism are potential sequel of prolonged prolapsed (Noakes *et al.*, 2009; Kalita *et al.*, 2018) however, if managed properly animal can conceive again without problem (Pothiappan *et al.*, 2013).

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Fig 1: Total Uterine Prolapse at the time of reduction



Fig 2: suturing the uterine tear



Fig 3: After repairing the uterine tear



Fig 4: After treatment