



Postpartum Uterine Prolapse and Vaginal Cystocoele in a Murrah Buffalo

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ABSTRACT

A pluriparous Murrah buffalo was presented with vaginal tear over fornix vagina along with post-partum prolapse of uterus, cervix and urinary bladder. The case was managed by suturing of vaginal wall after repositioning the prolapsed mass. The catheterization of urinary bladder and modified Buhner's sutures through vulvar lips were applied to prevent the recurrence of the condition.

Keywords: Vaginal tear, Postpartum prolapse, Catheterization, Modified Buhner's sutures.

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INTRODUCTION

Post-partum uterine prolapse occurs most commonly following parturition. The relaxation of pelvic ligaments, along with straining, lack of uterine tonicity, increase in intra-abdominal pressure, uterine inertia and loss of muscular tonicity might be the cause of uterine prolapse (Arthur *et al.* 1996). The forced extraction over relaxed pelvic structure, flaccid uterus and hyper-estrogenism are also considered as predisposing factors for the condition (Hanie, 2006). Also, in neglected cases of prepartum cervico-vaginal prolapse, complete prolapse of gravid genitalia

and rupture of vaginal wall may occur as a serious complication through tear in vaginal wall (Singh *et al.* 2018).

CASE HISTORY AND OBSERVATIONS

A six-year-old pluriparous Murrah buffalo with the history of post-partum prolapse since last ten hours was brought to Veterinary Clinical Complex, Lala Lajpat Rai University of Veterinary and Animal Sciences, Hisar. Anamnesis revealed calving two days back and manual removal of

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placenta 6 hours later. Clinical examination revealed normal physiological parameters (rectal temperature: 102°F, respiration rate: 8/minute, heart rate: 74 beats per minute). Examination of prolapsed mass revealed that the vagina was congested and oedematous, cervix was visible in the centre of most caudal part of prolapsed mass and a tear in the vaginal wall through which uterus and urinary bladder were protruding out (Fig. 1). Bleeding was also evident from the vaginal tear which was controlled by application of artery-forceps.



Fig. 1. Prolapse of uterus through tear in vaginal wall

TREATMENT AND DISCUSSION

After epidural anaesthesia with 5 ml of 2% lignocaine hydrochloride between 1st and 2nd inter-coccygeal space and sedation with 1 ml xylazine I/M, the prolapsed mass was thoroughly washed with potassium permanganate solution. The urinary bladder was emptied with 18G disposable needle (Fig. 2). The animal was restrained on mattress over an inclined plane so that the pelvic region was at higher position. The prolapsed uterus along with urinary bladder were repositioned properly after application of ice-pack for about 15 minutes, and the torn vaginal tissue was sutured with vicryl No. 2 in simple continuous suture pattern (Fig. 3). Lignocaine jelly and Soframycin ointment (Soframycin[®], Sanofi, India) were mixed on palm of a gloved hand and applied on the prolapsed mass. The animal was administered with Inj. Oxytocin 50 I.U. in 1 litre of normal saline solution IV and Inj. Calcium-magnesium-boro-gluconate 450 ml I/V was administered. Thereafter, urinary bladder was catheterized by using Foley's catheter No. 18 to prevent straining while micturition and modified Buhner's sutures were applied over the vulvar lips using infusion (drip) set tubing as suture material (Bhattacharyya *et al.*, 2012; Singh *et al.*, 2018) (Fig. 4). The animal was treated with Inj. Ascorbic acid 7.5g I/V, Inj. Cefoperazone plus sulbactam 4.5g I/M, Inj. Chlorpheniramine maleate 227.5 mg I/M,

Inj. Flunixin meglumine 1000 mg I/M, Inj. Metronidazole 5000 mg/1000 ml I/V and Inj. Vitamin B complex 10 ml I/M, Inj. Cloprostenol 500 mcg I/M. Antibiotic, Vitamin-B complex and non-steroidal inflammatory drug were advised for six days and Inj. Metronidazole was recommended for three days.



Fig. 2. Emptying of urinary bladder with 18G needle



Fig. 3. Suturing of vaginal wall

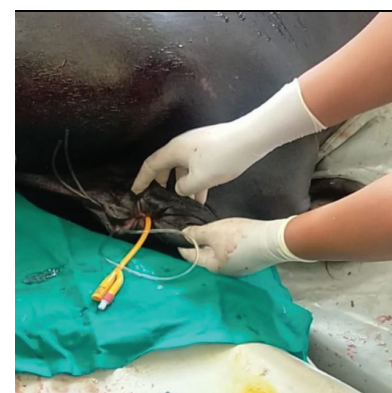


Fig. 4. Catheterization of urinary bladder and application of modified Buhner's sutures

Uterine prolapse commonly occurs within 2-24 h of calving, yet it rarely occurs up to 72 hours of calving (Singhal *et al.*, 2011). The prolapsed uterus is highly prone to mechanical injury, trauma, haemorrhage, necrosis, urinary incontinence, stress, shock and environmental contamination that lead to increased maternal morbidity and sometimes even death of the animal (Singh *et al.*, 2018; Seema *et al.*, 2020). Further, the exposed uterus shows varying degree of edema which makes the repositioning process difficult and makes the uterus prone to tear. The condition can be corrected with favourable prognosis if treatment is initiated at early stage to avoid much injury to organ (Noakes *et al.*, 2019). In the present case, continuous straining because of vaginitis and frequently lying down of the animal predisposed the vaginal wall for tear through which uterus and urinary bladder prolapsed.

Therapeutic care of animals subsequent to uterine prolapse and repositioning usually depends upon the condition of the animal and time lapse between prolapse and its repositioning. Repositioning is effortless if the animal is in standing and in case of recumbency, the animal has to be restrained in an inclined plane on the mattress to minimize the abdominal pressure. In present case, the intravenous administration of calcium and magnesium probably corrected the hypocalcaemia and provided tonicity to perineal muscles assisting holding of prolapse uterine mass, simultaneously oxytocin provided tonicity and slight contraction to smooth uterine musculature which helped repositioning and improving uterine inertia. Similar reports of post-partum prolapse of uterus and bladder through vaginal tear in buffaloes are scanty in the literature. Administration of antibiotics, fluid replacements, antihistaminic, ecbolics (oxytocin or methyl-ergometrine) and intravenous calcium following the repositioning of prolapsed uterus are imperative (Purohit *et al.*, 2018). A good care, timely management and treatment are needed to avoid the worsening of the condition.

CONCLUSIONS

The present study deals with a rare case of tear in vaginal wall and prolapse of uterus and urinary bladder through it.

The case was successfully managed by repositioning of prolapsed mass and urinary bladder, suturing of vaginal wall, catheterization of urinary bladder, repositioning of prolapsed cervix and vagina. Modified Buhner's sutures were applied through the vulvar lips to prevent the recurrence.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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