

Treatment of Post-Partum Uterine Prolapse in A Non-Descript Cow: A Case Report

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Abstract

A three years old non-descriptive cow with post partum uterine prolapse was treated successfully with reduction, re-placement and repositioning in its original place. Uterine prolapse is one of the most common post partum obstetrical problems, which significantly affects the reproductive as well as productive performance of the dairy cattle by prolonging the duration of return to estrus, increasing the calving to conception interval, calving interval and decreasing the conception rate. The affected cow showed protrusion of congested uterine mass through the vulva and vagina after its calving. The animal was active, alert and apparently healthy and diagnosed to suffer with uterine prolapse based on the clinical examination. With use of epidural anaesthesia, proper reduction and proper lubrication of the prolapsed uterine mass, the mass was repositioned in its place followed by application of Buhner's sutures at vulva to prevent recurrence of the prolapse. Eventually the animal had recovered.

Key words: Post-partum uterine prolapse, non-descript cow, treatment, case report

Introduction

Uterine prolapse is defined as the protrusion of uterine mass through vulva with exposure of mucosal surface (Gustafsson *et al.*, 2004) and it occurs between 48 and 72 h after parturition (Arthur, 1996, Roberts, 1971) or sometime up to several hours. Post partum uterine prolapse has been seen in third stage of labour in the dairy cow (Joseph *et al.*, 2001). Hypocalcaemia (milk fever), hypoglycemia, prolonged dystocia, fetal oversize, fetal traction, retained fetal membranes, excessive straining, uterine atony or uterine inertia, poor uterine tone, tympany, increased intra-abdominal pressure or hormonal imbalance due to excessive estrogen available in the feed or plants (phyto-estrogen) are the main etiological factors for uterine prolapse (Hanie, 2006, Jackson, 2004). Prevalence of uterine prolapse was reported as 0.3 to 0.5% in cattle (Luktuke and Chaudhary, 1965) and 6.6 % to 12.9 % in buffaloes (Nanda and Sharma, 1982). Hormonal imbalance in the sense that increasing the concentration of estrogen and relaxin causes relaxation of pelvic ligaments and softening of cervical canal, which induce the uterine prolapse in dairy cows. It is considered as a veterinary emergency as without treatment, the affected cow is usually to die within a short period of time (Murphy and

Dobson, 2002, Miesner and Anderson, 2008). The present case report explains successful treatment with reduction, replacement and repositioning of prolapsed uterine mass in the non-descriptive post partum dairy cow.



Fig. 1: Uterine Prolapse

Case history and observation

A three years old non-descriptive cow was attended at the door step of a farmer with history of protrusion

of uterine mass through the vulva since ten hours after parturition. The placenta was expelled out. Cow is parturated with a male calf and the calf was apparently healthy (Fig. 1). The cow was active, alert and apparently healthy with sternal recumbency and severe tenesmus. Physiological parameters were observed within the normal range. The prolapsed mass was highly congested and larger (hanging down up to hocks when the cow was standing). Prolapsed uterine mass and the maternal caruncles were highly oedematous, and covered with faeces, dirt and blood clots.

Treatment

A non-descriptive cow of three years of age was attended with post-partum uterine prolapse. Clinical examination confirmed that the uterine prolapse was bilateral. Prolapsed uterine mass was checked for any injury, washed gently with warm water followed by warm saline and then washed with 1% KMnO₄ solution to remove the dirt and debris. Epidural injection was given with Lignocaine (2%; 5ml) at first and second inter-coccygeal space to minimize straining during replacement of prolapsed organ. Oedema and size of the prolapsed uterine mass was reduced with the help of ice water application and saturated sugar solution. Urinary bladder was emptied with lifting of the mass to give way to flow the urine. This procedure was repeated three times in order to reduce the size of both prolapsed horns. The prolapsed uterine mass was kept on a clean and moist piece of cloth. The prolapsed uterine mass was repositioned with the help of fist and palm inside vagina and then pushed gently into the pelvic cavity till complete repositioning of the uterine horns which was later assessed by per-rectal examination. During reposition, liquid paraffin was used as a lubricant. Once the prolapsed mass was reposed inside, oxytetracycline tablets (Terramycin; 4 no) were placed inside the uterus to provide the antibacterial coverage. Buhner's suture was placed in the vulva with sterile cotton thread dipped in betadine solution to retain the uterus in place. The suture was removed after 14 days. The animal was treated with fluid therapy, 5% DNS – 2000 mL/day and Calborol 450 mL slow intravenous, antibiotic (Injection Enrofloxacin 5 mg/kg B. Wt, injection Streptopenicillin 2.5 g intramuscular),

anti-inflammatory analgesic (Injection Meloxicam 0.2 mg/kg B. Wt) and antihistamine-Chlorphenaramine maleate (Injection Avil–12 mL). The prescribed treatment was repeated for five days excluding Calborol. The cow recovered uneventfully without any complications.

Discussion

Prolapse of reproductive organs including cervico-vaginal prolapse or uterine prolapse are common gestational accident among reproductive disorders in dairy animals. Long myometrial contractions, violent straining, and hypocalcaemia, hypoglycemia, lack of exercise, relaxed atonic flaccid uterus, extreme laxity of perineum and vulvar lips, excessive estrogen content in the feed, forced traction of the foetus leads are predisposing factors of post-partum uterine prolapse in ruminant species such as cattle and buffalo (Roberts, 1971, Noakes *et al.*, 2001, Kumbhar *et al.*, 2009). Therefore, calcium borogluconate and dextrose saline were given to minimize the impending symptoms of hypocalcaemia and hypoglycemia. Caudal epidural anaesthesia with Lignocaine was administered before the reduction and replacement of the prolapsed uterine mass to reduce straining and desensitization of the perineum (Noakes *et al.*, 2001). Moreover, uterine prolapse is more common in post- partum than in prepartum period mainly due to abrupt release of increased intra-abdominal pressure, loss of muscular tonicity or uterine inertia in ruminant species (Noakes *et al.*, 2001).

In case of absolute fetal oversize and low nutritional status of dam, the animal suffers uterine prolapse. Lower calcium (hypocalcemia), lower phosphorus and higher concentration of serum magnesium were also etiological factors to induce uterine prolapse (Ahmed *et al.*, 2005, Akhtar *et al.*, 2008). In untreated cases of uterine prolapse, the animal suffers hemorrhagic shock, septic metritis, infertility or death. As the uterine prolapse is an emergency veterinary treatment, therefore, it needs immediate and proper treatment of this condition that not only saves the life of dam but also protects the future fertility of the affected cow, otherwise there will be interference in blood flow to the prolapsed mass may leads to into edema, septic condition, cyanosis which

later on leads to develop into gangrene (Kapadiya *et al.*, 2015). Dung, blood spots and other dirt materials should be removed carefully and KMnO_4 solution was used to prevent the uterine infection (Prakash *et al.*, 2016, Paul *et al.*, 2017). Hemorrhagic shock, thromboembolism, septic metritis, infertility or death is the potential sequel of a prolonged uterine prolapse (Pothiappan *et al.*, 2013). Therefore, administration of broad spectrum suitable antibiotic treatment was followed for at least five days after replacement of the prolapsed mass which will prevent secondary bacterial infection (Borobia- Belsue, 2006).

Conclusion

Uterine prolapse occur in peri-parturient or post partum period. Prompt diagnosis and treatment of uterine prolapse is very important task and delayed treatment leads to critical condition like oedema, fibrosis, necrosis, septicemia, toxemia and death of the animal. Therefore, the farmers and veterinarian act carefully, promptly for early recovery of the condition which will save the cow from life threatening condition. Present case reports the successful correction of uterine prolapse along with its management.

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