

SUCCESSFUL MANAGEMENT OF POST PARTURIENT COMPLETE PROLAPSE OF
UTERUS IN A NON-DESCRIPT BUFFALO - A CASE REPORT

**Kolangath Sujit Mathew*, Chavan Nitin Bhaskar, Dube Yogesh Subhash,
Khatke Prashant Abaji and Palve Ganesh Amrutrao**

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ABSTRACT

Prolapse is a common ailment associated with parturition in cattle and buffaloes. An eight-year-old, non-descript buffalo with the history of aggressive assistance during parturition was presented at farmers doorstep for third degree complete uterine prolapse. The prolapsed mass haemorrhagic and soiled, the mass was cleaned maintaining all aseptic measures. Animal was restrained and using the three-step management reduction, reposition and retention of the prolapsed mass was undertaken. The blood parameters indicated anaemia, neutrophilia, and eosinophilia, while the serum profile indicated hypocalcaemia. The case was managed rationally by rehydration, supplementation of energy and calcium. The infection and trauma of uterus was managed with antibiotic therapy, analgesics and antiallergics. The animal recovered uneventfully without a relapse of the uterine prolapse.

Keywords: *Bubalis bubalis*, buffaloes, prolapse of uterus, reduction, retention, reposition, third degree prolapse

INTRODUCTION

Uterine prolapse in buffaloes has been extensively reported throughout the world. Around 0.3 to 0.5% of all parturitions end up in prolapse (Luktuke and Chaudhary, 1965), though there are a multiple factor influencing the occurrence of Uterine Prolapse. Factors like mineral deficiency, hormonal imbalance, infection, trauma, aggressive assistance during parturition, prolonged dystocia, retention of placenta etc. have been identified as predisposing factors (Potter, 2008; Murphy and Dobson, 2002). Prolapse is an obstetrical post-partum emergency and can lead to trauma, infection, shock, and death if veterinary intervention is delayed (Singhal *et. al.*, 2011). The incidences of prolapse are generally during the first 38 to 48 h from partum and can be linked to early rise of prostaglandins during parturition (Yadav *et. al.*, 2014; Purohit *et. al.*, 2018). Based on the severity and the parts of the reproductive system involved, the prolapse can be classified under three categories *viz* first, second and third. In the first degree prolapse the mass is small and extends only up to the lips of the vulva. It is more evident when the animal is resting. In the second degree prolapse, vaginal floor protrudes out of the vulva.

The third degree is the most extensive form of uterine prolapse where there is complete protrusion of vagina exposing the cervix. Lack of education limits intervention from animal owners in assisting the animal or in providing the basic first aid. The current report highlights the management of third degree post parturient complete prolapse of uterus in a non-descript buffalo (Hafez and Hafez, 2013).

MATERIALS AND METHODS

An eight-year-old, non-descript buffalo with the history of aggressive assistance during parturition was presented at farmers doorstep for third degree complete uterine prolapse. The uterine walls were haemorrhagic and soiled. The buffalo was examined for routine parameters and restrained using rope to prevent kicking. Using an 18 G needle, 5 ml 2% lignocaine HCl was administered epidurally, and the animal was restrained in standing position. Blood and serum samples were collected. To arrest the bleeding hemostat inj. Carbazochrome Salicylate 5 ml was administered intramuscularly. The uterine mass was cleaned first with potable water to get rid of soil and dung. The attached placenta was gently removed from the caruncles and disposed of. The prolapsed uterine mass was cleaned with normal saline and placed on a clean surgical drape.

The uterine prolapse was managed by three step managementas reported by Kolangath *et. al.*, 2020.

Reduction

The prolapsed mass had lacerations resulting into bleeding, ice packs were applied to the prolapsed mass to reduce its size. During the process the prolapsed mass was elated to reduce

pressure of the urinary meatus. The urine was allowed to flow out completely in order to make space to accommodate the prolapsed mass. The ice packs were applied for 20 minutes after which shrinkage of the prolapsed mass was evident to naked eyes.

Reposition

The mass was lubricated with oil-based preparation to take care of the laceration and ease the repositioning exercise. Care was taken to avoid aggressive pushing and repositioning of the mass was undertaken during the relaxation phase of weak contractions exerted by the buffalo during the manoeuvring. The prolapsed mass was repositioned beyond the cervix and the buffalo was allowed to adjust by gentle per vaginal assistance.

Retention

Considering the straining and lack of tone in the supporting muscles it was decided to provide stay sutures to the skin adjacent to the vulval junction. 2% Lignocaine HCl was infiltrated at the site and using 16 G needle through and through suture were given. For the normal passage of urine, the opening was kept at the distal end of vulva. In order to negotiate the straining force, cotton pads were provided to stabilize the sutures. The site was painted with tincture iodine to prevent infection and fly repellent spray was advised four times a day.

The animal was provided with two litres of 5% dextrose solution, intravenous calcium-phosphorus, and magnesium preparation to supplement for the mineral and energy deficit. To prevent infection inj. Enrofloxacin 20% long acting and Meloxicam, Pheniramine maleate preparations were administered intra muscularly. The animal was provided with Involon DS an Ayurveda based

uterine tonic for faster involution and healing. The treatment was continued for Three days. The stay sutures were detached after five days and dressed for four days using antiseptic spray. The animal was provided succulent greens in the form of lucerne grass to keep the faeces soft. The animal was housed in such a way that the hind quarters are at a higher position compared to the fore quarters. The animal showed uneventful recovery with no relapse of uterine prolapse.

RESULT AND DISCUSSION

The Complete Blood Check (CBC) indicated anaemia; the haemoglobin concentration was found to be 10.1 gm/dL. The blood picture also indicated neutrophilia (67%) and eosinophilia (12%). The Levels of calcium, phosphorus and magnesium in serum were found to be 9.62 mg/dL; 3.48 mg/dL and 2.01 mg/dL respectively.

Prolapse of uterus is a common malady of buffaloes. The prolapse mass often bears insult due to trauma leading to haemorrhage, oedema and necrosis. In severe cases the necrosis may lead to life threatening changes due to internal bleeding resulting into hypovolemic shock. Immediate veterinary intervention is crucial during the initial couple of hours as the trauma and haemorrhage can be checked. First aid and providing care to the prolapsed mass delays onset of swelling and devitalization. Majority of the times, soiling of the uterus leads to infection and compromises the breeding soundness of the animal for considerable time (Kumar *et al.*, 2015; Markandeya, 2014). The outcome has economic implications on the farmers income. Thus, under such situations, it becomes essential to provide emergency veterinary care to treat the prolapse at the earliest (Sharma *et al.*,

2014). Reports suggest that the prolapsed mass can be repositioned without any complications in the first 24 h, however the nature of insult and trauma are important factors that must be considered in rendering veterinary intervention (Markandeya, 2014).

Reduction of the prolapse mass is challenging as the prolapsed mass is oedematous and enlarged this makes it difficult to reposition the prolapsed mass back to the normal position. In the third degree prolapse, the vagina, cervix and the uterine body are everted and visible beyond the vulva. In the current case the placenta was found attached to the proposed mass, indicating the prolapse of uterus due to efforts to expel the placenta. There are numerous reports highlighting the linkage of retention of placenta and the prolapse of uterus in domestic animals (Kapadiya *et al.*, 2015). Role of minerals like calcium and phosphorus has been highlighted by Abbas and Fahad which has critical role in the maintenance of tone of skeletal muscles. Due to the prolapsed mass, pressure is applied at the external urinary meatus leading to accumulation of urine in the urinary bladder. The space so acquired competes with the repositioning efforts of the prolapsed mass, hence, it is essential to empty the urinary bladder. In the current method, the prolapsed mass was elated towards the base of the tail to reduce the pressure on the external urinary meatus. The approach is non-invasive and requires no special equipment or catheterization (Kolangath *et al.*, 2020; Raju *et al.*, 2018).

Repositioning in cases of third degree prolapse of uterus is critical as the entire uterine mass is everted through the cervix. There are many predisposing factors contributing to the eversion of the body of uterus through the cervix, primarily the atony of the uterus is considered as



Figure 1. Complete uterine prolapse in a buffalo with fetal membranes attached.



Figure 2. Vulvular sutures for retention post-partum prolapsed mass.

a major contributing factor. Another challenge in repositioning of prolapsed uterine mass is concurrent straining of the animal which pushes the mass out of the normal site. This is due to the failure of the prolapsed mass to attain the normal size. There are two approaches in retention of the prolapsed mass; one approach is conservative and involves application of rope truss at the vulva (Kumbhar *et al.*, 2009), while the other is invasive involving the suture of the vulva (Prasad and Rajesh, 2014; Bhoi and Parekar, 2009). The method can be selected based on the intensity of contractions, size of prolapsed mass and status of animal. In the current study an invasive technique was employed for retention considering the straining due to weak myometrial contractions. Selection of a technique must outweigh the risks involved in its implementation, in the current case considering the inability of the owners to supervise the ailing animal during the tenure of the treatment an invasive method was opted. However, due care to prevent tearing of vulva due to straining was prevented by reinforcing the sutures with cloth cotton pads. The complication due to infection and maggots were monitored daily and adequate preventive measures were taken.

Aggressive assistance has been identified as a predisposing factor in the incidences of uterine prolapse in buffaloes. In the current case, hypocalcaemia, prolonged dystocia, aggressive assistance, retention of fetal membranes can be identified as predisposing factors (Pandey *et al.*, 2007; Patil, 2014). The sub-optimal levels of calcium and phosphorus indicate the possibility of uterine inertia leading to dystokia and subsequent retention of placenta. The low levels of calcium lead to weak myometrial contractions due to which the uterus fails to involute to normal under the influence of prostaglandins (Lakde *et*

al., 2014). In the current case efforts to correct dehydration, energy and calcium deficit were made to encourage the retention of the prolapse uterine mass. The current case highlights swift veterinary intervention, gentle handling of the prolapse mass, restoration of energy and minerals along with rational therapy to contain infection and further breeding complications as key to treatment of third degree uterine prolapse in buffaloes.

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