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Management of pre partum cervico-vaginal prolapse in a buffalo: A case report

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Abstract

This case report discusses the successful management of pre-partum cervico-vaginal prolapse (CVP) in a non-descript nine-month pregnant buffalo. A buffalo presented with CVP was securely restrained and administered epidural anesthesia. The prolapsed mass was cleaned with potassium permanganate solution followed by ice packs application. Lignocaine gel and soframycin antibiotic ointment were applied and manual reduction was done. To prevent recurrence, a vulvar rope truss was applied and supportive therapy was done. The use of a vulvar rope truss is highlighted as a simple, non-invasive method for retaining pre-partum prolapse in buffaloes, ensuring continued pregnancy until the appropriate time for delivery.

Keywords: Buffalo, cervico-vaginal prolapse, pre-partum, rope truss

Introduction

Prolapse of vagina usually involves prolapse of the floor, the lateral walls and a portion of the roof of the vagina through the vulva thereby moving the cervix and uterus caudally. It is observed most commonly in the last 2 -3 months of gestation when a large amount of estrogenic hormone is being secreted by the placenta (Roberts, 1971 and Noakes *et al.*, 2019) [9, 5]. The hormonal surge induces relaxation of the pelvic organs, heightening vulnerability to prolapse. Additionally, as parturition approaches, buffaloes may experience intensified pelvic organ relaxation and heightened intra-abdominal pressure, resulting in vaginal and potentially bladder prolapse through the vulva (Kumar *et al.*, 2018) [6]. Occasionally, the condition occurs following calving, especially those cases involving dystocia which cause severe straining and trauma. While initial management of CVP entails manual repositioning of prolapsed tissues, several invasive techniques have been described for sustained retention, such as Buhner's suture (Roberts, *loc cit.*), boot lace sutures, vaginopexy (Wolfe and Carson, 1999) [11], modified Minchev's method (Napoleon *et al.*, 2018) [8], and trans-vaginal cervicopexy (Meisner and Anderson, 2008) [7]. These methods aim to keep the vagina positioned cranially to the vulva, often necessitating prolonged suturing to encourage fibrous adhesion formation. However, these invasive procedures commonly result in persistent straining and recurrent prolapse, occasionally leading to vulvar tears. Given the drawbacks and complications associated with invasive approaches, this report centers on managing and successfully treating pre-partum CVP in pregnant buffalo using a straightforward, non-invasive method for prolapse retention. This non-invasive technique offers practicality and effectiveness in addressing CVP in pregnant buffaloes, underlining the necessity for alternative prolapse management strategies.

Materials and Methods

A five and half year female non-descript buffalo was presented to the Department of ARGO, Veterinary college, Bidar with a history of prolapse of vagina and cervix through vulva from morning. History further revealed that animal is in 2nd parity and 9 months pregnant. The animal was presented in the clinic with complete prolapse of vagina and cervix. It exhibited mild, intermittent straining. Though the animal was temporarily off feed, the clinical parameters like temperature, pulse and respiratory rate were within the normal range.

The buffalo was securely restrained in a travis and was administered epidural anaesthesia (2% lignocaine Hcl). The prolapsed mass was washed free of dirt and debris with 0.1% potassium permanganate solution. Reduction of the protruding mass was done by gently elevating above the ischial arch to empty the bladder and application of ice packs. After applying combination of lignocaine gel and soframycin antibiotic ointment, the prolapsed mass was reduced by gentle pushing action with fistled hand while slowly elevating the mass from below simultaneously with the palm of other hand, thereby replacing the cervix and vagina to their original position. To prevent recurrence, modified version of rope truss described by Renault was applied on the animal (Craig, 1946)^[3] (Figure 1). A 10 meter long cotton rope was taken for the procedure. The rope was doubled in equal parts, and put around the neck with a knot in front of the wither (Figure 1). Then the doubled rope was passed straight along the dorsum of the animal and a firmer knot was placed over the rump region. Each side was carried up to the root of the tail, where a simple knot was tied. The two halves of the rope then run on each side of the vulva, and were united again by a simple knot below the lower vulvar commissure (Figure 1); again separating, each rope is carried between the hind limbs, brought up by the flank towards the loins on each side, and tied to one of the loops there. The animal was administered Inf. Calcium borogluconate – 450ml – slow I/V, Inf. Intalylte – 3 litres – I/V, Inj. Ceftriaxone tazobactam at the rate of 10 mg/kg b wt – I/V, Inj. Chlorphenaramine maleate 15 ml –

I/M for 3 days.

Results and Discussions

Following this technique, the animal did not have any straining and the owner was advised to tighten the rope at an interval 3 days and for removal of rope truss when straining get ceased. The rope was removed after 5days when the straining was completely stopped. The animal had an uneventful recovery.

The success of treating vaginal prolapse relies on numerous factors including how long the condition has been present, the severity of tissue damage from traumatic injury the presence of bacterial contamination, and whether neighboring organs such as the cervix and urinary bladder are affected (Beheshti *et al.*, 2011)^[2]. Reports indicated that the condition could be managed by rope truss (Aneesmon *et al.*, 2023 and Selvaraju *et al.*, 2023)^[1,10]. The truss exerts sufficient pressure on both the sides of vulva to keep it closed, without interfering with defecation or micturition thereby preventing recurrence of prolapse (Craig, 2000)^[4]. Further, formation of a permanent vulval scar which is usually an undesirable sequel to applying vulval sutures following reduction of prolapsed mass, can also be prevented through use of a rope truss. Also, in an emergency, the animal owner can manage the condition through application of such a truss at the farm level. The prognosis is usually favourable and future breeding efficiency is not affected if the condition is promptly diagnosed and treated under hygienic condition.



Fig 1: Application of rope truss - lateral view

Conclusion

This report describes a case of pre-partum cervical vaginal prolapse (CVP) in a pregnant buffalo, managed successfully with a non-invasive approach. Traditional invasive techniques for prolapse retention often lead to complications. Instead, the buffalo was treated with epidural anesthesia, cleaning, and reduction of the prolapsed mass, followed by the application of a modified rope truss. Intravenous medications were administered, and the buffalo recovered without complications. This highlights the practicality and effectiveness of non-invasive techniques in managing CVP, emphasizing the need for alternative strategies in prolapse management.

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