Grade II Vaginal Prolapse In A Buffalo Due To Uneven Flooring: A Case Report

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Abstract

The two main factors that contribute to this clinical case are the uneven flooring and dietary factor. This reports a clinical case of grade II vaginal prolapse in a two year old female Murrah Buffalo managed in an intensive farm with uneven flooring. The particular buffalo had just calved down a day before presentation. Physical examination findings revealed the buffalo was in pyrexia condition, dull and depressed with congested mucous membrane. There was also protrusion of mass from the vulva region. The therapeutic plan for this case was reduction, reposition and retention of the prolapse via Buhner’s method. The buffalo was administered with flunixin meglumine, 1.1mg/kg, intramuscularly, as anti-inflammatory, Benacillin, 1ml/16kg, intramuscularly, as broad spectrum antibiotic and theracalcium 100 ml, intravenously as calcium supplement. Prompt management and treatment of grade II vaginal prolapse are necessary to prevent further complications that will predisposed the buffalo to uterine infection, infertility or even death.

Keyword: Vaginal prolapse, Nutritional factor, Uneven flooring.

1. Introduction

Prolapse is defined as falling down, or downward displacement, of a part or viscus (Blood et al., 2007). Vaginal prolapse is the edematous enlargement of vaginal tissue during estrus and is common problem presents in mature females during their last trimester of pregnancy. There are 4 grading scale that recognize four different type of vaginal prolapse (Wolfe and Carson, 1999). For grade I, the prolapse can be seen intermittently especially when the cow is lying down. This grade can be progress to grade II if left untreated. For grade II, the prolapse is continuous with plus or minus urinary bladder retroflexed. In this type of prolapse, involvement of urinary bladder can interfere urination and cause persistent straining. Both grade I and II require temporary retaining suture or cull after calving or perform permanent fixation technique if embryo flush cow. As for grade III, the prolapse is continuous with urinary bladder and cervix. This condition can compromise urine outflow and ureters and should be treated quickly to prevent life threatening injury. Grade IV occur when grade II and grade III together with trauma, infection or necrosis of vaginal wall. Both grade III and IV require permanent fixation or induce parturition or C-section for commercial cow. Besides nutritional imbalance, higher incidence of genital prolapse was also recorded in farms with uneven flooring (Bhatti et al., 2006). This clinical case reports the management grade II vaginal prolapse due to nutritional factor and uneven flooring.

2. Case Report

2.1 History

A 2 year old female Murrah buffalo weighing 450kg was presented with complain of a mass protruding out from the vulva region. The vaccination and deworming status were up-to-date. The particular buffalo had just calved down a day before presentation.

2.2 Physical Examination

Physical examination findings revealed that the buffalo was having pyrexia (39.4°C), dull and -
There was protrusion of mass from the vulva of the buffalo (Fig 2).

2.3 Treatment

The therapeutic plan for this case was reduction, reposition, and retention of the prolapse via Buhner’s method. Epidural anesthesia was performed between the 1st and 2nd coccygeal vertebrae before repositioning (Fig 3). Firstly, the vulva and part of vagina was cleaned with diluted chlorhexidine (Fig 4). Then, the Buhner’s needle was inserted through the skin at the dorsal part of the perivulva. Then, the umbilical tape was passed through the needle. The same technique was applied on the other side (Fig 5). A cross suture pattern was performed (Fig 6). In this case, the ‘shoelace’ suture was applied where the end of the lace was tied (Fig 7). Acriflavine as antiseptic cream was applied at the suture site and wounds were sprayed around it (Fig 8). As for the medication, Flunixin meglumine, 1.1mg/kg, was given intramuscularly for three days as anti inflammatory, Benacillin, 1ml/16kg, was given intramuscularly every 72 hours for three doses as broad spectrum antibiotic and Calcium borogluconate 100 mL, was given intravenously once as calcium supplement.

2.4 Progression

Revisit of the case was done two weeks after the treatment and the buffalo responded well to the -
treatment. The buffalo was bright and alert with no protrusion observed at the vulva region. Thus, suture removal was performed. The prognosis of this case was good in terms of recovery but poor for breeding performance because the recurrence of vaginal prolapse is very high.

3. Discussion
Parturition, excess hormone production, nutrition, hypocalcaemia, and flooring are a few predisposing factors leading to the occurrence of vaginal prolapse (Miesner and Anderson, 2008). In this case, the buffalo was in the last trimester of pregnancy. Firstly, hormonal changes at last trimester of pregnancy especially increase level of estrogen and production of relaxin will cause a relaxation at the pelvic ligaments and surrounding tissue structures (Wolfe and Carson, 1999). Secondly, increase in intra-abdominal pressure will occur due to uterus distention, rumen distention or accumulation of intra-abdominal fat (Kahn, 2005). Besides that, this buffalo was fed with high level of concentrates and very little forage. Nutrition factors such as low quality of forage, high level of concentrate and hypocalcaemia are the common factor that contributes to the incidence of vaginal prolapse. Hypocalcaemia due to the insufficient calcium in the diet will predispose the buffalo to the prolapse (Jesse et al., 2014). In this case, flooring also becomes one of the predisposing factors of the vaginal prolapse. Uneven flooring contributes to the gravity that assists the eversion and prolapse. The similar finding was also observed by Bhatti et al. (2006), where higher incidence of genital prolapse was recorded in uneven floor compared with the brick floor and slopping floor condition. This case reports of grade II prolapse where the prolapse is continuous with plus or minus urinary...
bladder retroflexed (Wolfe and Carson, 1999). Grade II require temporary retaining suture where Buhner’s suture technique was used in this case (Pitmann, 2010).

4. Conclusion

Control of vaginal prolapse can be achieved by considering the predisposing factors in the management of the herd. In this report, the farmer was advised to improve the feeding quality and flooring of the farm to avoid further cases of vaginal prolapse.

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References


