Journal of the Andaman Science Association Vol. 26(2):184-186 (2021)
ISSN 0970-4183, Printed in India

Pre-partum Cervico-Vaginal prolapse in an Andaman Local Buffalo cow

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Abstract

An Andaman local buffalo cow of 8 years old and 9.0 months pregnant was presented to Buffalo Breeding Farm, ICAR-CIARI, Port Blair with pre-partum cervico-vaginal prolapse. In this case, exposed part was swollen and reddish pink. The cow was restrained on sternal recumbency and epidural anaesthesia (2% Lignocaine hydrochloride) was administered. The prolapsed mass was made aseptic by washing with 2% potassium permanganate solution and was set in-situ in the pelvic cavity. The animal was kept on antibiotic, anti-inflammatory and anti-histaminic drugs besides fluid therapy for three days. The prolapsed mass was repositioned following the standard procedure to keep it in position. In the cow, following treatment no complications and later deliver a healthy live male calf. A successful therapeutic management of prepartum cervico-vaginal prolapse in an Andaman local buffalo cow is recorded.

Keywords: *Andaman local buffalo, cervico-vaginal prolapse, prepartum, treatment*

Introduction

ANI have non-descriptive breed of Andaman local buffaloes which are distributed in Andaman Islands and few numbers are in Campbell Bay and Nicobar groups of Islands and are an admixture of different Indian buffalo breeds. It is well adapted to tropical humid island ecosystem. Its population is declining rapidly due to the unavailability of proper breeding and feeding strategy. Farmers with poor resources prefer the multipurpose ALB and thus it plays an important role in farmers' economic life. In dairy cows or buffaloes, reproductive disorders negatively affect their productive as well as reproductive performances. One such reproductive disorder is cervico-vaginal prolapse in dairy cows and buffaloes (Wachida and Kisani, 2011). Recto-cervico-vaginal prolapse was also observed in buffalo cows (Rajesh *et al*., 2018). Cervico-vaginal or recto-vaginal prolapse should be treated as quickly as possible before the condition become grave.

Cervico-vaginal prolapse is defined as eversion of cervix and vagina from the vulvar commissure (Whittier, 2007). The main predisposing factor for cervico-vaginal prolapse is higher circulating estrogen in the last trimester of pregnancy; however the exact etiology is not known. Higher level of circulating estrogen increases the relaxin hormone secretion which inturn induces relaxation of pelvic ligaments and surrounding soft tissues (Wolfe, 2009). Moreover, gravid pregnant uterus enhances the intra-abdominal pressure which inturn further enhances the chances of vaginal prolapse. Not only higher intra-abdominal pressure, other factors such as rumen distension, intra-abdominal fat accumulation, larger fetus, twins and hilly terrain habitat or grazing hilly tract are predisposing the cows into cervico-virginal prolapse.

Metabolic disorders like hypocalcaemia or ketosis, fodder or feed containing estrogenic substance such as clover, soybean meals etc are also induce the pre-partum cervico-vaginal prolapse in cattle and buffaloes (Miesner and Anderson, 2008). Various surgical or nonsurgical therapeutic techniques (Kumar, 2015) and medicines (Dhillon *et al.,* 2006) are available to treat the cervico-vaginal prolapse. This case report highlights the successful therapeutic management of pre-partum cervico-vaginal prolapse in an Andaman local buffaloes in Andaman and Nicobar islands.

History and Clinical observations

A pluriparous advanced pregnant (9 month) Andaman local buffalo cow of 8 years was presented with the history of pre-partum cervico-vaginal prolapse at Buffalo Breeding Farm, ICAR-CIARI, Port Blair, Andaman and Nicobar Islands. Buffalo was lying in sternal recumbency and the prolapsed mass was swollen and reddish pink and hanging through the vulva and resting on the ground. The buffalo was apparently healthy on clinical examination

and the physiological parameters (temperature, respiration and pulse) were within the normal range. Cervical seal was intact. The cow could not pass urine due to prepartum prolapse and at frequent intervals exhibited intermittent straining. Based on the history and physical examination, the case was diagnosed as prepartum first degree cervico-vaginal prolapse.

Treatment and Discussion

The animal was restrained on sternal recumbency and analgesia was induced by using 2% Lignocaine hydrochloride (5 ml) at the sacrococcygeal space as a caudal epidural block. The prolapsed mass was cleaned thoroughly with use of clean water to remove dung and dirt. The mass was further washed with lukewarm 2% potassium permanganate solution to avoid contamination and lubricated with liquid paraffin. Then the mass was lifted above is chial arch to drain out urine from bladder and replaced to its normal anatomical position with gentle push and meticulous pressure with half closed hand. After complete repositioning of the prolapsed mass, the cow was treated with fluid therapy such as 5% dextrose normal saline @ 1000 ml once. Ringers lactate @ 10 ml/Kg body weight intravenously, Calcium Magnesium borogluconate @ 1.5 ml/Kg body weight intravenously, Streptopenicillin @ 24000 Units/Kg body weight intramuscularly, Chlorpheniramine maleate @ 0.5mg/Kg body weight intramuscularly and Meloxicam @ 0.5mg/Kg body weight intramuscularly. The antibiotic, anti-inflammatory and antihistamine were continued for five days. The cow stopped tenesmus and started eating and drinking normally within 12 hrs. The farm manager was advised to keep the animal as hindquarter elevated and follow split feeding. Animal carried the fetus full term and delivered a live male calf without any complication and animal recovered uneventfully.

Cervico-vaginal prolapse is one such a major reproductive disorder observed in buffaloes and cattle (Ahmed *et al*., 2005) and it is considered as an emergency as it may induce septicemia condition hence considered as a life threatening (Bhattacharya *et al.,* 2007). This case should be managed immediately before become severe edema, contamination of dung or dirt, mucosal trauma or tear and fatal hemorrhage (Miesner and Anderson, 2008). Higher intra-abdominal pressure and lack of myometrial tone may deteriorate cervico-vaginal prolapse (Kapadiya *et al*., 2015). It is also reported that the prevalence of cervico-vaginal prolapse is due to genetic causes in cattle and sheep (Kahn *et al*., 2005). Cervico-vaginal prolapse occurs commonly during the last trimester of pregnancy in pluriparous animal than in heifer (Hasan *et al.,* 2017). Similar to ALB, maximum number of such genital prolapse was reported in last 2 months or last trimester of gestation (Noakes *et al.,* 2001). Circulating estrogen hormone alteration during last trimester of gestation induces cervico-vaginal prolapse by higher relaxation of sacro-sciatic ligament and other adjacent ligaments (Wolfe, 2009). Epidural anaesthesia with 2% Lignocaine hydrochloride for caudal epidural block is compulsory before handling of genital prolapse as it prevents tenesmus and straining. Epidural analgesia also helps to easy return of protruding mass (Noakes *et al.*, 2009). Further, lifting of the uterus causes straightening of urethra which is way for easy urination, which inturn improve comfort to the animals and subsequently reduce straining (Miesner and Anderson, 2008). Further, genital prolapse can be successfully managed by supplementation of exogenous progesterone (Bhattacharya *et al*., 2012). However, progesterone administration in late gestation prolongs the pregnancy period therefore, it is generally not recommended (Roberts, 2004).

In this case, the prolapse is mild and primary stage, therefore no suture was applied. However, in severe cases, rope truss was used for successful management of cervico-vaginal prolapse. The rope truss is very effective, non-invasive, easy and economic method for successful management of prepartum vaginal prolapsed in dairy bovines (Sharma *et al*., 2017; Lakde *et al*., 2014). Successful management of cervico-vaginal prolapse was done by surgical or nonsurgical methods (Kumar, 2015) and medicines (Dhillon *et al*., 2006), however, the successful was varied based on various factors. Parental administration of antibiotic helps to control the secondary bacterial infections whereas; anti-inflammatory and antihistaminic drugs help to correct pain and inflammation.

Conclusion

In this study, successful management of prepartum cervico-vaginal prolapse in an Andaman local buffalo cow was reported. Reposition of prolapsed was done successfully. Administration of supportive treatment with antibiotics, analgesics and fluids to prevent secondary bacterial infection to the prolapsed mass under field conditions should be followed. The cervico-vaginal prolapse case should be intervened as early as possible for better prognosis.

References

Ahmed, S., Ahmad, I., Lodhi, L.A., Ahmad, N. & Samad, H.A. (2005). Clinical haematological and serum macro mineral contents in buffaloes with genital prolapse. Pakistan Veterinary Journal. 25: 167-170.

Bhattacharyya, H.K., Fazili, M.R., Buchoo, B.A. & Akand, A.H. (2012). Genital prolapse in crossbred cows: prevalence, clinical picture and management by a modified Buhner's technique using infusion (drip) set tubing as suture material. Veterinarski Arhiv. 82: 11-24.

Bhattacharyya, H.K., Peer, F.U., Buchoo, B.A. & Ansari, M.M. (2007). Management of uterine prolapse in cattle of Kashmir. Indian Veterinary Journal. 84: 744-745.

Dhillon, K.S., Singh, B.B., Kumar, H., Bal, M.S. & Singh, J. (2006). Treatment of vaginal prolapse in cows and. Veterinary Record. 158: 312.

Kahn, C.M., Line, S. & Aiello, S.E. (2005). The Merck Veterinary Manual. Merck & Co Inc Whitehouse Station, NJ.

Kapadiya, P.S., Chauhan, P.M., Nakhashi, H.C., Sharma, V.K. & Sutaria, T.V. (2015). Recurrent post-partum uterine prolapse in a primiparous Mehsana buffalo- A case report. Journal of Livestock Science. 6: 109-112.

Kumar, P. (2015). Applied Veterinary Gynaecology and Obstetrics. CBS Publishers and Distributors Pvt. Ltd. New Delhi-110002, pp. 258-271.

Lakde, M.B., Markandeya, N.M., Sanap, N.A. & Chaudhari, R.J. (2014). Comparative evaluation of techniques for management of cervico- vaginal prolapse in ante-partum buffaloes. Intas Polivet. 15: 456-458.

Miesner, M.D. & Anderson, D.E. (2008). Management of uterine and vaginal prolapse in the bovine. Veterinary Clinics: Food Animal Practice. 24: 409-419.

Hasan, T., Azizunnesa Parvez, M.A., Paul, P., Akter, S., Faruk, M.O. & Hossain, D. (2017). Correction and management of vaginal prolapse in a cow by Buhner's technique. Research Journal for Veterinary Practitioners. 5(1): 1-4.

Noakes, E.D., Parkinson, T.J. & England, G.C.W. (2001). Post parturient prolapse of the uterus. Arthur's Veterinary Reproduction and Obstetrics. 8th ed. Harcourt (India) Pvt. Ltd., New Delhi. 19: 333-338.

Noakes, E.D., Parkinson, T.J. & England, G.C.W. (2009). Veterinary Reproduction and Obstetrics. 9th edn. W.B Saunders Company, Philadelphia, 146-153: 306-318.

Rajesh Kumar, Yadav, D.K., Yadav, V.K., Jaisawal, S., Srivastava, S. & Gautam, S. (2018). Recto-cervico-vaginal prolapse in non-descript postpartum buffalo and its clinical management. Bulletin of Environment, Pharmacology and Life Sciences. 7(2): 46-50.

Roberts, S.J. (2004). Injuries and diseases of the puerperal period. In: Veterinary Obstetrics and Genital Diseases (*Theriogenology*). 2nd edn. CBS Publishers and Distributors, New Delhi, India. Pp. 300-335.

Sharma, D.K., Das, A. & Nath, N. (2017). Management of pre-partum vaginal prolapse in a crossbred cow with rope truss method. International Journal of Current Microbiology and Applied Sciences. 6(11): 1067-1070.

Wachida, N. & Kisani, A.I. (2011). Uterine prolapse in a doe goat: a case report. International Journal of Animal and Veterinary Advances. 3(3): 135-137.

Whittier, W.D. (2007). Prolapse in cattle- an ugly fact of life. Livestock update, Virginia State University.

Wolfe, D.F. (2009). Medical and Surgical Management of Vaginal Prolapse in Cattle. Presentation "81st western veterinary conference", Auburn, February, 2009.

Received : 21st July 2021 Accepted : 05th October 2021