

## Successful Management of Pre Partum Cervico-Vaginal Prolapse Concurrent with Dystocia Due to Incomplete Cervical Dilatation in Surti Buffalo: A Case Report

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DOI: 10.31080/ASVS.2022.04.0330

Received: January 17, 2021

Published: February 17, 2022

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### Abstract

The present paper reports the successful treatment of cervico-vaginal prolapse and dystocia due to incomplete cervical dilation in buffalo. Eight-year-old Surti buffalo in fourth parity was presented with history of full term gestation, unproductive straining and severe degree cervico-vaginal prolapse from past 24 hrs. The cervico-vaginal prolapse was repositioned and per-vaginal examination discovered one finger cervical dilation whereas foetus was in anterior presentation examined by per rectal examination. The buffalo was treated for incomplete cervical dilation with dexamethasone 40 mg, cloprostenol sodium 500 µg and intravenous valethamate bromide 80 mg with periodical fothering of cervix. There was cervical dilation and dead fetus was removed with slight traction. The cervico-vaginal prolapse as well as incomplete cervical dilation during parturition in Surti buffalo was successfully managed.

**Keywords:** Cervico-Vaginal Prolapse; Dystocia; Incomplete Cervical Dilatation

### Abbreviation

ICD: Incomplete Cervical Dilatation; CVP: Cervico Vaginal Prolapse; CMC: Carboxymethyl Cellulose

### Introduction

Buffalos are backbone for milk production contributing 49% milk produced in India (Annual Report, DAHD-2020-21). The reproductive concert of buffalos is underprivileged due to numerous diseases of reproductive system which includes genital prolapse [2,13]. Cervico-vaginal prolapse typically comprise overhang of the portion of floor, lateral walls and roof of vagina along with cervix and uterus [12]. It is a routine obstetrical delinquent which unfavorably disturbs productive and reproductive performance by upsetting postpartum return to estrus, reducing conception rate and increase in calving interval. Aetiologic features of prepartum cervico-vaginal prolapse in buffalos happens due to nutritional imbalance [1,8], hormonal disproportion [4], seasonal management

tal factors [9] and genetic predisposition [10].

Cervico-vaginal prolapse is associated with incomplete cervical dilatation (ICD) that leads to dystocia and the frequency of ICD in cattle and buffaloes were 5.1% [11]. It happens because of changed endocrine status during birth. Cervico-vaginal prolapse (CVP) is interceded by augmented circulating attentions of estrogens and relaxin during last trimester of gestation leading to relaxation and softening of pelvic ligaments and nearby soft tissue structure [14]. It is intensified by the constant straining by buffalo and partial opening of cervix. The current article reports a case of pre-partum cervico-vaginal prolapse complicated due to incomplete cervical dilatation and leads to dystocia.

### Case history and clinical observations

Eight years old Surti buffalo in fourth parity and in last month of gestation was initially reported with problem of intermittent prolapse of vagina, with vagina protruding from vulva when animal

was lying down. Further it become aggravated in sequence of period with vaginal mass prolapsed through standup posture while trying to urinate or defecate or strain.

After 15 days, the complete vagina prolapsed and medical inspection exposed inflamed, edematous and congested vaginal mucosa with visible cervix at caudal part. After prolapsed mass originated out animal had non-productive straining. Gross inspection of buffalo displayed relaxed pelvic ligaments and developed udder. All vital parameters were within the standard array.

### Treatment and Discussion

Buffalo was administered with epidural anaesthesia with 2% lignocaine (LOX®, Neon Labs, India) at dose rate of 1ml for 100 kg body weight to decrease straining. Then, the prolapsed mass was cleaned with potassium permanganate solution (1:1000 dilution) then icepacks, sugar solution and Popin spray was applied to reduce edema and volume of the mass. Carboxy methyl cellulose (CMC) solution was done over the prolapsed mass. Urine was removed using sterile stainless-steel catheter and future the prolapsed mass was relocated and applied rope truss. Buffalo was soothed with analgesic inj. Meloxicam 15 ml, antibiotic Amoxicilline - clavulanic acid - 15 mg/kg body wt. along with six liters of fluid. Additionally, calcium borogluconate 250 ml I/V was also administered [3].

After 24 hours there was no dilatation of cervix, and for incomplete cervical dilatation (ICD) treatment consisted of intramuscular injections of dexamethasone 40 mg, cloprostenol 500 µg, and intravenous valethamate bromide 80mg with periodical fothering of cervix was carried out. Per-vaginal inspection 8hr post-treatment exposed 4 finger dilation along with suckling reflex of the foetus and cervical massage was repeated. About 4 hour post therapy, chorioallantoic sac appeared at the external os of the cervix through the prolapsed mass that ruptured spontaneously due to movement of animal. Since, cervical dilation was inadequate even after 10hour intravenous valethamate bromide 50 mg was repeated along with fothering of cervix. After 6hours of second treatment, the buffalo delivered a dead male fetus with mild obstetrical intervention. Fetal membranes were expelled after 5 - 6 hours. Post-partum the buffalo was normal and alert and arranged with routine antibiotics and supportive therapy [11].

Influencing factors include augmented intra-abdominal pressure associated with enlarged size of pregnant uterus, intra-abdominal fat or rumen distention overlaid upon relaxation and soft-

ening of the pelvic girdle and associated soft-tissue structures in the pelvic channel and perineum mediated by increased circulating concentrations of estrogens and relaxin during late gestation [6,7]. Dystocia due to incomplete cervical dilation occurs because of changes in activation of inflammatory mediators like cytokines along with different endocrinal situation during the process of birth. In the current circumstance, combination of cervical massage [5] along with use of valethamate bromide and PGF2α resulted in effective dilatation of cervix as reported earlier in cattle and buffalo [3,11]. Newly, intracervical application of misoprostol (PGE1 analogue) has been stated in cattle and goat [2] with ICD. Augmented concentration of estrogen because relaxation and softening of the pelvic ligaments along with increased intra-abdominal heaviness might predisposed to cervico-vaginal prolapse. The foetus might be died due to long asphyxia caused by rupture of water bag and incomplete cervical dilatation.

Figure 1: Prolapsed Mass.

Figure 2: Cleaning of Proplapsed Mass.

**Figure 3:** Applied Ropetruss after prolapse reposition.

**Figure 4:** Male Dead Fetus.

## Conclusion

Cervico-vaginal prolapse occurs more commonly in buffalo. There are number of factors which involve in the course of parturition in synergistic mechanism to deliver the fetus. Any deviation or alteration in any factor leads to abnormal condition like prolapse in pre partum period or dystocia. The similar condition incomplete cervical dilatation come in midway during parturition and eventually animal suffers from dystocia. It not only hampers the health of animal but also inflicts the economy of the farm severely. So, the animal should be provided proper care and management and urgent medication during the pre-parturient period to avoid such type of conditions.

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