

CASE STUDY

Uterine torsion associated with incomplete cervical dilatation and subsequent fetal maldisposition: A case report

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ABSTRACT

A buffalo in its' 2nd parity was presented to the Veterinary Gynaecology and Obstetrics section of the Referral Veterinary Polyclinic with the history of labor and discomfort since last 36 hours, with 5 days remaining in the completion of the gestation. The per-vaginal examination revealed that there was post-cervical, right sided (clock-wise) uterine torsion, less than 270° but more than 180°. Animal was casted in right lateral recumbency and detorsion attempt was made by modified schaffer's (plank) method along with one continuous rolling and torsion was relieved. The per-vaginal examination revealed ICD as only three finger dilatation was present. The dilation therapy was given and cervix was fully dilated after 8 hours of therapy. Per-vaginal palpation revealed that the fetus was in anterior longitudinal presentation, dorso-pubic position with both fore limbs in flexed condition, creating obstruction. However, with the help of obstetrical mutation, a dead male fetus was extracted out. The animal was discharged on the same day after treatment and it recovered uneventfully.

Keywords- Buffalo, Uterine torsion, Incomplete cervical dilatation, Fetal maldisposition

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INTRODUCTION

Amongst all domestic animals, incidence of dystocia (difficult birth) appeared to be highest in cattle and buffalo with more incidences in cattle as compared to buffalo [1]. Dystocia is broadly classified into fetal and maternal causes. Maternal causes of dystocia have been reported to be more common in the buffaloes [2, 3, 4, 5, 6] with single most common cause i.e. uterine torsion covering most of the incidences. Uterine torsion mostly occur during late 1st stage or early 2nd stage of labor which is characterized by spiral twisting of uterus on its longitudinal axis either in clockwise (right sided) or in anticlockwise (left sided) direction. It can be either pre-cervical (cranial to the cervix involve uterine body) or post-cervical (caudal to the cervix involve anterior vagina) with the most reported occurrence of post-cervical right sided uterine torsions in buffaloes [1]. Case of uterine torsion should be considered as an emergency and handling must be done as early as possible. Correction by rolling the animal utilizes the principle of rolling the animal around its uterus while the uterus remains static or fixed. Uterus is fixed by either plank method (degree of torsion >180°) or by grasping fetal parts per-vaginal if cervix is opened (degree of torsion <180°) and fetal parts are accessible [7].

Incomplete cervical dilatation (ICD) is the maternal cause while fetal maldisposition is the fetal cause of dystocia. These both conditions have higher incidences reported in cattle as compared to buffaloes [1]. Incomplete cervical dilatation condition is relatively uncommon when it is associated with uterine torsion as cervix is found to be dilated because most uterine torsions occur during late 1st stage or early 2nd stage of labor. The etiological factors leading to ICD during parturition are not exactly known but then, alteration in hormonal concentration including steroids, prostaglandin at term, weak myometrial contractions because of primary uterine inertia or secondary uterine inertia and the presence of weak or dead fetus in the uterus may be considered responsible for this condition (8). Fetal maldisposition as

abnormal presentation, position or posture of fetus mostly occur when weak, succumb or dead fetus cannot able to exhibit righting reflex or normal disposition during last months of gestation or 1st stage of parturition and also it often associated with uterine torsion. Fetal death may be due to compromised blood supply to the fetus, ultimately leading to fetal death in delayed cases of uterine torsion.

HISTORY AND CLINICAL EXAMINATION

A buffalo in its' 2nd parity was presented to the Veterinary Gynaecology and Obstetrics section of the Referral Veterinary Polyclinic (Indian Veterinary Research Institute, Izatnagar) with the history of labor and discomfort since last 36 hours, with 5 days remaining in the completion of the gestation (Fig.1). The animal was anorectic for the last 4 days.

The animal was in good body condition and gross observation revealed relaxation of sacro-sciatic ligaments, however, no proper relaxation of perineum, vulva with marked absence of teat engorgement and udder enlargement. The animal was restless and exhibited intermittent abdominal straining. The per-vaginal examination revealed post-cervical, right sided (clock-wise) uterine torsion of more than 180° but, less than 270° and cervical os was not palpable.

OBSTETRICAL AND THERAPEUTIC MANAGEMENT

Animal was restrained and laid down in right lateral recumbency as the direction of torsion. Both forelimbs and hind legs were tied with a rope separately. Torsion was corrected by modified schaffer's method with the application of plank. Detorsion attempt was made along with one continuous rolling (In brief: one rolling of the animal was done according to modified schaffer's method followed by one continuous roll without application of plank i.e. putting one hand in birth canal holding some folds of cervix or fetal parts and animal rolled once completely) in the right direction as the direction of torsion. After this, uterus was completely detorted. The per-vaginal examination revealed ICD as only three finger dilatation was present. The dilatation therapy was given comprising of mainly 4 drugs i.e. Inj. Epidosin® (TTK Healthcare Ltd)- 80 mg IM; Inj. Dexona® (Sarabhai Zydus Animal Health Limited)- 40 mg IM; Inj. Vetmate® (Vetcare)- 500 µg IM and Inj. Progynon Depot® (Zydus)- 10 mg IM. Cervix was fully dilated after 8 hours of dilatation therapy and fetal disposition was checked per-vaginally. Presentation was anterior longitudinal, position was dorso-pubic and posture was bilateral knee flexion (Fig.3). For correction of this maldisposition, animal was casted in left lateral recumbency. Thereafter, long handled blunt eye hook was placed in medial canthus of right orbit and gentle traction was applied to correct the neck deviation, further traction was continued and head was extracted outside birth canal. Then by cupping the hoof, gentle traction was applied with the help of obstetrical rope and both fore limbs were brought back in birth canal or extended out one by one (Fig.2). Finally, three point tractions were applied and dead male fetus was extracted out (Fig.4). Later, Fortivir® inj. (Virbac)-30 mL IM, 15 mL each on both sides in neck muscles was administered and to facilitate expulsion of fetal membranes, Liq. Exapar (Ayurvet limited, India)- 100 ml P.O. bid on first day followed by 50 ml twice daily for 3-5 day was prescribed.

DISCUSSION

The present case revealed the concurrent occurrence of both maternal and fatal cause of dystocia in a she- buffalo. Maternal causes such as uterine torsion and ICD as well as fetal cause of dystocia i.e. fetal maldisposition was present in the presented animal. Incidence of dystocia is lesser in buffaloes compared to cattle [9] due to relatively ease of calving in buffaloes. Maternal causes of dystocia appeared to more common in buffaloes while some reports pointed fetal causes to be most common [10, 11, 12]. Uterine torsion has major occurrence in buffaloes due to their anatomical differences from cattle predisposing it. Incomplete cervical dilatation (ICD) cases are less common in buffaloes compared to cattle [1], which was present in this case. The most common fetal cause of dystocia in buffaloes is fetal maldisposition as reported [4, 12], where limb flexion and head deviation appears to be most frequent in pluriparous buffaloes [3] and was also present in present case. The incidence of dystocia due to dorso-pubic position of fetus is rare in buffaloes, presented in this case. As it was delayed case of uterine torsion, fetus succumbed due to compromised blood supply and weak or non-viable fetus predisposed to fetal maldisposition as revealed at the time of handling the case. The dead male calf which was associated with dystocia in the present case has been reported to be more common in the buffaloes [2]. However, the animal was treated and discharged on the same day and it recovered uneventfully.

CONCLUSION

A case of uterine torsion associated with incomplete cervical dilatation and fetal maldisposition in buffalo and its successful management is reported.



Fig.1. Buffalo presented at RVP (IVRI)



Fig.2. Application of rope on fetal extremities



Fig.3. Dorso-pubic position of the fetus



Fig.4. Extracted dead male buffalo fetus

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