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Per Vaginal Delivery of Partially Macerated Fetus in Graded Buffalo: A Case Report

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ABSTRACT

A graded riverine buffalo in second parity was presented to the referral veterinary polyclinic of the ICAR-IVRI with the history of fever, inappetance and around 7 months of gestation. The animal was having foul smelling; muco-purulent vaginal discharge and gynaecological examination confirmed it as a case of fetal maceration. The cervical dilatation therapy was given to the animal and a partially macerated fetus was removed by traction after 20 h. The manuscript presents a rare case of fetal maceration in buffalo and per vaginal delivery of the fetus following successful cervical dilatation therapy.

Keywords: Buffalo, Maceration, Dystocia, Gestational disorder

Fetal maceration is a pre-partum obstetrical disorder with occurrence in almost all species but mostly described in cattle. It results due to failure of an aborting fetus to be expelled out, which may occur due to uterine inertia. The retention of the dead fetus in-utero followed by the invasion of microbes from the partially dilated cervix leads to putrefaction and autolysis of the fetal mass leaving bones within the uterus (Long, 2009). It usually follows fetal emphysema and mummification and found to occur usually after 4 months of gestation when fetal bones have been developed normally (Purohit and Gaur, 2011). Elevated temperature is also noticed in some cases of fetal maceration in cattle where cervix remains quite contracting in latter stages with abolished signs of fever and anorexia (Roberts, 1971). Fetal maceration in the buffaloes have been rarely reported as well as poorly studied till date. Luthra (1996) and Pandey*et al.* (2014) reported cases of fetal maceration in buffalo. The present manuscript describes a rare case of partial maceration in a buffalo with the successful delivery of fetus per-vaginally following cervical dilatation therapy.

Clinical history and observation

A graded buffalo in its 2nd parity was presented to the referral veterinary polyclinic of the ICAR-IVRI with the history of around 7 months of gestation. The animal was having a history of fever and signs of abortion around one month ago with muco-purulent; foul smelling vaginal discharge since then. The animal had been treated by the local area practitioner with no improvement in health status. The animal was having normal rectal temperature (101.4°F) and respiration as well as normal body condition. The per-vaginal examination of animal with well lubricated gloved hand revealed that cervix was partially dilated and little hard in consistency

with protruded one ring. Per-rectal examination revealed palpation of bony part with crepitating sound, uterine wall was exceptionally thickened and doughy in consistency. During rectal as well as vaginal palpation foul smelling, red-chocolate colored watery fluid came out from the uterus. The history along with the general and gynaecological examination revealed that it was a case of fetal maceration so to extract out the fetal mass from the uterus cervical dilatation therapy was given.

Therapeutic and obstetrical management

After the diagnosis of case, cervical dilatation therapy consisting of cloprostenol sodium (Vetmate®- Cargill, India) 500 ug IM (intramuscular), estradiol benzoate (Pregheat®-Virbac, India) 2 mg IM, Valethamate bromide (Epidocin®- TTK, India) 80 mg IM, dexamaethasone (Dexona®- Zydus, India) 20 mg IM, calcium magnesium borogluconate (Mifex®- Novartis, India) 450 ml slow IV (intravenous) along with the supportive therapy of pheniramine maleate (Avilinvet®- MSD animal health, India) @1 mg/kg b.wt. IM, Normal Saline (NS) 2 litres IV, Dextrose NS 2 litres, Ringer lactate 2 litres and ceftriaxone-tazobactum (Intaceff-tazo®-Intas, India) 4.5 gm were given to the animal. The animal was examined at 6 h of interval for cervical dilation and after about 20 h of the treatment and a bony mass consisting fetal head and other parts was found engaged in birth canal with foul smelling fluid draining out. Then the fetal mass was pulled outside the birth canal with one hand along with the attached autolysed fetal membranes. Then, the rectal massage of uterus was done to remove excess fluid. On examination of the fetal mass it was found that some muscle mass was still there but mostly putrefied and autolysed so it was confirmed as a case of the partial fetal maceration.

The animal was given treatment consisting of antimicrobial ceftriaxone-tazobactum (Intaceff-tazo®-Intas, India) 4.5 gm IM OD (once a day) for 5 days, analgesic flunixin meglumine (Megludyne®-Virbac, India) @ 2.2 mg/kg b.wt. IM OD for 5 days, antihistamine pheniramine maleate (Avilinvet®- MSD Animal health , India) @1 mg/kg b.wt. IM OD for 5 days, intrauterine antimicrobial moxifloxacin (Moxiwell IU®-Wellcon Animal health, India) 60 mL OD for 3 days and oral herbal uterine cleanser (Uterotone®-Cattle remedies, India) @ 100 mL PO (per orally) BD (twice a day) for 5 days. After about 2 h of the removal of macerated fetus, animal started eating grass and drinking water.

DISCUSSION

Fetal maceration is a common sequel of mummification as well as emphysema. Rautela *et al.* (2016) observed a case of fetal maceration in the goat with completely dilated cervix and removed the fetal bones per vaginally successfully.

Fig. 1: Buffalo in second parity presented with fetal maceration

Dutt *et al.* (2018) reported two cases of fetal maceration in crossbred cattle and opted left flank laparotomy as therapeutic measure due to failure of cervical dilatation therapy. Bisla *et al.* (2018) also reported per vaginal delivery of mummified fetus in a non-descript doe without any cervical dilatation therapy. Luthra (1996) used prostaglandin $F_2\alpha$ ($PGF_2\alpha$) for the successful

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per vaginal delivery of macerated fetus in a buffalo heifer. Fetal maceration in a non-descript buffalo was also reported by Palanisamy *et al.* (2014 and 2018) with successful use of only $PGF_2\alpha$ for cervical dilatation and per vaginal delivery of the macerated fetus. Praveen and Naidu (2015) used trans-rectal ultrasonography for the monitoring of the fetal maceration in a buffalo heifer. Saurabh *et al.* (2018) used a combination of valethamate bromide and dinoprost (PG analogue) for the successful management of fetal maceration in a buffalo.

Fig. 2: Partially macerated fetus with autolysed fetal membranes

CONCLUSION

Fetal maceration is a rare obstetrical pre-partum disorder in buffaloes which makes large economic losses to the farmer in terms of fetal loss, uterine infection and even in many instances the animal will become infertile due to extensive uterine endometrial damage. Early diagnosis using novel diagnostic techniques like ultrasonography or via gynaecological examination of the dam with better therapeutic management makes the margin of economic loss lesser.

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