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Fetal Maceration in a Cross-Bred Holstein Friesian Cow - A Case Report

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ABSTRACT

A crossbred Holstein Frisian cow was treated by local veterinarian for induction of parturition due to fetal death with Vetmate® (cloprostenol) and Dexona® (Dexamethasone) but failed to deliver the fetus and referred to Veterinary Clinical Complex (LUVAS, Hisar). Thereafter a combination of five drugs e.g. Prostaglandin, dexamethasone, valethamate bromide, estrogen and calcium-magnesium boro-gluconate was given to the animal and cervix dilated completely. A macerated fetus was delivered by forced traction and animal recovered successfully.

Key words: *Cow, Estradiol, Incomplete cervical dilatation, Maceration, Prostaglandin.*

INTRODUCTION

In domestic animals, pregnancy loss is inevitable at any stages of the gestation. Maceration of the fetus has been described in cattle[1], sheep[2], and mare[3] but most commonly in cattle and buffaloes[4]. When fetal death occurs during the second and third trimester of pregnancy and pus discharge comes through vulva, the condition is known as maceration[5]. Following death of fetus and cervical dilatation bacteria enters into the uterus through the dilated cervix, and by a combination of putrefaction and autolysis, the soft tissues are digested, leaving a mass of fetal bones within the uterus[1]. In such cases, endometritis develops and leads to infertility. The available literature describes management of macerated fetus through manual removal of fetal bones per vaginum through a dilated cervix[4,6]. This case study describes the per-vaginal delivery of a macerated fetus through traction from a crossbred Holstein Friesian cow after induction of parturition.

CASE HISTORY AND OBSERVATIONS

A Crossbred Holstein Friesian cow of aged about five years (Fig. 1), referred to Veterinary Clinical Complex, LUVAS, Hisar (Haryana) with the history of foul smelling discharge, complete gestation period and fetal death. The animal was attended by local veterinarian for induction of parturition using Cloprostenol sodium (500 µg) and Dexamethasone (40 mg) but no progress was observed in terms of fetal delivery.

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Clinical observations showed that animal had normal temperature and pulse rate with off-fed. Per-rectal examination revealed presence of fetal bones in uterine cavity with foul smelling purulent discharge through vulva. Distinct crepitating sound among the fetal bones in the left uterine horn was appreciated on per rectal examination. Ultrasonographic examination also showed hyperechogenic bones visible in echogenic pus (Fig. 2). Per-vaginal examination revealed open cervix only upto four fingers and fetus was present in posterior longitudinal presentation and hind portion of the fetus at lumbo-sacral region was broken by local vet. On the basis of ultrasonography, per-rectal and per-vaginal examination it was diagnosed as a case of fetal maceration. As the cervix was soft, it was decided to induce the parturition with complete parturition induction protocol.

TREATMENT

Animal was administered with Dexamethasone (Inj. Dexona, Sarabhai Zydus Animal Health Ltd. 10ml, IM), Oestradiol Benzoate (Inj. Prag Heat, Virbac India, 2ml, IM), Calcium-Magnesium-Boro-Gluconate (Inj. Mifex, Novartis India Ltd., 450ml, Slow IV), Valethamate Bromide (Inj. Epidosin, TTK Pharma, 10ml IM), Cloprostenol (Inj. Vetmate, Vetcare 2ml, IM). Antibiotics (Inj. Sulbian, Bovian Health Care Pvt Ltd. 4.5g, IM) and liver extract (Inj. Belamyl, Sarabhai Zydus Animal Health Ltd. 10ml, IM) were given as supportive therapy. The animal was kept under observation for 24 hours. On the next day, per-vaginal examination revealed completely dilated cervix and macerated fetus was delivered by careful traction using long handle eye hook (Fig. 3). Other remaining parts of placenta, bones etc. were removed manually. Following removal of fetus and other parts, four intrauterine boli (Cleanex®, Dosch Pharmaceuticals Pvt. Ltd.) were put in the uterus to prevent local uterine infection. Consequently, animal was administered with Normal Saline 3 litre, IV and Metronidazole 600 ml IV for 3 days. Antibiotic (Inj. Sulbian, Bovian Health Care Pvt. Ltd. 4.5g, IM), anti-inflammatory (Inj. FM-50, Macwell Pharmaceuticals Pvt. Ltd., 15ml, IM), uterine ecbolics (Inj. Nexbolic, Intas pharmaceutical Ltd., 5 ml) and liver tonic (Inj. Belamyl, Sarabhai Zydus Animal Health Ltd., 10ml IM) were advised daily for 6 days and animal recovered uneventfully.

Fig. 1: Crossbred Holstein Friesian having macerated fetus

Fig. 2: Hyperechogenic bones visible in echogenic pus in maceration

Fig. 3: Macerated fetus delivered by traction after induction of parturition

DISCUSSION

Fetal maceration is one of the accidents of pregnancy where fetal death can occur at any stage of the gestation but more commonly after 4th month of pregnancy. The reason for the non-delivery of a dead fetus could be a partially dilated cervix, or the abnormal

presentation of a fairly dry fetus which causes it to be retained in the uterus[1]. In literature there are reports for expelling the fetus using several drugs including estrogen, prostaglandins and Valethamate bromide[7] and failure of this therapy may be recorded if cervix is hard and indurated[8] or presence of structureless macerated fetus[9]. In such cases a repeated treatment can be attempted which was also true for current case that responded well with second dose of prostaglandin & dexamethasone combined with valethamate bromide, estradiol benzoate and calcium-magnesium-boro-gluconate. In non-responded cases surgical removal is considered as the last resort.

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