

FETAL MACERATION IN CROSSBRED HOLSTEIN FRISIAN HEIFER-A CASE REPORT

ABSTRACT

A maiden crossbred HF heifer was treated by one local veterinarian for induction of parturition due to fetal death with cloprostenol sodium and thereafter by combination of dexamethasone plus estrogen with no success. Looking at the condition of the animal, cesarean was conducted using ventrolateral approach under line infiltration of local analgesia as per standard procedure. A macerated fetus was expelled. Metritis developed 8 days following operation and was treated successfully.

1. INTRODUCTION

In domestic animals, pregnancy loss is inevitable at any stages of the gestation. When fetal death occurs during the second half of pregnancy, the result is an abortion or a stillbirth. Failure to expel out the foetus may be due to uterine inertia and intrauterine infections resulting in fetal emphysema and maceration [1]. Maceration of the fetus has been described in cattle [2-4], sheep [5], dog [6], mare [7], etc. 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 [4, 8]. Sometimes these become embedded in the uterine wall and are difficult to remove other than by hysterotomy. Under these circumstances a chronic endometritis ensues and there is severe damage to the endometrium [2]. The surgical treatment has a poor prognosis with least chance of future pregnancy [3] and slaughter for those cows with fetal maceration is indicated. This article describes the surgical removal of a macerated fetus from a crossbred heifer.

2. CASE HISTORY

A maiden crossbred heifer aged three years, presented with the history of fetal death. The animal was attended by one local veterinarian for parturition induction using cloprostenol sodium and thereafter by combination of dexamethasone plus estrogen with no success. Animal had normal temperature and pulse rate with off-fed, moderate dehydration, debility and progressive loss in body weight. Per-rectal examination revealed presence of fetal ribs in the pelvic cavity with passing of foul smelling purulent discharge per vaginum. Distinct crepitating sound among the fetal bones in the left uterine horn was appreciated on per rectal examination. Per-vaginal examination revealed aclosed cervix. Clinical judgment of the case demanded cesarean section.

3. SURGICAL PROCEDURE AND TREATMENT

Cesarean section was conducted under line block with 2 per cent lignocaine hydrochloride using left ventro-lateral (Oblique) approach. Preoperatively animal was administered with Dextrose with Normal Saline (2.5 liters intravenously), haemostatic (Revisci 15 ml intramuscularly) and antibiotic (ceftriaxone) and analgesics (meloxicam) as per recommended

dose. About 10 inches long incision was made on skin and muscles were severed. Gravid uterine horn was taken out and was packed with draper to prevent leakage of uterine contents into peritoneal cavity. About 5 inch long incision by using scalpel was made on the gravid horn and a macerated fetus (Fig. 1) was taken out. On the basis of crown-rump length fetal death was suspected around 7th month of gestation. Uterine fluid was collected and subjected to antibiotic sensitivity testing. The horn was lavaged with normal saline to clear the purulent material. Endometrium underwent mild sclerosis indicating doubtful status of future fertility of the animal. Uterus was closed with chromic catgut number 2 in cushing pattern following intra uterine deposition of four cleanex boli (1 bolus contains nitrofurazone-60mg, metronidazole 100mg, urea 6 gm and povidine iodine 60 mg, produced and marketed by Animal Health, Dosch Pharmaceuticals Pvt. Ltd., Mumbai, India). Then muscles were sutured in continuous pattern with catgut number 3 and skin was sutured with silk number 2 in cross mattress pattern. Post operatively animal was provided with antibiotic (at the rate of ceftriaxone 3 gm, i.m. daily for 6 days), analgesic (at the rate of meloxicam at the rate of 0.2 mg/kg body wt. i.m. daily for 3 days) and Feritas (each ml contains iron sorbitol citric acid-50 mg, folic acid-500 mcg and cyanocobalamin-50 mcg; marketed by Intas Pharmaceuticals Ltd., Ahmedabad, India) 5 ml intramuscularly. The animal was discharged on the same day of operation and owner was advised to keep the animal under supervision of local veterinarian. However, information of the patient was also taken every alternate day telephonically from our team. Eight days following the operation metritis developed and was treated with intrauterine levofloxacin and intramuscular enrofloxacin as uterine fluid showed highest sensitivity to both these drugs. On per-rectal examination at 40 days of post surgery uterus was found completely involuted without any complication. About 60 days thereafter the animal came into estrus but the owner was advised not to rebreed the animal for another 2 to 3 months.

4. DISCUSSION

Fetal maceration is one of the accidents of pregnancy where fetal death occurs although at any stage of the gestation; however more commonly from mid to late gestation [3]. Following death of the fetus if cervix is not dilated properly fetus is not expelled and there is history of chronic fetid mucopurulent discharge from the vulva over a long period of time as was seen in the present case. Although there are reports for expelling the fetus using several drugs including estrogen, stillbestrol or prostaglandin $F_{2\alpha}$ and these therapy may be successful only if fetal skeletal material is not present in the uterus [9]. Surgical removal is considered as the best resort in the cow. However, the future fertility is always doubtful [2]. Longer the condition exists greater the damage of the endometrium and poorer the prognosis. Thus slaughter is recommended wherever law permits. However, in our case, animal was completely recovered with no further complication probably because of earlier diagnosis of the condition and immediate removal of the macerated fetus.

Animals suffering from fetal maceration are usually ill [5, 10] probably due to development

of severe septicemia. In extreme cases death may also result [5]. However, if it is treated for prevention of secondary infections may show recovery [11]. In the present case deterioration in the physical health of the heifer was also observed.

Left ventro-lateral/ oblique approach for caesarean is usually suitable as contaminated uterus can easily be retracted outside and thereby helps in easy expelling of the uterine contents. This approach was described by Parish and his coworkers [12] where incision extends more cranio-ventrally compared with the traditional vertical incision. However recently Sood, et al. [11] reported expulsion of a macerated fetus through an uncommon site of gluteal region also.

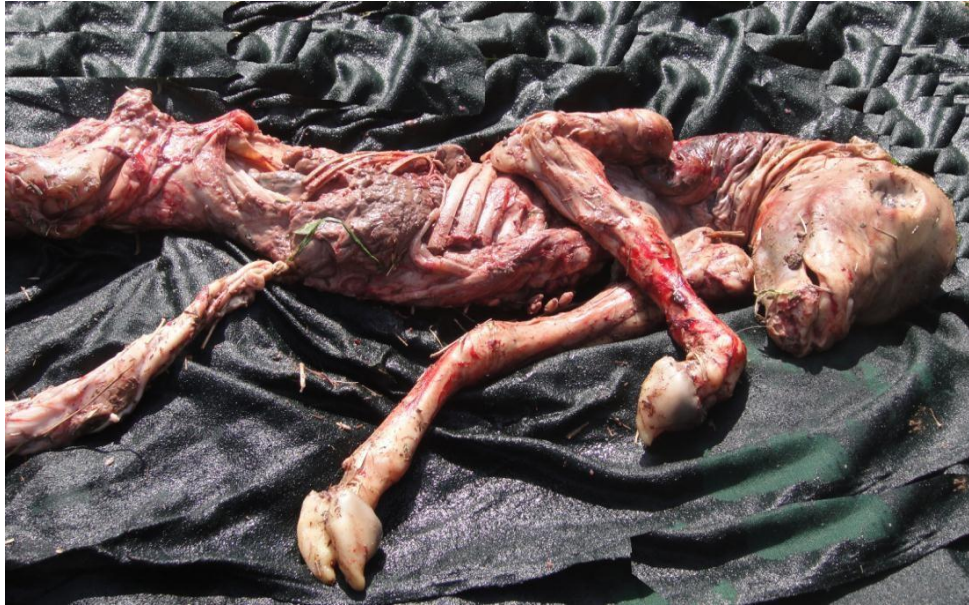


Fig-1. Macerated fetus