

## MANAGEMENT OF FETAL MACERATION THROUGH LEFT FLANK CAESAREAN SECTION IN A JERSEY CROSSBRED COW

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**Abstract:** A six years old, eight month pregnant pluriparous Jersey crossbred cow in its third lactation was presented to Large Animal Obstetrics Unit of VCC, VCRI Orathanadu with the history of abdominal straining and vaginal discharge for past 15 days. Clinically the cow was dull with wet muzzle and elevated rectal temperature (40.2°C). Per-vaginal examination explored two finger dilatation of external-os of cervix with foul smelling discharge. Per-rectal examination revealed thick walled doughy uterus and fetal bones were palpated in uterine body. The trans-rectal ultrasonographic findings confirmed the presence of fetal bones as echogenic shadows in hypo-anechoic fluid. The case was confirmatively diagnosed as fetal maceration. Hence, it was decided to perform lapro-hysterotomy by left flank incision under local infiltration anaesthesia. As per the standard procedure, Caesarean was performed and bones of macerated fetus were completely retrieved from the uterus. The uterine incision was closed with Cushing's followed by Lambert suture pattern and abdominal muscles were closed with continuous interlocking suture pattern. Finally, the skin was closed by horizontal mattress suture pattern with nylon. The crossbred cow was treated post-operatively with Streptopenicillin 5gm, i/m, 40 IU of Oxytocin i/m, Flunixin meglumine @ 1.1mg/kg b.wt i/m, Chlorphenaramine maleate @ 0.5mg/kg b.wt i/m, Meloxicam @ 0.5mg/kg b.wt i/m for seven days and skin sutures were removed after 12 days. The cow recovered uneventfully and become active after completion of treatment.

**Keywords:** C section, Fetal maceration, Jersey Crossbred cow.

### Introduction

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 (Roberts, 1971). Maceration of the fetus has been described in cattle, sheep, and mare but most commonly in cattle and buffaloes (Noakes *et al.*, 2009). 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 (Drost, 2007). The management of macerated fetus through cervix by manual removal of fetal bones per vagina was also done in case of dilated cervix. Under

these circumstances a chronic endometritis ensues and there is severe damage to the endometrium (Noakes *et al.*, 2001). The surgical treatment has a poor prognosis with least chance of future pregnancy (Roberts, 2004) and slaughter for those cows with fetal maceration is indicated. This article describes the surgical removal of a macerated fetus from a Jersey cross bred cow.

### **Case history and Observation**

A six years old, eight month pregnant pluriparous Jersey crossbred cow in third lactation was presented to Obstetrics Unit of VCC, VCRI Orathanadu with the history of abdominal straining and vaginal discharge for past 15 days. The history revealed that it was treated locally without success. Clinically the cow was dull with wet muzzle but rectal temperature was slightly elevated (40.2°C). Per-vaginal examination showed two finger dilatation of external os of cervix with foul smelling discharge. Per-rectal examination revealed thick walled doughy uterus and fetal bones were palpated in uterine body. The transrectal ultrasonographic findings confirmed the presence of fetal bones as echogenic shadows in hypo-anechoic fluid (Fig. 1 & 2). The case was confirmatively diagnosed as fetal maceration.

### **Treatment and Discussion**

The cesarean section was decided to perform lapro-hysterotomy by left flank incision under local infiltration anaesthesia with 2% lignocaine hydrochloride using left ventro-lateral (Oblique) approach. As per the standard procedure, about 15 inches long incision (Fig. 3) 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 8 inch long incision (Fig. 4) by using scalpel was made on the gravid horn and a macerated fetal bones (Fig. 5) were taken out. The uterine incision was closed with Cushing's followed by Lambert suture pattern using PGA-2 and abdominal muscles were closed with continuous interlocking suture pattern by using PGA-2. Finally, the skin was closed by horizontal mattress suture pattern with nylon. The crossbred cow was treated post-operatively with Streptopenicillin 5gm, i/m, 40 IU of Oxytocin i/m, Flunixin meglumine @1.1mg/kg b.wt i/m, Chlorphenaramine maleate @ 0.5mg/kg b.wt i/m, Meloxicam @ 0.5mg/kg b.wt i/m for seven days and skin sutures were removed after 12 days. On per-rectal examination at 40 days of post surgery uterus was found completely involuted without any complication. The cow recovered uneventfully and become active after completion of treatment (Fig. 6).

The reason for the non-delivery of a dead fetus could be 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. The dead foetus and open cervix at the body temperature cause a rapid invasion of the foetus and membranes by the organisms already present in the uterus or from the more caudal portion of the reproductive tract. Caesarean section should be considered as a last resort in valuable cow otherwise slaughter is recommended (Roberts, 1971). In literature there are reports for expelling the fetus using several drugs including estrogen, prostaglandins and Valetamate bromide and failure of this therapy may be recorded if cervix is hard and indurated (Roberts, 2004) or presence of structure less macerated fetus (Ball *et al.*, 1980). Surgical removal is considered as the best resort in the cow. However, the future fertility is always doubtful (Noakes *et al.*, 2001). Longer the condition exists greater the damage of the endometrium and poorer the prognosis. 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 (Bhattacharyya *et al.*, 2015). 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 (Paries *et al.*, 1995). It is concluded that the caesarian section should be performed immediately in the failure of expulsion of foetus within 72 hours after administration of PGF<sub>2</sub> $\alpha$ . The longer the condition had existed the greater the damage to the endometrium and the poorer the prognosis otherwise humane slaughter is recommended (Krishnakumar *et al.*, 2008).

## References

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Irregular Hyperchoic Reflections

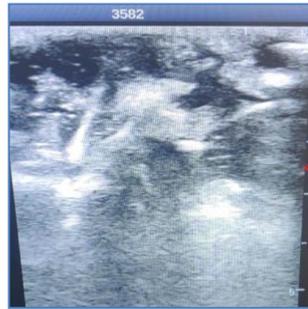


Fig .3

Abdominal Incision

Fig .4



Uterus exposing fetal bones

Fig .5



Arrangemnt of complete Fetal bones

Fig .6



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