HYSTEROTOMY THROUGH COLPOTOMY COMBINED WITH CERVICOTOMY FOR THE TREATMENT OF FETAL MACERATION IN A CATTLE

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ABSTRACT

Five year-old Jersey crossbred cattle was diagnosed as suffering from fetal maceration. The macerated fetal bones along with tissue debris were removed by hysterotomy through colpotomy combined with cervicotomy approach.

Keywords: Cattle, Colpotomy, Cervicotomy, Hysterotomy, Maceration

Failure of an aborting fetus to be expelled, perhaps due to uterine inertia or intrauterine infections leads to fetal emphysema and maceration of fetus (Johnston *et al*., 2001). Incomplete abortion after the third month of gestation is the main reason for a retained fetal bony mass in the uterus of cattle and buffalo (Sood *et al*., 2009). For fetal maceration, the available literature describes surgical treatment as a difficult procedure with poor prognosis and a low likelihood of successful future pregnancy (Roberts, 1971). This report put on record the successful removal of macerated fetus from a Jersey crossbred cattle through hysterotomy by colpotomy combined with cervicotomy approach.

CASE HISTORY AND OBSERVATIONS

A crossbred Jersey cattle in its third gestation with the history of seven-month pregnancy and mucopurulent discharge from vagina was presented for treatment. General clinical examination revealed 39.5˚C body temperature, 38/min respiration rate, 60/min heart rate and the animal voided mucous coated dung. Vaginal examination revealed two-finger dilatation of cervix of hard consistency and mucopurulent discharge from uterus. Rectal examination revealed the absence of signs of normal pregnancy. The cervix was located in the pelvic cavity and the thick contracted uterus was at the pelvic brim. The placentomes were not palpable and fremitus was absent. Crepitation was felt inside the uterus due to the presence of bony prominences of fetal mass. The case was diagnosed as fetal maceration and it was decided to relive the fetal bones by hysterotomy through colpotomy and cervicotomy approach.

TREATMENT AND DISCUSSION

The animal was restrained by epidural anesthesia (3 ml 2% Lignocaine HCl). Thereafter, through the vagina, fingers were inserted inside the cervical canal and the vagina were pulled upto the level of vulva. An incision of about 3 cm was made on the dorsal aspect of vagina using surgical blade but that space was not enough to exteriorize the uterus for hysterotomy so the incision was extended upto cervix in dorsal aspect using William's long obstetrical hook. Both the uterine horns were located, grasped firmly and retracted through the cervical and vaginal incisions. The uterus was incised on the greater curvature of both the horns to remove the fetal bones. Fetal bones, decomposed muscles and tissue debris were removed from the uterus (Figure 1). Uterine lumen was exposed as much as possible to wash with normal saline.

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Figure 1: Fetal bones removed from the uterus

Figure 2: Uterus exposed for removing fetal bones after colpotomy combined with cervicotomy

Thereafter, the incision on the uterus was closed with double layer of Cushings followed by Lembert suture using chromic catgut no. 2 (Figure 2). After replacing the uterus in its original position, the incision on the cervix and vagina was closed with simple interrupted suture using chromic catgut no. 2. Animal was treated with Ceftriaxone (10 mg/kg b wt), Chlorpheniramine maleate (100 mg), Meloxicam (0.5 mg/kg b wt) and intra venous fluids. Animal recovered completely and was discharged after seven days. After two months animal showed estrus signs, however, the rectal examination revealed adhesion of uterus with broad ligaments, hence, culling was advised.

In present case, surgical intervention was decided to remove the macerated fetus because the prostaglandin therapy is usually unsuccessful due to absence of corpus luteum on the ovary and severe endometrial damage. In Jersey crossbred cattle, the gravid uterus was contracted and located at the pelvic brim; hence, the normal abdominal flank approach was not possible. Considering all these factors, the combined technique of vaginotomy (colpotomy) with cervicotomy was carried out for exposing the uterus to remove the fetal bones and tissue debris successfully. Other advantage of this approach over flank incision was the ability to perform the procedure in standing animal, obviating the need for general anesthesia or deep sedation, and the decreased risk of wound dehiscence. Simultaneous perforation of the vaginal wall and cervix using a sharp instrument is an elegant means of entering the peritoneal cavity and could be expected to have minimal postoperative complications (Drost *et al*., 1992). Colpotomy, which can be done in a standing animal and does not require incision and closure of the abdominal musculature, is a cheaper procedure than other surgical approaches to bovine uterus.

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