

Short Communication

DELIVERY OF MACERATED AND REABSORBED FETUS THROUGH FLANK APPROACH - A CASE REPORT

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ABSTRACT: The current case report gives the brief information about fetal maceration in a non-descript six years aged cow and its successful management through lateral oblique (flank) approach of laparo-hysterotomy. The animal had a history of eleven-month gestation without any sign of parturition. Initially, the animal was suspected for mummification since there was no genital discharge and completely closed cervix. Upon transrectal ultrasonography the case was confirmed with fetal maceration. Lateral oblique laparo-hysterotomy was decided to perform for delivery of macerated and reabsorbed fetus. Animal recovered uneventfully after proper post-operative care and management.

Key words: Caesarean section, Cow, Maceration, Reabsorbed foetus.

Incomplete abortion after the third month of gestation is the main reason for a retained fetal bony mass in the uterus of cows and buffaloes (Sood *et al.* 2009). Fetal maceration may occur at any stage of gestation and has been reported to occur in all species (Purohit 2012) following fetal death, regression of corpus luteum and failure of abortion (Arthur *et al.* 1989). The condition is common in cattle and buffaloes (Purohit and Gaur 2011, Dutt *et al.* 2017, 2018) but may be rarely encountered in mares (Burns and Card 2000) and small ruminants (Mehta *et al.* 2005, Ajitkumar *et al.* 2007). It has also been observed that incidence of fetal maceration is more in cattle than in buffaloes (Personal observations). In delayed cases of maceration, the prognosis is very poor (Dutt *et al.* 2018). When the cervix is not open prostaglandins or estrogens can be given to regress the partially regressed CL and/or increase the uterine contractions (Purohit and Gaur 2011).

Case history and observation

A non-descript six years aged cow was brought to the Veterinary Clinical Complex, LUVAS with the history of over gestation. The history revealed that the animal was artificially inseminated eleven months ago and had not shown any heat signs afterwards. The general clinical

examination of the animal showed body temperature of 102.4° F and rest all other physical parameters were apparently normal. External genitalia were normal without any discharge or foul smelling. Per-rectal examination revealed a contracted uterus lying anterior and downward to the pelvic brim, the uterus appeared thick and having a hard-compacted mass with crepitation in the left horn of the uterus without appreciable fluid, the placentomes were not palpable and fremitus was absent. Per-vaginal examination revealed that closed external os of the cervix. For further confirmation of maceration, the patient was subjected to trans-rectal Ultrasonography, that revealed bright hyperechoic disintegrated bony parts of the fetus (Fig. 1). There was no integrity in the skeleton of fetus that too without any fluid in the uterus (Fig. 2). Thus, the clinical findings of the case confirmed as fetal maceration.

Treatment and discussion

An attempt was made to dilate the cervix and evacuate the uterus by the administration of Cloprostenol 500µg (Inj Metrum®, Macwell, 2 ml IM), Oestradiol benzoate 2mg (Inj Pregheat®, Virbac 2ml IM), Valethamate bromide 100 mg (Epidosin®, TTK Pharma 10ml IM), Dexamethasone 40 mg (Dexona®, Sarabhai Zydus

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Fig. 1. Hyperechoic disintegrated fetal bony impressions.



Fig. 2. The bones of a macerated fetus.

Animal Health Ltd. 10 ml IM), Calcium-Magnesium-Boro-gluconate (Mifex®, Novartis India Ltd. 450 ml IV). There was no change in the condition in terms of dilatation of cervix. Since the uterus containing macerated fetus in delayed cases is difficult to be exteriorized at the incision site because of small size of the uterus, therefore it was decided to perform a laparo-hysterotomy in standing position by left flank approach under regional anaesthesia (inverted L block) and local infiltration at the site of incision. To improve the general condition and to combat toxemia the animal was administered intravenous fluids (2 liters of normal saline) and broad-spectrum antibiotic (Amoxicillin-sulbactam, Inj. Amoxirum forte®, Virbac India Ltd, 4.5g IM) before the surgery. Subsequently, laparo-hysterotomy was carried out successfully under paravertebral block and linear

subcutaneous infiltration of 2% Lignocaine hydrochloride along the incision line with least possible contamination of the surrounding tissues by completely exteriorizing the pregnant horn outside the incision line and removing the macerated fetal bones and other reabsorbed septic contents from the uterus. The uterus was given good flush with normal saline and diluted povidone iodine solution. The uterus was subsequently sutured with Cushing's followed by Lembert's sutures using Chromic catgut no.3 followed by closure of the abdominal incision by lock stitch suture pattern. Post-operative care included infusion of fluids (normal saline, 3 liters i.v), antihistaminic drug (Pheniramine maleate, Avilin Vet®, Intervet India 10 ml), antibiotic (Amoxicillin-sulbactam, Inj. Amoxirum forte®, Virbac India Ltd, 4.5g i.m) and non-steroidal anti-inflammatory drug (Flunixin meglumine, Inj. Megludyne®, Virbac India Ltd, 20ml i.m) for 6 days. The cow recovered uneventfully. The skin sutures were removed after ten days post-operation.

Fetal maceration is disintegration of a fetus that has died and has failed to abort due to un-dilated cervix. In current case rectal palpation revealed compact mass of fetal bones palpable in the left uterine horn which was doughy and thick. The absence of discharge and closed internal os of cervix may be because of early maceration condition. It is observed that in most of the chronic macerated cases the disintegration of skull from the foetus occurs and this disintegrated skull will lodge in non-pregnant horn towards ovarian end very frequently (personal observations). Therefore, disintegration of fetal skeleton is not a common feature of mummified fetus that helps in ultrasonographic differentiation of macerated fetus from mummified foetus in these types of cases. In caesarean section through ventro-lateral incision parallel to milk vein, there are chances of seepage of contaminated uterine content in abdominal cavity and difficulty in suturing the comparatively smaller size of uterus than normal pregnancy. Therefore, delivery of macerated /mummified fetus through left flank approach is often advantageous (Kumar *et al.* 2013, Dutt *et al.* 2017, Dutt *et al.* 2018).

REFERENCES

- Ajitkumar G, Kuriakose AM, Ghosh KNA, Sreekumaran T (2007) Fetal maceration in a goat. *Indian J Anim Reproduct* 28: 107-108.
- Arthur GH, Noakes DE, Pearson H (1989) *Veterinary Reproduction and Obstetrics*. 6th edn, ELBS Publication, Britain.

Burns TE, Card EE (2000) Fetal maceration and retention of fetal bones in a mare. *J American Vet Medic Assoc* 217: 878-880.

Dutt R, Dalal J, Singh G, Gahalot SC (2018) Management of fetal mummification/maceration through left flank caesarean section in cows - study of four cases. *Advan Anim Vet Sci* 6(1): 12-16.

Dutt R, Singh G, Gahalot SC, Yadav V, Patil SS, Soni N, Dhaka A and Dalal J (2017) A rare case of a uterine torsion in a five months pregnant cow and its successful management through left flank caesarean section. *Int J Sci Nature* 8(4): 922-925.

Kumar P, Purohit GN, Mehta JS (2013) Surgical management of a macerated bovine fetus. *Ruminant Sci* 2(1): 107-108.

Mehta V, Sharma MK, Bhatt L (2005) Macerated fetus in goat. *Indian J Anim Reproduct* 26: 75.

Purohit GN (2012) *Domestic Animal Obstetrics*. Lambert Academic Publishers, Germany.

Purohit GN, Gaur M (2011) Etiology, antenatal diagnosis and therapy of fetal complications of gestation in large and small domestic ruminants. *Theriogenol Insight* 1: 45-46.

Sood P, Vasishta NK, Singh M (2009) Use of novel approach to manage macerated fetus in a crossbred cow. *Vet Rec* 165: 347-348.

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