Surgical Management of Haematic Fetal Mummification in an Ongole Cow

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Abstract: A five years old, Ongole cow with prolonged gestation was presented to the Teaching Veterinary Clinical Complex, Gannavaram. Per rectal examination revealed the hard mummified condition of the fetus without any fetal fluids. Laporo hysterotomy was conducted under the sedation with Triflupromazine hydrochloride (Inj. Siquil) and local anesthesia (Inj. xylocaine 2%) to remove the fetus. A fully developed mummified fetus which was soft and surrounded by viscous bloody and chocolate coloured material was removed. Hysterotomy opening and laporotomy opening were closed by standard methods. The animal had uneventful recovery.

Keywords: Ongole cow, haematic fetal mummification, left lower flank approach

INTRODUCTION
Fetal mummification is an abnormal condition in which death of the fetus occurs after mid-gestation, when ossification of the bones has begun and complete resorption of fetal material cannot take place [1]. The incidence of fetal mummification in cattle ranges from 0.13 -1.8 % of which haematic mummification is more common [2].

Studies suggest that hysterotomy as an effective surgical approach for removal of mummified fetus in cows that do not respond to PGF2α therapy [3]. The present report describes the haematic fetal mummification in an Ongole cow and its surgical management by hysterotomy through caudal left lower flank approach.

CASE HISTORY AND CLINICAL OBSERVATIONS
A 5 year old, Ongole cow, weighing around 500 kg, was presented to the Teaching Veterinary Clinical Complex, Gannavaram. Per rectal examination revealed the hard mummified condition of the fetus without any fetal fluids. Laporo hysterotomy was conducted under the sedation with Triflupromazine hydrochloride (Inj. Siquil) and local anesthesia (Inj. xylocaine 2%) to remove the fetus. A fully developed mummified fetus which was soft and surrounded by viscous bloody and chocolate coloured material was removed. Hysterotomy opening and laporotomy opening were closed by standard methods. The animal had uneventful recovery.

On physical examination, the cow looked apparently normal and per-rectal palpation revealed hard uterine mass adhering to the uterine wall without cotyledons and uterine fluid. On vaginal examination, partially dilated cervix (one-finger dilation) with brownish uterine discharge was observed. The case was prepared for caesarian section for removal of the mummified fetus.

TREATMENT
The cow was premedicated with Triflupromazine hydrochloride @ 0.1 mg/kg body wt. IM and local analgesia was achieved with inverted-L block using 2% lignocaine hydrochloride after routine aseptic surgical preparation of caudoventral area of left paralumbar fossa [4].

A 15 cm long laporotomy incision was made at the proposed site and the uterus was exteriorized. A longitudinal incision was made on uterus and the mummified fetus was removed. The fetus was soft and surrounded by viscous bloody and chocolate colored material (Fig: 1). Uterus was flushed with normal saline and 60ml of topical terramycin liquid was deposited (Terramycin, Pfizer). The uterus was closed by double inversion with Cushing and lambert sutures using no.3 chromic catgut. Laporotomy incision was closed by continuous interlocking pattern using extra heavy Vitafil for muscles and peritoneum and number 3 silk for skin in horizontal mattress pattern.

Post operatively, the animal was administered with Enrofloxacin @ 5mg/kg body wt for 7 days; DNS @ 5lt/day, Metronidazole @ 300 ml/day and Meloxicam @ 0.2 mg/kg bwt for 5 days. Antiseptic dressing was carried out daily. Ecbolics like Oxytocin 15 IU was given by IM on the day of operation and...
also for 3 days subsequently and Exapor liquid @ 200 ml PO. The animal recovered uneventfully and skin sutures were removed on 12th post operative day.

Fig-1: Photograph showing caudal left lower flank was the site selected along with the mummified fetus

Fig-2: Photograph showing mummified fetus surrounded by viscous bloody and chocolate coloured material

CASE DISCUSSION
Fetal mummification occurs due to variety of causes including the biological, mechanical and hormonal anomalies [3]. The present case deals with haematic mummification due to the hormonal anomaly resulting prior administration of corticosteroids in mid pregnancy and its surgical management. Administration of Corticosteroids causes myometrial contractions and luteolysis of the corpus luteum (CL) during pregnancy. This results in decreased serum P4 levels which may induce myometrial contractions and expulsion of fetus. But in the present case, may be due to insufficient dose of corticosteroid and the capability of placenta to produce P4 to maintain pregnancy between 150 – 270
days of gestation [1] resulted no functional regression of CL and maintained the pregnancy. The fetus becomes mummiﬁed, due to regression of maternal caruncles and leads to hemorrhage between the endometrium and foetal membranes thereafter the plasma is reabsorbed as a sequela to corticosteroid therapy[5]. Most often, haematic mummiﬁcation occur between 3rd to 8th months of gestation without concomitant luteolysis of the corpus luteum (CL) and opening of cervix. In haematic mummiﬁcation the fetus appears covered by dark and viscous material, consequence of blood metabolization as observed in the present case [6]). The prolonged gestation observed in the present case may be due to failure of the physiological events of parturition of fetal origin. This condition often only diagnosed when the cow is examined because of prolonged gestation.

The treatment of choice in case of fetal mummiﬁcation is both medical and surgical approaches. Medical treatment consists of administration of PGF2α analogue to induce luteolysis of the CL leading to the expulsion of fetus within 2-4 days [5]. Surgical removal of mummiﬁed fetuses through laparohysterotomy remains an option when medical treatment fail[7]. In the present case caudal left lower ﬂank was the site selected for easy approach to the uterus and its exteriorization compared with mid ventral, paramedian approaches because of smaller size of the uterus (Fig-1). The chances of post operative infections and incisional hernia were less with this approach. The animal recovered uneventfully and came to estrus after 4 months. Haematic mummiﬁcation of fetus is due to hormonal origin[8].

CONCLUSION
Caudal left lower ﬂank incision is preferred site for easy exteriorization of uterus and fetus in case of haematic mummiﬁcation which are not responded to the hormonal treatment.

REFERENCES