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Spontaneous expulsion of mummified fetus in crossbred Jersey cow

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Abstract

The present report records the spontaneous expulsion of a mummified fetus due to endogenous lysis of the corpus luteum in a crossbred Jersey cow. Confirmative diagnosis of fetal mummification was made based on the history, clinical signs, rectal and vaginal examination and examination of the fetus.

Keywords: Crossbred jersey cow, mummification, hematic type, spontaneous expulsion

Introduction

Fetal mummification is not uncommon in cattle and buffalo. It is most commonly encountered in polytocous species like swine (Kennedy *et al.*, 1993) [1] followed by small ruminants like sheep and goats (Hailat *et al.*, 1997 and Mane *et al.*, 2010) [2, 3], large ruminants like cattle and buffalo (Barth, 1986) [4], pet animals like dog and cat (Johnston and Raksil, 1987 and Thangamani *et al.*, 2023) [5, 6] and horse (Mayers and Varner, 1991) [7]. In cow and buffalo, the fetal death without abortion and persistent corpus luteum (PCL) at the end of the first and beginning of the second trimester of gestation result in autolytic changes in the fetus. The shrinkage of the uterus and the fetus occurs gradually with the absorption of the placenta and fetal fluids forming a mummy within the uterus. The cervix remains tightly closed in this condition and the fetus will be sterile [8]. The papyraceous type of mummification was observed in dogs, cats, pigs and horses, whereas the hematic type of mummification observed in cattle, buffalo, sheep and goats [9]. Diagnosis of fetal mummification in cattle and buffalo is based on rectal palpation of fetal parts which are palpable at the pelvic brim with a contracted uterus over the fetus and absence of fetal fluids, place tomes and fremitus [10]. Various treatment protocols are practiced for fetal mummification from conservative (or) medical management to cesarean section. The present report recorded the spontaneous expulsion of a hematic type of mummified fetus in crossbred Jersey cow.

Case history and clinical observations

An eight and half month pregnant crossbred Jersey cow on its third gestation was reported with the history of not showing udder development, abdominal distention and other signs pertaining to the stage of gestation. The previous calvings were normal and no postpartum complications were reported. On general clinical examination, the animal was active, and alert and the vital parameters were within the normal range. On rectal examination hard mass was palpable inside the uterus. Detailed rectal examination evinced absence of fetal movements, place tomes, fetal fluid and fremitus. The uterus was completely contracted over the fetal mass. A vaginal examination revealed a full-hand dilated cervix and the presence of a small-sized fetus covered with fetal membrane and having empty orbits. Based on the owner's history, rectal and vaginal examination and examination of the fetus, the case was diagnosed as hematic fetal mummification.

Treatment

The cow was restrained in Travis and epidural analgesia was induced with lignocaine hydrochloride (4 ml) at the sacrococcygeal space to prevent straining.

The birth canal was lubricated with a lukewarm Carboxyl methyl cellulose solution. After lubrication, the obstetrician's fingers were inserted in both the orbits of the fetus and by judicious traction mummified fetus was delivered. The cow was administered with calcium borogluconate (250 ml) intravenously, and oxytocin (20 IU) intramuscularly on the day of removal of the mummified fetus. The oral ecobolic was advised for 5 days. The cow recovered uneventfully.

Examination of the mummified fetus revealed an empty orbit, shrivelled body and covered with hematic type of fetal membrane (Figures 1 and 2). The biometry of the mummified fetus delivered was also recorded (Table 1).

Table 1: Biometry of the mummified fetus

S. No	Characteristics of a mummified fetus	Measurements
1	Placenta weight	1.7 Kg
2	Crown Rump Length (CRL)	45 cm
3	Forelimb length	24 cm
4	Hind limb length	21 cm
5	Head length	13 cm
6	Orbit length	2 cm
7	Weight of the fetus	3.6 Kg
8	Fetus along with fetal membrane weight	5.3 Kg
9	Approximate age of the fetus	6 months

Discussion

Most of the fetal mummification cases usually brought with the history of absence of parturition signs even after completing the gestation period. In the reported case, the

owner brought 15 days before the expected date of calving. On vaginal examination, mummified fetus was delivered. This might be due to the lysis of the corpus luteum by the endogenous release of prostaglandin without exogenous administration of hormone. In 63 per cent of cases suspected of mummification, the abdomen is unusually small in size for a given stage of gestation [11]. On rectal examination immobile fetal mass, resorption of fetal fluids, and absence of place tomes and fremitus were noticed [10]. The surface of the fetus and fetal membranes were surrounded by a brown colour viscous material that might be originated from carbuncular bleedings [9]. In the reported case also similar findings were noticed. Prostaglandin analogue and estradiol could be used for the termination of pregnancy in fetal mummification (Barth, 1986) [4], but in the present case mummified fetus was expelled spontaneously. Post-obstetrically the cow was recovered uneventfully without any complication.

Conclusion

A Jersey crossbred on its eight and half month gestation was reported with the history of not showing signs related to the stage of gestation. Rectal examination revealed a thick and contracted uterus with absence of fetal movements, place tomes, fetal fluid and fremitus. During vaginal examination, mummified fetus was found and delivered. The gross examination of the fetus revealed an empty orbit, a shrivelled body and a thematic type of fetal membrane around the fetus. The present report recorded typical hematic-type fetal mummification and its clinical management.



Fig 1: Hematic type of mummified fetus



Fig 2: Empty orbit, Shriveled body

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