FETAL MUMMIFICATION IN COW AND ITS RETENTION IN THE VAGINA: A CASE REPORT

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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 (Noakes et al., 2001). Fetal mummification generally remains unobserved during the first half of pregnancy, because embryonic or fetal death prior to the development of fetal bones usually is followed by unobserved discharge or tissue resorption (Lorenz et al., 2009).

The condition has been reported in several species but it is more common in cattle (Roberts, 1971). In the case of haematinic mummification, when the placenta or maternal caruncules regress, a hemorrhage occurs between the endometrium and fetal membranes and, after plasma is reabsorbed, there is a formation of viscous, thick and dark brown tissue, with mucus and clots (Arthur *et al.*, 1996). The present case report describes the retrieval of mummified foetus from the vagina of a cow with history of ten months gestation.

CASE HISTORY, CLINICAL OBSERVATION AND TREATMENT

An eight years old non descript cow with history of 10 months gestation period was presented to the Teaching Veterinary Clinical Complex, DUVASU, Mathura, showing thick brownish vaginal discharge since last 3-4 days and suspected for approaching oestrus. No apparent sign of parturition was noticed and the feed and water intake of the animal was normal. Per-rectal examination of animal revealed symmetrical horns and resembled to be of non-pregnant animal but vaginal area revealed presence of a hard mass. It was confirmed per-vaginally and was extracted out with mild traction. Gross clinical examination revealed that it was a mummified fetus covered with thick fetal membrane having brownish gummy materials in small amount (Fig. 1). Uncovering the membranes of a mummified fetus revealed well developed orbits, jaw and limbs with dehydrated body (Fig. 2). An ultrasound examination was also done to confirm the status of uterus which revealed normal in cross-section without any fluid retention and around 10.6 mm follicle on the right ovary and small follicles with regressing/ residual tissue of corpus luteum in the left ovary.

After extraction of mummified fetus with gentle traction, cow was treated with Inj. Intamox (4 gm, i/m), Inj. Melonex (100 mg, i/m) and Inj. Anistamin (100 mg, i/m) for three successive days to prevent uterine infection.

DISCUSSION

The retention of a mummified fetus in the uterus is associated with a functional corpus luteum and no signs of estrus (Roberts, 1971). However, in some cases, mummification of the fetus can lead to total expulsion of fetus, before the expected time for labor (Roberts, 1971) or the fetus can be partially expelled from the uterus and remains in the cervix or vagina (Arthur *et al.*, 1996). In present case, retrieval of mummified fetus proved that it might have expelled from the uterus to the anterior vagina and subsequently involution of the uterus took place. And further regression of corpus luteum followed by follicular activity as it was evident through ultrasonography; fully involuted uterus with an almost preovulatory size of the follicle along with regressing corpus luteum that might have triggered hypothalamic-hypophyseal-gonadal activity, evincing estrus in the animal.

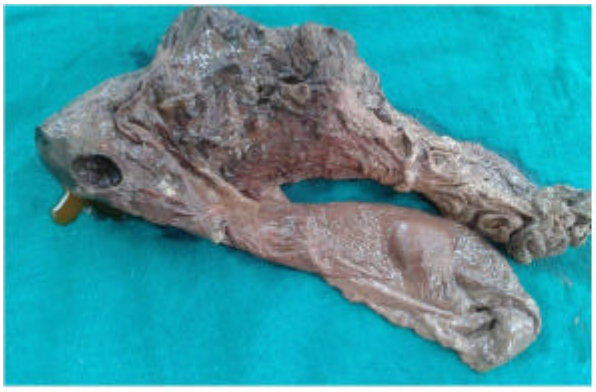

Fig-1. Mummified fetus covered with fetal membrane

Fig-2. Mummified fetus after removal fetal membrane

The occurrence of fetal mummification in cows is very low (0.43 to 1.8%), but usually occurs between three and eight months of gestation, being more frequent between fourth to sixth month (Roberts, 1971). In present case, it was speculated that mummification might have occurred around 5 to 6 month of gestation. The mummified fetus may be kept in the uterus from three to twenty-four months in large animal (Grunert *et al.,* 2005) and is usually detected during routine reproductive examinations (Arthur *et al.*, 1996). However, in present case the gestation of mummified fetus was 10 months only and could be detected because of vaginal discharge and owner suspected for estrus and brought to the clinics and it was confirmed as the case of mummification through gynaeco-clinical examination, visual observation and retrieval of the fetus from the anterior vagina. Although the exact cause of death and mummification could not be established in the present case but it could be due to various events such as trauma, uterine torsion, malnutrition and genetic problems may certainly contribute to the arrest of a normal gestation (Arthur *et al.*, 1996) and death followed by mummification.

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