

SUCCESSFUL MANAGEMENT OF FETAL MUMMIFICATION VIA CAESAREAN SECTION IN GOLDEN RETRIEVER BITCH: A CASE REPORT

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Abstract: A primiparous pregnant golden retriever bitch of prolong gestation was presented to Veterinary clinical complex (VCC) with a history of inappetence, fever and abnormal bloody vaginal discharge since a week. As per breeding history of bitch mating was done 3 months before. Per vaginal examination revealed open cervix and no fetus part in birth canal. X-ray confirmed the presence of one fetus in uterus and USG examination reveals presence of fetus but no such fetal fluid present somewhat suggestive for mummified fetus. Caesarean section was done under general anaesthesia. Suturing was carried out following standard surgical procedures, and post-operative care included antiseptic, pain management and wound dressing for seven days. The bitch recovered successfully through therapeutic management following a surgical procedure.

Keywords: Bitch, Golden retriever, Fetal mummification, Caesarean section.

Introduction

Fetal mummification occurs when the fetus and its fluids are reabsorbed by the uterus, leading to dehydration of the fetal tissue and surrounding membranes. The corpus luteum remains active, preventing the expulsion of the retained fetal remains (Noakes, 1986). Fetal mummification has been observed in various species, though it is more frequently seen in cattle. In canines, however, it is rare and occurs sporadically. (Roberts, 2004). Fetal mummification is a sterile process resulting from morphological changes in the retained dead fetus after the first third of pregnancy. This occurs when the fetal skin has matured enough to resist autolysis. (Jackson, 2004b; Grunert *et al.*, 2005; Linde-Forsberg, 2010). Fetal death occurring in late gestation, without leading to abortion or maceration, can result in fetal mummification. This process does not occur in the first half of pregnancy, as embryonic or fetal death before bone formation typically leads to unnoticed discharge or tissue resorption (Lorenz *et al.*, 2009). Fetal mummification is a characteristic of canine herpes virus (CHV)

infection in dogs (Arthur *et al.*, 1996). Canine fetal mummification closely resembles that of swine, where one to three mummified fetuses are delivered alongside healthy pups during whelping. (Roberts, 2004). A present case report of canine fetal mummification and its successful treatment via Caesarean section.

History and clinical observations

A 4-year-old female golden retriever in its first parity presented with a history of mating 3 months before examination at Veterinary Clinical Complex (VCC), DUVASU Mathura (**Fig:1**). The owner reported Inappetence, fever, abnormal bloody vaginal discharge since a week. The rectal temperature was 103° F and the animal was active. Haematological examination revealed neutrophilia, leukocytosis and low PCV count which may be due to blood loss after uterine rupture and passage of red blood cells into the uterine lumen by diapedesis (Vorwald *et al.*, 2012). Per vaginal examination revealed open cervix and no fetus part in birth canal. USG examination reveals presence of fetus but no such fetal fluid present somewhat suggestive for mummified fetus and radiographic examination of lateral view of the abdomen indicated the presence of bony structure in uterus (**Fig:2**).



Fig:1. Golden Retriever Bitch



Fig: 2. Radiography red arrow showing fetus

Treatment and Discussion

A presumptive diagnosis of primary uterine inertia was established and treated with 25% dextrose, calcium gluconate, and oxytocin. However, as the medical treatment was ineffective. A caesarean section was conducted under general anesthesia using Xylazine (1 mg/kg BW, I/M), Diazepam (0.5 mg/kg BW, I/V) and Ketamine (5 mg/kg BW, Slow I/V). The uterine tissue exhibited scarring, which may have facilitated the accumulation of purulent material within the uterine cavity. The fetal membranes were tightly adhered to the fetus, while the uterine horn contained serosanguineous fluid (**Fig: 3**). The fetus appeared

dehydrated, encased in dark, moist capsules (**Fig: 4**). Then uterus was flushed thoroughly with normal saline and metrogyl there after uterus was closed using vicryl suture no.1 in cushion followed by lambert suture pattern. The abdominal wall was closed using suture vicryl no.1 and the skin was closed with suture nylus no.1. Ceftriaxone and tazobactam (20 mg/kg BW) and Meloxicam (0.3mg/kg BW) was given intramuscularly for five consecutive days post-operatively. Intravenous fluid therapy was given for 4 days additionally with supportive medicines. Daily dressing was done for 7 days with povidone iodine ointment, and the suture was removed on 12th post-operative day. The bitch recovered without complications.



Fig: 3. Grossly enlarged gravid uterus of bitch



Fig: 4. Mummified fetus of dog

Fetal mummification is a common problem in polytocous species but is rare in monotocous species. (Perumal and Srivastava, 2011). In this study, fetus was mummified and surrounded by dark capsules with wet surface. The placental fluids are absorbed, and the fetal membranes adhere to the dehydrated fetus, allowing the formation of a dark tissue with a wet surface without odor or secretions (Nascimento and Santos, 2003; Jackson, 2004a; Grunert *et al.*, 2005; Kennedy and Miller, 2007). The failure to expel the dead mummified fetus in this case was likely due to primary uterine inertia, a condition commonly observed in canines as radiography revealed only presence of bony structures in the uterus (Romagnoly *et al.*, 2004). Walett and Linde (1994) also reported main cause of dystocia in bitches is uterine inertia. The owner reported that the bitch exhibited no clinical signs indicating the onset of whelping. In some female dogs, due to poor abdominal muscle tone there is difficulty in producing uterine contraction in second stage of labor (Jackson, 2004b). This primary uterine atony may have contributed to the maternal dystocia. (Vorwald *et al.*, 2012). It was also believed that fetus

fails to produce sufficient ACTH and cortisol to initiate the birth process (Linde- Forsberg, 2010).

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Conflict of interest: None

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