

Successful Treatment of Fetal Mummification in a Bitch by Caesarean Section: A Case Report

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ABSTRACT

A four year old Labrador bitch was presented with a history full term gestation and non-progressive signs of labor with uterine discharge. Per vaginal examination showed dilated birth canal without any fetus. Plain radiography revealed presence of bony structures in the uterus. Induction of labor with oxytocin and calcium was futile. Upon C-section, mummified (n=5), was removed along with normal fetus. The bitch recovered uneventfully following normal post-operative management.

Keywords: Mummification, Bitch, Caesarean, Dystocia, Foetal death

Fetal death followed by resorption of fluids and dehydration of fetal tissue is associated with persistence of corpus luteum and retention of fetuses within the uterus (Noakes, 1986). Fetal mummification is a common problem in polytocous and rare in monotocous animals (Perumal and Srivatsava, 2011). In dogs, embryonic and fetal death can occur due to abnormalities in development or chromosome, infectious agents, maternal endocrine disorders, contraceptive drugs, torsion of uterus and dystocia. These conditions may alter the environment of uterus and lead to fetal death and subsequent mummification (Planellas *et al.*, 2012). Fetal mummification occurs in last stage of gestation after ossification of

the bones. As it is a sterile condition, future fertility of animal will not be affected. In canines, fetal mummification is a characteristic of canine herpes virus (CHV) infection (Arthur *et al.*, 1996). Here, we report removal of mummified fetus through caesarean in a Labrador bitch.

Materials and Methods

Case history

A four year old Labrador bitch weighing 36 kg in its second parity was presented to referral veterinary polyclinic, IVRI, with history of mating 2 months back and showing labor signs with vaginal discharge. As per the owner, animal was showing nesting behaviour with reduced appetite. Examination of animal showed signs of pregnancy with abdominal enlargement and engorged mammary glands. Per vaginal examination revealed complete dilation of birth canal without any fetal part. Abdominal radiograph revealed presence of bony structures in the uterus. A tentative diagnosis of primary uterine inertia was made and treated with 25% dextrose, calcium gluconate and oxytocin. Since the medical management was unsuccessful, caesarean section was performed. The animal was anaesthetised using diazepam (Calmpose, Ranbaxy Diagnostics) and ketamine (Aneket, Neon Laboratories Limited) at dose rate of 0.25mg/kg and 5 mg/kg, respectively. The right flank was prepared aseptically and a 5 cm incision parallel and 5 cm caudal to the last rib was given on the skin. The incision was extended through the muscle layers to reach the peritoneal cavity. The uterus was exteriorized by firmly grasping and the boundary was packed with drapes to prevent entry of uterine content upon incision (Figure 1). A linear incision was made on the uterine body to expose the dead pups. Each pup was removed gently by milking the uterus with gloved hand with due care to minimize spilling of uterine contents (Figure 2). A total of 10 dead fetuses were removed of which five were mummified (Figure 3). The placental remnants were also removed. The uterus was thoroughly cleaned using warm saline solution. The uterus was sutured using no.1 chromic catgut in inverted pattern (Cushing's followed by Lembert's) from the cervical end to ovarian end. Metronidazole solution was instilled in the abdominal cavity. The muscles were apposed in two layers by simple interrupted fashion using no.1 polyglactin 910 (Vicryl). The skin incision was closed with nylon. Post-operative medical care was given with antimicrobial (cefotaxime and sulbactam @ dose rate of 25mg/kg) and analgesics (meloxicam @ dose rate of 0.3 mg/kg) were given for 5 and 3 days, respectively. Antiseptic dressing of the suture line was done with povidone iodine. Skin sutures were removed on 12th postoperative day. Animal had an uneventful recovery.



Figure 1. Grossly enlarged gravid uterus with engorged blood vessels



Figure 2. Mummified foetuses removed as mass from the uterus



Figure 3. Mummified foetuses at different stages of devitalisation along with two normal dead foetuses

Results and Discussions

In this case, a total of 5 mummified fetus were removed from both the horns along with fully developed dead fetus. Mummified fetuses were soft in consistency without any odour and with little placental fluids (Johnston and Raksil, 1987; Johnston *et al.*, 2001; Nascimento and Santos, 2003; Jackson, 2004; Grunert *et al.*, 2005; Kennedy and Miller, 2007). Presence of one or more mummified fetus along with normal live fetus is observed occasionally in dogs (Roberts, 2004). Radiography revealed only presence of bony structures in the uterus which were most likely the shadows of fully developed dead pups. The uterine inertia was the main cause for retention of mummified fetus as described by Wallet and Lindane (1994) and Romagnoly *et al.*, (2004). Mummified fetuses were at varying size indicating that the death occurred at different stage of gestation, which is in accordance with earlier reports (Jubb *et al.* 1985; Yugal Raj Bindari and Sulochana Shrestha1, 2012). In conclusion, mummified fetus were successfully removed through caesarean section in a bitch.

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