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Therapeutic management of fetal mummification in a bitch: A case report

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Abstract

An 18-month-old bitch was presented with dystocia due to uterine inertia at the Referral Veterinary Polyclinic, IVRI, Izatnagar. Clinical examination revealed a foul-smelling vaginal discharge, systemic illness, and a lodged fetal mass in the reproductive tract. Following treatment, the mummified fetus and a normal-sized dead fetus were delivered. The dog recovered uneventfully after three days of supportive care.

Keywords: Canine, dystocia, mummification, uterine inertia

Introduction

Fetal death following ossification of the bones without bacterial infection typically results in fetal mummification (Noakes, 1986) [3]. In this condition, the uterus and fetus gradually shrink as the placenta and fetal fluids are absorbed, leading to the formation of a mummy within the uterus. The cervix remains tightly closed, and the fetus becomes sterile (Purohit and Gaur, 2011) [7]. In polytocous species, the occurrence of mummification in some fetuses typically does not disrupt the continuation of pregnancy for the remaining fetuses. (Noakes *et al.*, 2001) [4]. In canines, fetal death can result from developmental or chromosomal abnormalities, infections, maternal endocrine disorders, contraceptive drugs, uterine torsion, and dystocia. These factors can disrupt the uterine environment, causing fetal death and eventual mummification. (Planellas *et al.*, 2012) [6]. Canine Herpes Virus infection may cause fetal mummification in dogs (Arthur *et al.*, 1996) [1]. It is uncommon and sporadic in canines (Roberts, 2004) [8].

Case History and Clinical Observations

An 18-month-old female dog, in its first parity, was presented to the 'Referral Veterinary Polyclinic' at IVRI, Izatnagar, following the completion of its gestation period. As per the owner, the dog had already delivered nine puppies; however, six had died, and only three were alive. Clinical examination revealed the presence of a foul-smelling, brownish vaginal discharge from the vagina. The dog appeared weak, anorexic and showed signs of systemic illness with an elevated rectal temperature of 104.2°F. Additionally, the conjunctival mucous membranes were congested. A per-vaginal examination was performed, which revealed the presence of a fetal mass lodged within the reproductive tract. Based on history and findings, a tentative diagnosis of dystocia, due to uterine inertia, was made.

Treatment and Discussion

Initial treatment included 250 ml of 25% Dextrose saline intravenously to address potential hypoglycemia, Inj. Oxytocin @ 15 IU intravenously to stimulate uterine contractions, and Inj. Calcium borogluconate @ 10 ml intravenously (slowly, diluted with normal saline) to support muscle contractions and prevent hypocalcemia. Approximately 40 minutes post-treatment, the bitch Surprisingly delivered a mummified fetus (Figure 1), followed by a normal-sized dead

fetus 20 minutes later. Post-whelping, female received Ceftriaxone @ 20 mg/kg body weight intravenously with normal saline to prevent or treat bacterial infections, Meloxicam @ 0.2mg/kg body weight intramuscularly for inflammation and pain relief, and Eldervit (a multivitamin injection) @ 2.5 ml intravenously for overall health support. After continuous follow-up and supportive therapy over three days the female showed steady improvement and ultimately recovered without any complications.



Fig 1: Mummified fetus (right side) along with fully developed dead fetus

Fetal mummification is frequent issue in polytocous species and rare in monotocous species (Perumal and Srivastava, 2011) [5]. In this case, the primary reason for the failure to deliver the mummified fetus may be uterine inertia, which is commonly observed in canine species. Mummified fetus along with normal live fetuses at the time of whelping have been reported in canines by Baruti *et al.* (2018) [2] which was also observed in the present study. Radiography and ultrasonography (USG) are effective clinical methods for diagnosing mummification. However, in this case, radiography and USG were not done. Fetal mummification can be prevented by maintaining proper hygiene and sanitation, adhering to standard vaccination schedules, and regularly implementing recommended reproductive monitoring programs.

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Conflict of interest

No conflict of interest to declare.

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