

Fetal maceration following incomplete abortion in a Mongrel bitch

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Abstract

A third parity mongrel bitch was brought to the clinic with a history of foul-smelling pus discharge through the vaginal cavity for the last two months and treated for medical termination of pregnancy in the last year and inappetence for 10 days. Transabdominal ultrasonography revealed a hyperechoic mass in the uterus. Radiographic examination revealed the presence of a radio-opaque foetal bony mass within the uterus. Based on the above history and obstetrical examination, the case was diagnosed as foetal maceration, and it was immediately decided to remove the foetal parts through an exploratory laparotomy. The surgical site was prepared aseptically, and the bitch was premedicated with inj. Xylazine @ 1 mg/kg i/m and inj. Atropine Sulphate at 0.02 mg/kg i/m, followed by induction with 2 to 4% isoflurane and maintenance with 2% isoflurane. Skin, abdominal muscles and peritoneum were incised in a routine manner, and exploration of the uterus was done. Three macerated foetal masses were removed. The uterus was sutured with Cushing followed by the Lembert pattern. The peritoneum, abdominal muscles, and skin were sutured in a routine manner. The bitch was treated with Inj. cefotaxime (50 mg/kg, slow I/V) and the injection Meloxicam (0.25 mg/kg.bwt I/M) for 5 days. The bitch was recovered uneventfully with appropriate postoperative care.

Key Words: Fetal maceration, Exploratory laparotomy and Mongrel Bitch

Introduction

Foetal maceration occurs as a result of the death of the foetus after the formation of foetal bones (Sagar et al., 2017), characterised by failure to expel the foetus following abortion and this is perhaps due to incomplete cervical dilation and uterine inertia (Tunic and Celik 2021). This condition is usually reported in cattle; nevertheless, this condition is unusually reported in bitches (Bozkurt et al., 2018). The source of infection for this condition is mainly ascending bacterial contamination through the partially dilated cervix into the uterus, which causes putrefaction followed by autolysis of the soft tissues, leaving the foetal bones, resulting in foetal maceration (Sreeranjani et al., 2025). A bitch with foetal maceration exhibits a foul-smelling and foetid uterine discharge through the vaginal cavity and may become systemically ill and show the signs of anorexia, septicaemia or toxemia (Balamurugan & Maurya 2022). Mongrel dogs have attained liking by pet lovers (Kumar et al., 2023). The present case reports the successful removal of a macerated foetus done through the exploratory laparotomy in a mongrel bitch.

Materials and methods

A four year old mongrel bitch was brought to the clinic with a history of foul-smelling pus discharge through the vaginal cavity for the last two months and treated for medical termination of pregnancy in the last year and bitch had inappetence for 10 days. Transabdominal ultrasonography revealed a hyperechoic mass in the uterus (Fig.1). Radiographic examination revealed the presence of a radio-opaque foetal bony mass within the uterus (Fig.2). Based on the above history, obstetrical and trans-abdominal ultrasonography and radiographic examination, the case was diagnosed as foetal maceration. Blood sample (2ml) was collected from cephalic vein in a EDTA vial to perform the complete blood count, ALT, ALP, Blood urea, Blood urea nitrogen and creatinine (Tab1 & 2). It was immediately decided to remove the foetus through an exploratory laparotomy. The surgical site was prepared aseptically, and the bitch was premedicated with inj. Xylazine @ 1 mg/kg i/m and inj. Atropine Sulphate at 0.02 mg/kg i/m, followed by induction with 2 to 4% isoflurane and maintenance with 2% isoflurane. Skin, abdominal muscles and peritoneum were incised in a routine manner, and exploration of the uterus was done. Three macerated foetal masses were removed. The uterus was sutured with Cushing followed by the Lembert pattern. The peritoneum, abdominal muscles, and skin were sutured with simple continues pattern. The bitch was treated with Inj. cefotaxime (50 mg/kg, slow I/V) and the injection Meloxicam (0.25 mg/kg.bwt I/M) for 5 days.

Results and Discussion

The bitch had an uneventful recovery without any complications with appropriate postoperative treatment following exploratory laparotomy. Fetal maceration is commonly encountered in cattle sheep and goat but the incidence is rare in bitches (Bozkurt et al. 2018; Narwade et al., 2024 a). The contributing factors for foetal maceration in bitches include uterine inertia (Balamurugan et al., 2024 a), incomplete expulsion of the foetus following medical termination of pregnancy, ectopic pregnancy (Sagar et al., 2017), uterine rupture due to overdose of oxytocin therapy (Balamurugan et al., 2024 b), abortion in the last stage of pregnancy, faulty presentations, positions and postures of the foetus, and inadequate uterine contractions followed by intrauterine infections resulting in mummification that leads to maceration (Mahla, et al., 2016). Foetal maceration is characterised by death of the foetus after formation of the foetal bones, regression of the corpus luteum and failure of abortion. This condition mainly occurs due to ascending through inadequate dilatation of the cervix with uterine inertia (Narwade et al., 2024 b). This results in putrefaction and autolysis of muscles and soft tissue, leaving the foetal bones within the uterus (Noakes et al., 2019). Generally, the treatment recommended for foetal maceration in bitches involves removal of the foetus by exploratory laparotomy (Verma et al., 2021; Narwade et al., 2024 c). In our study also, three macerated foetal masses were removed by the exploratory laparotomy.

Table 1. Haematological evaluation

S.No	Haematology Parameters	Result	Reference value
1	Haemoglobin (g/dl)	7.6	12-18
2	PCV (%)	21.7	35-55
3	MCV(m/mm ³)	70.9	66-77
4	MCH (pg)	24.8	21.0-26.2
5	Total Erythrocyte Count (m/mm ³)	3.06	5.5-8.5
6	White Blood Cell Count (m/mm ³)	11.89	6-17
7	Neutrophils (%)	79.1%	58-85
8	Lymphocyte (%)	43.4%	8-38
9	Platelets (m/mm ³)	311	200-500
10	Monocyte (%)	13.2	1-9
11	Granulocyte (%)	43.2	51-84

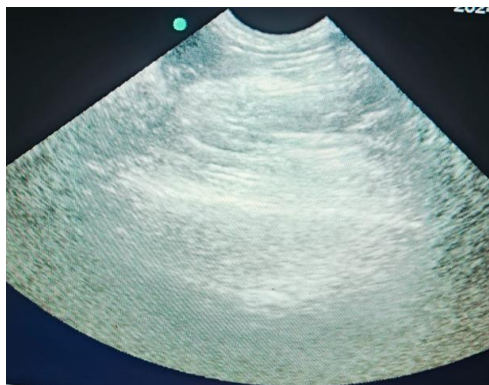


Fig.1. Transabdominal ultrasonography revealed hyperechoic foetal mass.



Fig.2. Abdominal lateral view revealed presence of radio-opaque foetal bony mass



Fig.3. Exteriorization of uterine horn containing macerated foetuses.



Fig.4. Extraction of foetal mass



Fig.5. Macerated foetal mass

Table 2. Biochemical evaluation

S.No	Biochemical Parameters	Result	Reference value
1	ALT (IU/L)	110	16 to 91
2	ALP (IU/L)	162	20 to 150
3	GGT (IU/L)	14	1.0 to 10.0
4	Creatinine (mg/dl)	3.2	0.5 to 1.5
5	Urea (mg/dl)	42	8 to 28
6	BUN (mg/dl)	52	10 to 30

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