

# Ectopic fetal maceration in a chihuahua bitch

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## Abstract

Three years old Chihuahua bitch was reported with the history of whelped 3 pups normally one month back. The dog showed acute abdominal enlargement and vaginal discharge for the past 7 days. Upon laparotomy, it was found to be a case of ectopic fetal maceration. The diagnosis and management of rare case of ectopic fetal maceration in a Chihuahua bitch was reported.

**Keywords:** Ectopic fetus; Fetal Maceration; Chihuahua; Bitch; Ovariohysterectomy

## Introduction

Fetal maceration is commonly encountered in cattle, but the incidence is rare in dogs probably due to all fetal death generally results in expulsion of fetus. It is a type of incomplete abortion which occurs as a consequence of the failure of aborting fetus to be expelled due to uterine inertia (Johnston et al., 2001 and Selvaraju, et al., 2012), complicated by entry of pathogen into uterus through the completely or partially dilated cervix. Administration of excess doses of oxytocin to induce whelping in animals with improper dilatation of cervix may result in uterine rupture followed by ectopic fetus condition in labrador retriever bitch (Sagar et al., 2017). The present case reports the successful management of rare case of ectopic fetal maceration after one month of delivery in a Chihuahua bitch by laparotomy.

## Materials and methods

Three years old Chihuahua bitch weighing about 3.3 kg was reported to the private pet clinic, Namakkal, Tamil Nadu with the history of whelped 3 pups normally one month back. The dog showed acute abdominal enlargement and vaginal discharge for the past 7 days. General clinical examination revealed normal vital parameters. Abdominal palpation revealed a hard structure without any evidence of pain to the dog. The dog was suspected for pyometra and hence midventral- ovariectomy was decided to be performed.

### Anaesthesia

Laparotomy was performed under general anaesthesia, using Atrophine sulphate @ 0.02 mg/kg b.wt SC and Xylazine @ 1 mg/kg b.wt IM as premedication, Ketamine @ 5mg/kg b.wt IV and Diazepam @ 0.5 mg/kg b.wt IV for induction and Ketamine @ 2.5mg/kg b.wt IV for maintenance.

### Surgical procedure

A 4 cm skin incision was made 1 cm below the umbilicus and the subcutaneous fat were removed to visualize the linea alba. A stab incision was made on the linea alba and further extended. Uterus was difficult to get exteriorized and found adhered to the intestines (Fig. 1). Further examination revealed multiple fetal bony structures within the abdomen and removed (Fig. 2, 3 & 4). Ovariectomy was performed by blunt separation of uterine adhesions with the intestines. The abdominal and skin incision were closed as per standard operative procedure.

**Post-operative care** The dog was treated with Ceftriaxone @ 15 mg/kg b. wt IV for 7 days Meloxicam @ 0.2 mg/kg b. wt IM for three days.



Fig. 1 Closer view of uterine adhesion to the intestine



Fig. 2 Removal of Macerated fetus from the abdomen



Fig. 3 Closer view of the canine ectopic macerated fetus



Fig. 4 Macerated fetus with the chihuahua bitch

## Results and Discussion

The dog showed no illness and recovered uneventfully. Predisposing factor for the ectopic fetal maceration in the present case was assumed to be due to rupture of the uterus following continuous uterine contraction during whelping. The ruptured uterus was adhered to the adjacent abdominal organs and the fetus found macerated. In mammals, fetal maceration follows abortion in the late stage of gestation. Fetal maceration occurs when the cervix is either insufficiently dilated or abnormal presentation, position and/or posture of the dead fetus resulting in incomplete expulsion of the fetus as stated by Konwar et al., (2020). Embryonic losses which occur in the period between implantation and formation of fetal skeleton are called as fetal resorption, later occurrences are called abortion. Failure to expel out the fetus may be due to uterus inertia, cervical spasms, abnormal fetal presentations, positions and postures, deficiencies of uterine contractions or intrauterine infections resulting in fetal mummification and maceration by Drost, (2007) and Mahla, et al., (2016). Sagar et al., (2017) reported ectopic fetus due to uterine rupture which might be resulted due to injections of oxytocin given by the local veterinary before the completion of gestation. Fetal adhesions with intestines were noticed in the present case which is in concomitance with the one of the findings of Gonzalez – Dominguez et al., (2010) and Sagar, et al., (2017) in the dog with ectopic fetus, but other intra operative findings like intestinal compression, septic peritonitis and haemorrhage were not noticed. By these prompt treatment with surgical removal of the macerated fetus relieved the pain and confirmed the survivability of the reported chihuahua bitch.

### Conclusion

Appropriate veterinary care and check-up of bitches before, during and after whelping is recommended to prevent ectopic fetal maceration in canines.

**Conflict of interest** None

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