



Fetal Mummification in a Cat

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Abstract

Fetal mummification is the condition when the fetus undergoes some morphological changes and dies and retained in the uterus. A 3 years old local queen was presented to Teaching and Training Pet Hospital and Research Center, Purbachal, Dhaka with the history of abdominal swelling since last 3 months without any vaginal discharge. Diagnosis of fetal mummification was confirmed by using imaging technique. Overiohysterectomy was performed as a surgical consideration reminding anesthetic complication. Complete wound healing was observed on PO 7days, and the queen is maintaining her normal life.

Keywords: Queen; Mummification; Imaging; Overiohysterectomy

Abbreviations

Et.al: Et Alia; IM: Intramuscular; Mg: Milligram; KG: Kilogram; INJ: Injection; Fig.: Figure.

Introduction

A series of morphological alterations that occurs to a fetus which dies and retained in the uterus is called fetal mummification (Debas, *et al.* 2011) [1]. After the death of fetus the fetal fluid will be reabsorbed by the uterus with the persistent of corpus luteum is called fetal mummification. Without abortion, it is an undesirable sequel to fetal death often after complete ossification of bones (Khasatiya, *et al.*, 2011) [2]. In polytocous animals, it is a common problem and in monotocous animals, it is rare (Perumal and Srivatsava, 2011) [3]. If mummification occurs in some embryos of polytocous species then the termination of pregnancy of the live fetus may not inhibit in its place throughout parturition mummified fetus may be delivered with the live fetus [1]. In dogs, embryonic and fetal death can occur due to abnormalities in devel-

opment or chromosome, infectious agents, maternal endocrine disorders, contraceptive drugs, torsion of uterus and dystocia. These conditions may alter the environment of the uterus and lead to fetal death and subsequent mummification (Planellas, *et al.* 2012) [4]. Last stage of gestation after ossification of the bones fetal mummification occurs. As it is a sterile condition, the future fertility of animal will not be affected (Sony, *et al.* 2018) [1]. In the first half of pregnancy, fetal mummification does not occur due to embryonic death before the development of fetal bones usually is followed by unabsorbed discharge or tissue resorption (Lorenz, *et al.* 2009) [5]. In cats, fetal mummification is sporadically reported and incidental and the actual cause for this is unknown and presumed to below. The objective of this report is to diagnose fetal mummification case and its surgical correction.

Case details

A 3 years old local queen weighing 4.05kg previously 2 times delivered was presented to Teaching and Training Pet Hospital and

Research Center, Purbachal, Dhaka with the history of abdominal swelling since last 3 months without any vaginal discharge. On the day presentation, the rectal temperature was 102°F and the animal was weak and lethargic. As per the owner, animal was showing nesting behavior with reduced appetite 3 months back. Per vaginal examination showed narrowing of birth canal. Diagnosis was confirmed by lateral radiographic examination of the abdomen indicated the presence of skeleton, suggestive of autolytic changes following death. Death of fetus was also confirmed by using ultrasonography image having no heart beats (Figure 1).



Figure 1: Distended abdomen with sternal recumbancy before surgery.

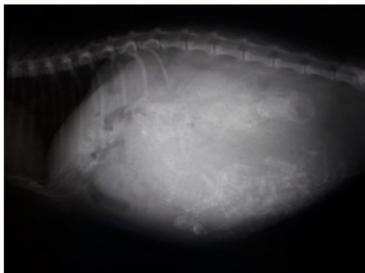


Figure 2: Lateral abdominal x-ray showing fetal skeleton.

Patient preparation

Patient was fasted 12 hours before surgery. The Patient was pre medicated by atropine sulphate (0.02mg/kg IM, Inj. Tropin vet; ACME Laboratories LTD.). Sedation was performed by Xylazine Hydrochloride (1mg/kg IM, Inj. Xylazin; Indian Immunological LTD.). Proper clipping and shaving of the ventral abdomen was performed. The surgical site was made aseptic by using 10% povidone iodine followed by 70% alcohol. General anaesthesia was confirmed by using Ketamine (10mg/kg, Inj. Ketalar; Popular phar-

maceuticals) intravenously. Fluid therapy (Inj. DNS 5%) was maintained during surgery.

Surgical procedure

The patient was positioned in dorsal recumbancy during surgery. Proper sterile draping was confirmed in surgical site. Under general anaesthesia explorative laparotomy was performed. Using scalpel blade (no. 10) ventral midline 2 to 3cm straight incision was given between umbilicus to pelvis in linea alba. Blunt dissection was performed by metzenbaum scissors to separate adipose tissue and the abdominal muscle was incised to get access into the abdominal cavity. The engorged uterus was expelled out from abdominal cavity. Two separate ligature was ensured below each individual ovary to ligate the ovarian blood vessels using 2/0 chromic cat gut (HuaianWanjia Medical Devices Co., Ltd). By using same suture material uterine body was also ligated and Overiohysterectomy was performed on standard procedure. The abdominal muscle was closed by using vicryl(Vicryl 2/0; Ethicon; Johnson Johnson Ltd.) on simple continuous suture pattern. Subcutaneous fascia was closed and skin was closed by cross mattress pattern using braided silk.



Figure 3: Closure of abdominal muscle.



Figure 4: Closure of abdominal muscle.



Figure 5: Closure of abdominal muscle.

Postoperative care

Broad spectrum antibiotic- Ceftriaxone 50mg/kg IM (Inj. Trizon; ACME Laboratories Ltd.), anti-histaminic drug- Diphenhydramine hydrochloride 1mg/kg IM (Inj. Phenadryl; ACME Laboratories Ltd.) for 7 days and anti-inflammatory drug- Meloxicam 0.5mg/kg SC (Inj. Mel vet; ACME Laboratories Ltd.) for 3 days was prescribed. After 15 days (Figure 6).



Figure 6: Post operative 15 days.

Results and Discussion

In present case report that successful ovariohysterectomy with general anesthesia in emaciated and very weak cat. Total of 5 mummified fetus were removed from both the horns after ovariohysterectomy and there is no fluid and no bad odor. During mummified fetus, soft in consistency without any odour and with little placental fluids (Nascimento and Santos, 2003; Jackson, 2004; Grunert, *et al.* 2005) [6,7]. Radiography revealed only presence of bony structures in the uterus which were most likely the shadows of fully developed dead kitten. The uterine inertia was the main cause for retention of mummified fetus as described by Wallet and Lindane (1994) [1], and Romagnoly, *et al.* [8]. Present research reveal that

during mummified fetus the cat is very risk but this procedure make safe for cat [9-13].

Conclusion

The Patient was pre medicated by atropine sulphate (0.02mg/kg IM, and Sedation was performed by Xylazine Hydrochloride (1mg/kg IM, General anaesthesia was confirmed by using Ketamine (10mg/kg, intravenously. Fluid therapy (Inj. DNS 5%) was maintained is safe for weak and mummified cat for ovariohysterectomy.

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Conflict of Interest

No any conflict of interest.

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