

# UTERINE RUPTURE IN A PREGNANT CAT

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[Received: 24.8.2014; Accepted: 20.4.2015]

Secondary ectopic pregnancy following uterine rupture in a full term cat is explained. Abdominal ultrasound revealed ectopic location of a dead fetus and both dead and viable fetuses' in-utero. Emergency caesarean section was performed and the dead and viable fetuses extracted out followed by repair of the rupture. Both the queen cat and the viable neonates recovered without complications.

**Key words:** Queen cat, Pregnancy, Uterine rupture.

## Introduction

Secondary ectopic pregnancy may occur following trauma or rupture of the gravid uterus where the developing fetus is lost into the peritoneal cavity (Jackson, 2004). Uterine rupture is a major emergency which can arise in late pregnancy. Rupture is more usually the result of an accidental blow from a vehicle or other violent trauma, or can occur from violent straining on a complete obstruction. A rupture occurring at the time of parturition will give rise to the same signs of emergency as torsion. The present case represents an acute emergency following uterine rupture in a full term queen cat.

## History and Observation

A three year old, full term pregnant, non-descript queen cat was presented to the Department of Veterinary Gynaecology and Obstetrics, Veterinary College, Bangalore

with a history of fall from a building, implicating a traumatic injury, the previous day. The rectal temperature was normal, but the respiratory rate and pulse rate was elevated. The queen cat was anorectic and lethargic. Physical examination of the queen cat did not reveal any abnormality of the locomotor system. On abdominal palpation, fetal skeleton was palpable superficially suggestive of a uterine tear and ectopic presence of fetus (Fig. 1). Digital examination of the vagina did not reveal the presence of any fetus. Trans-abdominal ultrasound confirmed ectopic location of non viable fetus in the abdominal cavity, and presence of viable fetuses' in-utero (Fig.2). Gestational age as determined by fetal head diameter was 61days. It was decided to perform an emergency caesarean section to improve fetomaternal outcome.

(Fig: 1) Full term pregnant queen cat on presentation



(Fig: 2) Ultrasonogram of the abdomen



## Treatment and Discussion

The surgical site was prepared aseptically and anaesthesia was induced with Propofol @ 6mg/Kg, I/V and maintained with the same @ 0.25/Kg/min for 30 minutes. Preoperatively, ceftriaxone (inj. Intacef-125 mg) and lactated Ringer's solution was administered intravenously. A ventral midline laparotomy was performed. A non viable fetus was located partly in the abdominal cavity through a tear on the abdominal muscle and rest of it was noticed protruding through a rupture identified on the ventral part of the left uterine horn (Fig.3 & 4). The fetus was removed by increasing the length of the incision at the rupture point. The fetus showed no sign of putrefaction. Further, two live and one dead fetus

in the uterus was also removed through an incision made on the uterine body. Following this, an ovariohysterectomy was performed. On laparotomy, no damage to any of the abdominal visceral organs was observed. Abdominal lavage was carried out using isotonic solutions and metronidazole solution. The tear on the abdominal muscles was scarified and sutured using catgut No: 2-0. The laparotomy incision was closed anatomically and postoperative analgesia provided with Inj. Tremadol @ 2mg/Kg, I/V. Supportive treatments with antibiotics, fluids and anti-inflammatory agents were continued for a week to prevent peritonitis and the queen cat and the kittens were in good health in a week time of follow up.

(Fig: 3) Ectopic location of fetus



(Fig: 4) Dead fetus extracted out of uterine tear



Preparturient rupture of the uterus often results from external trauma, while peri-parturient uterine ruptures are caused due to infection, dead fetus, uterine torsion, inappropriate obstetrical technique and excessive use of oxytocin (Jackson, 2004; Noakes, 2001). In the case of secondary ectopic pregnancy, initially, the fetus develops in the uterus, and then gets into the abdominal cavity, through the rupture of the uterine wall, caused usually by a trauma or injury (Rosset *et al.*, 2011). The underlying reason for secondary ectopic pregnancy in this case is due to rupture of the uterine wall explained by the trauma caused by the fall from a height. For the dead fetus, the

connection with the placenta and uterus was broken after rupture and it's likely that the live fetuses maintained the intact placental connections with the uterus. Extrusion of fetus into the abdominal cavity can occur in extensive uterine rupture, resulting in intestinal compression, severe adhesions, septic peritonitis and hemorrhage (Noakes, 2001). Sign of systemic illness and a foul and fetid uterine discharge is seen in cats undergoing maceration (Johnston *et al.*, 2001). Hysterectomy is advocated in cases of gross damage to the uterus or if the fetal death and decay have occurred. In the present case, the uterus was not grossly damaged out of tear and there was no

evidence of peritonitis. However, ovariohysterectomy was performed as the owner was not willing to maintain the breeding status of the queen cat. Timely recognition of early signs of obstetrical related complications, use of proper diagnostic and obstetrical techniques and proper postoperative care of the animal can help in ensuring a successful outcome for queen cat and kittens (Johnston *et al.*, 2001). The wellbeing of the dam and the two kittens obtained in this case was an outcome of the timely presentation of the problem, proper diagnosis based on palpation and ultrasonography, judicious surgical intervention and careful postoperative care.

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