

# UTERINE RUPTURE AND FOETAL MACERATION IN A QUEEN CAT

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A five years old queen cat was presented with the complaint of anorexia for one week. The animal delivered nine times, last queening was four months back with a litter size of three. Hard masses could be palpated in the abdomen without any pain on palpation. Hematology showed severe leukopenia and thrombocytopenia. Lateral abdominal radiography, doppler ultrasonography and ventral midline laparotomy were employed and diagnosed the condition as uterine rupture and foetal maceration. After stabilizing animal with antibiotics and fluids, explorative laparotomy was performed to reveal ruptured uterine horn with fetal skeletal parts scattered in abdominal cavity mostly encapsulated in adnexa. Ovariohysterectomy was done and removed whole skeleton as well as the fetal remnants from the abdomen. On tenth postoperative day animal had an uneventful recovery.

**Keywords:** Uterine rupture, Foetal maceration, Cat.

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 (Lucas *et al.*, 2003), 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 uterine torsion. The foetal maceration occurs more in feline species than in canine, characterized by the use of contraceptives erratically, causing disruptive degenerative changes of the foetus. The diagnosis is based on clinical evaluation by the anamnesis, mostly ultrasound and/or radiography is strictly required for a better diagnosis. The treatment was ovariohysterectomy. In this study rupture of the uterus during delivery and presence of macerated foetus in the abdominal cavity with friable encapsulated tissues were reported.

## Case history and Observations

A female domestic Persian cat of five years of age with ninth parity and a body weight of 2.5 Kg was presented to Veterinary Hospital with the complaint of anorexia and emaciation for the last one week. Anamnesis revealed no defecation for two days, last

queening was four weeks back with two dead and one live foetus after completion of term. No further staining was noticed by the owner after the queening of last kitten. On clinical examination, the animal was found to be weak and dehydrated. On abdominal palpation a firm, non-painful mass was detected and intestinal loops were highly thickened. Per-vaginal examination showed no cervical dilation or vaginal discharge. On haematology, acute changes like severe leukopenia (3600/  $\mu$ L), lymphocytopenia (453/  $\mu$ L), monocytopenia (60/  $\mu$ L), thrombocytopenia (49000/  $\mu$ L), haemoglobin level of 6.9 g/dL and packed cell volume of 21.8% were observed. Right lateral radiograph of abdomen demonstrated shattered and misaligned foetal skeleton with gas pockets. The radiographic findings of the foetus were compatible with foetal death and were confirmed ultrasonographically. On ultrasound scanning, foetal parts were observed without continuity (Fig. 1). Foetal viability could not be detected on doppler ultrasonography. Animal was treated with antibiotic amoxicillin (@ 12.5 mg/Kg b. wt.) and fluids (Ringer lactate @ 10 mL/Kg b. wt.) to stabilise the vital and haematological parameters. Explorative laparotomy was fixed

on the next day.



**Fig. 1: Ultrasonographic image showing misaligned foetal skull**

### Treatment and Discussion

A midline laparotomy was performed under general anaesthesia. Anaesthesia was induced with ketamine (@ 25 mg/Kg b. wt.) and midazolam (@ 0.2 mg/Kg b. wt.) and maintained with 2% isoflurane inhalation. Mid-ventral laparotomy revealed reddish brown fluid accumulation and shattered foetal skeleton with degenerated foetal tissues, as well as adnexa adhering to broad ligament, spleen, omentum, mesentery and urinary bladder (Fig. 2). On detailed inspection, the uterine body, right uterine horn as well as right ovary was obtained. Carefully ligated the right ovarian pedicle and dissected right ovarian end. Ligature was done above the cervix and incised the uterine body. Left horn was ruptured about 1 cm from the uterine body and excessively adhered to surrounding tissue so that rest of left uterine horn along with foetal bones were encapsulated with neighbouring tissues. Precisely ligated the

attachments of uterus to surrounding tissue and removed the uterus along with adhered foetal skeletons. Washed the abdominal cavity with sterile normal saline thrice and removed the remaining foetal skeletons (Fig. 3). The abdominal muscles, subcutis and skin were apposed using 2/0 vicryl. Analgesic tramadol (@2 mg/Kg b. wt.) and intravenous fluids (Ringer lactate @ 10 ml/Kg b. wt.) was administered. Animal was given antibiotic amoxicillin (@12.5 mg/Kg b. wt.), metronidazole (@12 mg/Kg b. wt.), pantoprazole (@1mg/Kg b. wt.) for one week and tramadol (@2 mg/Kg b. wt.) for 3 days.

On tenth post operative day, skin sutures were removed. Animal was active and showed an uneventful recovery with normal food and water intake. On haematological examination, the total leukocyte count became 15000/  $\mu$ L, total erythrocyte count 6.13 millions/  $\mu$ L, total thrombocyte count 1,99,000/  $\mu$ L, Packed Cell Volume 29.7% and haemoglobin level 8g/ dL.



**Fig. 2: Uterus, adnexa and adhered foetal**



**Fig 3: Dissected uterus, adnexa and foetal**

### **skeleton in abdomen**

Pre-parturient rupture of the uterus often results from external trauma, while peri-parturient uterine ruptures are caused due to infection, dead foetus, uterine torsion, inappropriate obstetrical technique and excessive use of oxytocin as also reported by Jackson, 2004; Noakes *et al.*, 2001. Extrusion of foetus into the abdominal cavity can occur in extensive uterine rupture, resulting in intestinal compression, severe adhesions, septic peritonitis and haemorrhage as also mentioned by Noakes *et al.*, 2001. Signs of systemic illness and a foul and fetid uterine discharge are seen in cats undergoing foetal maceration. Foetal death and its resorption can occur due to uterine herniation in Cats were also recorded by Becha *et al.*, 2017. Ectopic mummified foetus in the abdominal cavity, strongly adhered to mesentery was also elucidated by Rosset *et al.*, 2011. Hysterectomy is advocated in cases of gross damage to the uterus or if the foetal death and decay have occurred. 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

### **skeletons retrieved from abdomen**

ensuring a successful outcome for queen cat and kittens.

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