



## Uterine Rupture in A Pregnant Queen

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**Abstract:** In the case presented, a 4-year-old, 5 kg-weight Tabby breed pregnant cat who had a traffic accident and was in agony was brought to the Animal Hospital of Atatürk University Faculty of Veterinary Medicine. During the clinical examination, it was observed that the cat's vital function symptoms decreased, a brown foul-smelling discharge came from her vagina, paleness in his mucosa and weakening of his pupil reflex. Ultrasonographic examination revealed that uterine integrity was impaired and the patient was diagnosed with uterine rupture. After informing the animal owner about the patient and getting approval, it was decided that the cat should undergo an emergency caesarean operation. After the cat was taken into general anesthesia with a combination of xylazine and ketamine, she underwent a median line laparotomy. It was determined that the anterior region of the left cornu uterus had ruptured and that there were two dead fetuses in the abdominal cavity along with the uterine contents in the free state. During the operation, the cat developed cardio-pulmonary complications. Despite resuscitation, the cat could not be saved. As a result, it was concluded that the uterus could rupture due to trauma in pregnant cats, and that the level of rupture and the duration of intervention in the case were important in terms of the prognosis of the mother and the cub.

**Keywords:** Queen, Rupture, Uterine.

## INTRODUCTION

Uterine rupture is a phenomenon that can cause maternal morbidity-mortality and perinatal mortality characterized by deterioration of the integrity of the muscular layer of the uterus (1,2). Diagnosis of the case is depending on clinical, radiography, and ultrasonography examination (3). Uterine rupture is associated with torsion of the pregnant uterus, force birth, induction of childbirth by oxytocin and prostaglandin injections, iatrogenic trauma, or pyometra and classified into two types; complete (compulsive) and intimate ruptured. Ruptures involving all layers of the uterine wall have shown excessive bleeding of the uterine veins, and peritonitis is developed as a result of the uterine

contents passing into the abdominal cavity (1,4). Uterine rupture should be considered an emergency case and performed immediately emergency cesarean section in a complicated type rupture due to threatening the mothers' health (4). In the case of an incomplete uterine rupture, the serosa layer of the uterus is typically asymptomatic in maintaining its integrity (1).

## CASE REPORT

A 4-year-old, a pregnant mixed breed cat weighing 5 kg was presented to the Atatürk University Faculty of Veterinary Medicine Animal Hospital because of a car accident that causes agony.

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As a result of the clinical examination applied to the cat, a brown stinky discharge showed from the vagina, paleness of mucous membranes, and the pupils reflex weakened was determined. Informed consent form was obtained. Ultrasonographic examination showed that the integrity of the uterus was impaired because of uterus rupture. After informing the owner of the animal about the patient and obtaining his approval, it was decided to perform an emergency cesarean section operation. The cat was administration combination of xylazine (2 mg/kg/i.m., Alfazyme® %2, Egevet, Turkey) and ketamine HCl (10 mg/kg/i.m., Alfamine® %10, Egevet, Turkey) for general anesthesia. Following the laparotomy was performed from the median line, it was determined that the uterine of the right corn was shaped in the anterior region of the uterine and that there were two dead fetuses in the abdominal cavity, free of charge with the contents of the uterus (Figure 1,2). Despite the resuscitation procedures, the cat died during the surgery.



**Figure 1.** Free fetuses due to the uterine rupture.



**Figure 2.** Uterine rupture caused by abdominal trauma.

#### **DISCUSSION and CONCLUSION**

Uterine ruptures are less a common phenomenon in cats than dogs (5). Although it is often observed in pregnant cats, it can also be observed in some pyometra cases (6). Demirel and Acar (7) stated that a cat with stump pyometra had a ruptured uterus and died two days later despite surgical intervention and abdominal irritation. Uterine ruptures usually appear as a result of trauma in pregnant cats. In cases that have been shaped and not intervened in the early stages of pregnancy, it is stated that fetuses implanted in any organ in the abdominal cavity can cause ectopic pregnancy and cause dysfunctions in the relevant organs (8,9).

Abdominal pain caused by vaginal bleeding is clinically the most common findings of uterine rupture. Lucas et al (10) reported that the general healthy condition of the cat with suffering uterine ruptures positive progress, the body temperature is normal (approximately 39 °C) and the mucous membranes is also normal; In palpation, they reported that the abdomen was tense and they detected a non-painful mass in this area. In additional, they stated that there was no discharge and no fetus was found in gonioscopic examination.

De Geer (11) showed that no evidence of uterine rupture in both anamnesis and clinical examination but noticed the development of uterine rupture during laparotomy during the postpartum period. In cases where clinical findings of uterine rupture are overlooked, the case may progress and pose a life-threatening threat to the mother. Anamnesis, clinical and ultrasonographic examination results were supported diagnosis in the case of uterine rupture. If the diagnosis of uterine rupture is incorrect or late in animals, it can be life-threatening for both mother and fetuses. Although peritonitis may develop later in the pregnant uterus, free fetuses due to rupture may lose their lives and then be mummified or secondary ectopic pregnancy may take shape in the abdominal cavity. Surgery intervention is recommended immediately in the treatment of uterine rupture and ovariohysterectomy also is considered indicated in irreversible cases (8,9).

In a conclusion, it is an important phenomenon in that the level of rupture and the duration of intervention in pregnant cats affect the prognosis of mothers and fetuses. However, it is thought that urgent surgical intervention is necessary to reduce the risk of maternal mortality and to eliminate the possibility of ectopic pregnancy in cases of complete uterine rupture.

#### Conflict of Interest

The authors declare that they have no conflict of interest.

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