

A Case Of Dystocia in A Queen Related To Uterus Rupture

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Abstract: The case material consists of a British Shorthair cat, which was brought to Erzurum Atatürk University Veterinary Faculty Animal Hospital, at the age of 15 months and on the 65th day of pregnancy. Uterine rupture is a phenomenon characterized by disruption of the integrity of the muscular layer of the uterus, which can cause maternal morbidity-mortality and perinatal deaths. Despite all the possibilities of modern medicine, uterine ruptures are one of the biggest causes of maternal and fetal mortality and morbidity. The diagnosis of the case is made by clinical and ultrasonographic examination findings. Although uterine rupture is a rarer case in cats than dogs, seen as a secondary complication of exogenous oxytocin/prostaglandin administration or difficult delivery, it can also occur due to cesarean section scar, uterine tumor, or trauma. In conclusion, a careful clinical examination and correct treatment method should be chosen in cases characterized by abdominal pain in cats.

Keywords: Cat, Dystocia, Uterine rupture

INTRODUCTION

Uterine rupture is a phenomenon characterized by disruption of the integrity of the muscular layer of the uterus, which can cause maternal morbidity-mortality and perinatal deaths. Despite all the possibilities of modern medicine, uterine ruptures are one of the biggest causes of maternal and fetal mortality and morbidity. The diagnosis of the case is made by clinical and ultrasonographic examination findings. Although uterine rupture is a rarer case in cats than dogs, seen as a secondary complication of exogenous oxytocin/prostaglandin administration or difficult delivery, it can also be formed due to cesarean section scar, uterine tumor or trauma (1).

CASE PRESENTATION

The case material consists of a British Shorthair cat, which was brought to Erzurum Atatürk University Veterinary Faculty Animal Hospital, at the age of 15 months and on the 65th day of pregnancy. In the anamnesis taken from the patient's owner, it was learned that the labor pains started

approximately 24 hours ago, and the brood juices were seen, a live fetus was born at the same time and died later, and it vomited twice a day. On clinical examination, fatigue, dehydration, abdominal pain and lying in the lateral position were observed in the cat. In the light of this information, fetal heartbeats of the fetuses were checked with Pulsed-Wave (PW) Doppler mode in ultrasonographic examination, and the viability of the fetuses was determined. Ultrasonographic examination revealed that the mean heart rate of the fetuses was 180 bpm. Since the number of fetuses cannot be determined precisely by ultrasonographic examination, the number of live fetuses cannot be expressed clearly. According to the findings of anamnesis and clinical examinations,, this case was diagnosed as a dystocia due to uterine inertia (secondary inertia). Medical treatment was applied primarily, as a dystocia was diagnosed because of uterine inertia. The treatment was started as an intravenous (IV) infusion of 100 milliliter (mL) of 0.9% Isotonic Sodium Chloride (POLİFLEKS, POLİFARMA, Türkiye) containing 0.5 mL of Oxytocin (Vetaş, Oksitosin, Türkiye). After the

oxytocin, abdominal contractions started, and the respiratory rate increased in the cat. The cat began to strain in the hunched position and defecate hard, due to the pain caused by abdominal contractions. It was observed that blood came from the vulva of the cat with defecation. Because of the bloody discharge from the vulva in the form of leakage, the cat was quickly taken to cesarean section. Preoperative hematological test and biochemical analysis were not performed because the cat was operated on urgently. Considering the food consumption of the cat before the operation, Cerenia (Zoetis, Cerenia, USA) [1 mg/kg Subcutan (SC)] was injected to minimize the risk of aspiration pneumonia. After the antiemetic administration, the cat was placed under general anesthesia with the combination of Butorphanol (Richter pharma, Butomidol, Austria) (0,5 mg/kg SC)-Medetomidine (Orion pharma, Domitor, Finland) [(60 µg/kg Intramuscular (IM))-Ketamine (Vetagro, Vetaketam, Poland) (10 mg/kg IM). The left flank region was selected for the incision line. During the operation, there were ruptures in the uterus after the muscle layers and peritoneal incision, and 5 fetuses were located in the abdominal cavity.

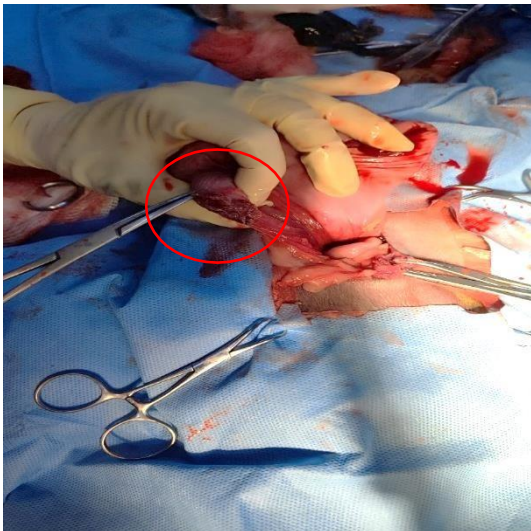


Figure 1. Red Circle: Rupture in Right Uterine Horn

It was observed that there was no vitality, and color changes began in the fetal membranes and fetal fluid due to meconium. The cause of these ruptures in the uterus may be exogenous injection of oxytocin. However, considering this possibility, low-dose oxytocin injection was performed.



Figure 2. Dead Fetuses

After the dead fetuses were removed from the abdomen, the operation was completed by performing an ovariohysterectomy due to ruptures in the uterus, and the abdominal region was sutured after irrigated with 0.9% Isotonic Sodium Chloride. After the operation, Equizolin (Tüm Ekip İlaç A.Ş., Eqizolin, Türkiye) (20 mg/kg IV) was administered for the first 3 days and Synulox (Zoetis, Synulox, Türkiye) (8,75 mg/kg SC) was administered for 7 days to prevent the infective tissues of dead fetuses from creating any toxemia in the queen. During this period, fluid therapy and, when necessary, Non-steroidal Anti-inflammatory (baVET, Bavet Meloxicam, Türkiye) (0,1 mg/kg SC) injections were administered. It was reported that the general condition of the cat improved after the medical treatment and there was no problem in eating and drinking.

DISCUSSION and CONCLUSION

Uterine rupture is an extremely rare phenomenon in cats. (2). In the etiology of uterine rupture, there are reasons that developed during pregnancy or existed before pregnancy. Pre-pregnancy causes include pyometra or stump pyometra (3). Some researchers reported that a cat with stump pyometra had ruptured uterus and died

two days later despite surgical intervention and abdominal irrigation (4). The most common cause of uterine rupture in cats is trauma during pregnancy. Sometimes with the rupture of the uterus, the contents of the uterus and the fetus/fetuses are displaced into the abdominal cavity and implanted in any organ in the abdominal cavity, sometimes fetal deaths occur because of trauma and uterine rupture. It is stated that in cases that were shaped in the early stages of pregnancy and were not intervened, the fetus(s) implanted in any organ in the abdominal cavity may cause ectopic pregnancy and cause dysfunction in the relevant organs (5). In the case reported by Dharmaceelan et al., it was reported that the fetal extremities protruded from the trauma area when a pregnant cat was bitten by another cat. It has been reported that the fetuses on the bitten side were dead and the fetuses on the other side were alive in a pregnant cat who underwent cesarean section. (6).

Prenatal uterine ruptures were associated with traffic accidents, while perinatal uterine ruptures were associated with infection, dead fetus, uterine torsion, inappropriate obstetric technique, and indiscriminate use of oxytocin (7) (8). While motor vehicle trauma was present in two of the three cases presented by Rebecca et al. (9), uterine rupture was encountered because of being bitten in one. It was reported that two domestic cats recovered uneventfully after laparotomy and ovariohysterectomy, while the other cat died while being taken to the animal hospital. As a result of necropsy, uterine rupture and associated peritonitis were reported.

Lucas et al. (10) reported that an 18-month pregnant British Shorthair cat was brought for examination because of a traffic accident. Abdominal and thorax radiographs revealed rupture of the diaphragm and three fetuses in the abdominal cavity. The general condition of the cat with uterine rupture is good, body temperature is 39 °C and mucous membranes are normal; reported that the abdomen was tense on palpation, and they detected a non-painful mass in this region. They stated that there was no discharge, and no fetus was found in the vaginoscopic examination. A single fetus, which

was found freely to the right of the abdominal cavity by laparotomy, was removed as lifeless. In the case presented by Alper et al., (11) it was reported that a 5-year-old pregnant cat with mixed breed was brought to the animal hospital because of a traffic accident. In the examination, a foul-smelling discharge from the vagina, cold mucous membranes and weakened eye reflex were detected. Uterine rupture was detected in the cat who underwent cesarean section. Two dead fetuses were removed from the abdominal cavity by laparotomy. In the case presented by Webb et al., (12) it was reported that a 10-month-old pregnant cat was brought with a case of difficult delivery. On general examination, body temperature was 37,1°C, pulse rate was 120, respiratory rate was 30, bloody vaginal discharge and swelling in the left hind extremity were reported. It was determined that the skin on the side of the swelling was peeling and bruised. Five fetuses were removed lifeless from the abdominal cavity by laparotomy.

As a result, it should not be forgotten that there may be ruptures in the uterus and even the kittens may be found in the abdominal cavity in cats brought with the complaint of dystocia, and the treatment method to be applied should be carefully selected.

CONFLICT of INTEREST

There is no conflict of interest between the authors.

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