

Uterine prolapse in a pregnant cat

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Abstract: A 3-year-old, 2.5-kg British shorthair cat with dystocia and protrusion of a mass through the vulva was presented to the Obstetrics and Gynaecology Clinic, Faculty of Veterinary Medicine, İstanbul University. Upon clinical examination, a complete uterine prolapse was diagnosed. Because of a blood blister and oedema in the uterine horns, ovariohysterectomy treatment was decided. During laparotomy, one foetus was detected in the cranial portion of the left uterine horn. After manual reduction and intraabdominal withdrawal of the prolapsed uterus, a caesarean section was performed to deliver the foetus. The last litter and the queen were discharged from the clinic in good health.

Key words: Uterine prolapse, pregnancy, cat

1. Introduction

Uterine prolapse is an uncommon complication of parturition which occurs infrequently among domestic cats from 10 months to 6 years of age (1,2). It may typically arise during or within 48 h of normal parturition, prolonged labour, or abortion (3,4). The prolapse may occur with the protrusion of both horns from the vulva or one part of the uterine body (1). Powerful contractions induced by oxytocin during labour, extreme dilatation of the cervix, relaxation and stretching of the pelvic musculature, and incomplete separation of the placental membranes are predisposing factors to a uterine prolapse (5). The diagnosis is made by inspection of the prolapsed tissue (6). Depending on the severity of the ischemia, necrosis, damage, and oedema of the prolapsed tissue, various types of treatment can be performed such as amputation of the prolapsed uterus, manual reduction, reposition by abdominal palpation and local use of oxytocin and hyperosmotic serum (50% dextrose) infusion, manual reduction through a laparotomy incision, and ovariohysterectomy (2,7).

2. Case history

A 3-year-old, 2.5-kg British shorthair cat with dystocia and protrusion of a mass through the vulva was admitted to the Obstetrics and Gynaecology Clinic, Faculty of Veterinary Medicine, İstanbul University. The cat first went into labour at 2 years of age, resulting in the delivery of four healthy kittens. The cat was presented to the clinic during

her third labour and gave birth to three live kittens in the seventh hour of parturition. The owner had noticed a large, red protruding mass from the vulva after the second litter had been delivered. The third litter was delivered when the uterus was almost prolapsed. Upon physical examination, the mucous membranes of the cat were pale and the pulse and respiratory rates were both within normal ranges. On palpation and inspection of the protruded mass, bilateral prolapsed uterine tissue, oedema, and a blood blister on the cornu uteri were diagnosed (Figure 1). Hematologic examination revealed anaemia (erythrocytes: 4.21 M/ μ L, haematocrit: 18.1%, haemoglobin: 5.6 g/dL, leucocytes: 49.33 K/ μ L, neutrophils: 38.51 K/ μ L, lymphocytes: 7.26 K/ μ L, monocytes: 2.36 K/ μ L, basophils: 0.33 K/ μ L) and hyperglycaemia (glucose: 255 mg/dL). Before surgical intervention was performed, the cat was premedicated with atropine sulphate (0.03 mg/kg, subcutaneous (sc); Atropin[®], Teknovet, Turkey). General anaesthesia was induced with propofol 1% (4 mg/kg, intravenous (iv); Lipuro[®], Braun, UK) and maintained with isoflurane (3%) (Forane Liquid[®], Abbott Laboratories, UK) and oxygen (0.5%–1%). Immediately after the ventral midline laparotomy, a foetus was detected in the cranial portion of the left uterine horn. After the irrigation of contaminated and oedematous tissue with warm saline solution, the protruded uterus was reduced manually into the abdomen. After the live foetus was delivered using uterine incision (Figure 2), ovariohysterectomy was performed for completion of the treatment (Figure 3). Absorbable suture

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Figure 1. Bilateral uterine prolapse with haemorrhage. R: Prolapsed right uterine horn, L: Prolapsed left uterine horn.

material (Monocryl No: 2/0, Medeks, Turkey) was used for all sutures. After surgery, the cat was treated with a slow 10 mL/kg iv infusion of 0.9% isotonic sodium chloride (İzotonic, Eczacıbaşı, Turkey), amoxicillin clavulanic acid once daily (s.i.d., 20 mg/kg, sc; Synulox®, Pfizer, USA), enrofloxacin 5% (s.i.d., 5 mg/kg, sc; Bayartil-K® 5%, Bayer, Turkey), vitamin B12 (40 µg/kg, intramuscularly (im), s.i.d.; Dodex®, Deva, Turkey), and ranitidin (s.i.d., 1 mg/kg, im; Ulcuran®, Yavuz İlaç, Turkey). The cat and its last litter were discharged from the clinic in good health.

3. Results and discussion

In accordance with the researchers, the uterine prolapse in this case occurred bilaterally and during the delivery of the kittens (1,7). The cat continued to be in labour with a prolapsed uterus and there was still one live foetus in the cranial portion of the left uterine horn on the day of examination.

The exact cause of uterine prolapse is unknown in cats (3,7). It has been suggested that powerful uterine and abdominal contractions, excessive oxytocin stimulation, severe tenesmus, and uterine atony are predisposing factors of uterine prolapse (3,6). In contrast with Bigliardi

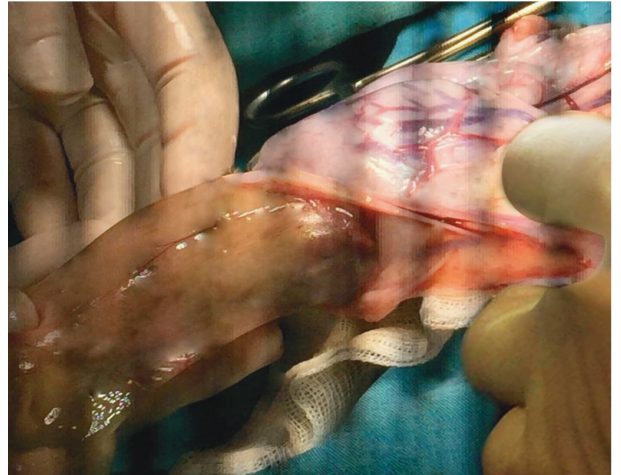


Figure 2. Caesarean section for the foetus in the cranial part of the left uterine horn.

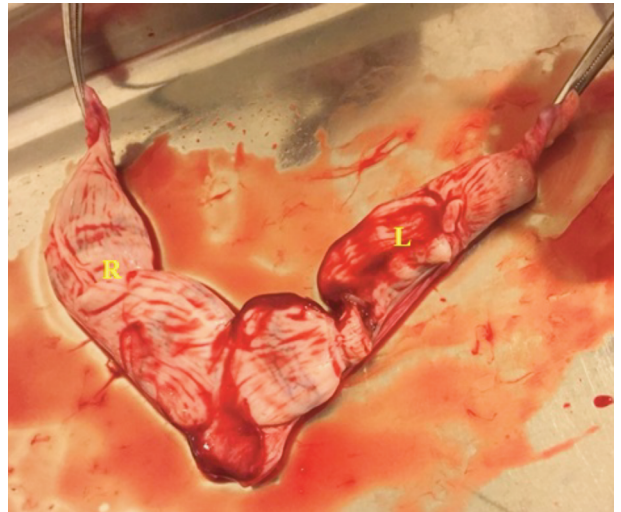


Figure 3. Ovariectomy. R: Right uterine horn, L: Left uterine horn.

et al. (3) and Jutkowitz (6), the uterine prolapse in this case was thought to be due to prolonged parturition (8), dystocia (9), and repeated pregnancy (4). In accordance with the researchers, it was thought that contamination of the prolapsed tissue caused leukocytosis (10) and severe anaemia was a result of poor nutrition during gestation (11). As Sodikoff (10) suggested, hyperglycaemia may have been caused by stress and dystocia in the presented case.

Probable complications of manual reduction are urethral obstruction, urinary incontinence, uterine rupture, cystic endometrial hyperplasia, and pyometra (12). The treatment for uterine prolapse depends on the

severity of damage to the uterus (1). As Özyurtlu and Kaya (2) reported, ovariectomy was performed in the current case.

Delivery of all kittens is normally completed within 6 h (13). In contrast with Jackson (13), the parturition in this presented case was prolonged by a further 6 h as a result of prolapsed uteri and the fact that the foetus was alive owing

to placental connection to the cranial portion of the uterus.

In conclusion, ovariectomy was performed after the delivery of a live foetus in order to prevent possible complications arising from the manually reduced, contaminated, and damaged uterus. Suitable types of a variety of treatment methods should be applied rapidly in order to improve the prognosis.

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