

## Management of Uterine Prolapse in a Cat – A Case Report

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### Abstract

A six year old multiparous queen cat was presented at Multispeciality Veterinary Hospital, Kudapanakunnu with complaint of a mass hanging out from external genitalia after queening. On examination, the protruding mass was identified as uterine horns and uterine body. Under general anaesthesia, the prolapsed mass was reduced manually, followed by ovariohysterectomy. The cat had uneventful recovery without any complications.

**Key words** Cat, queening, uterine prolapse

Total uterine prolapse is uncommon in cats. Uterine prolapse occurs when the uterus turns inside out and passes through the cervix into the vagina (Deroy *et al.*, 2015) without mucosal eversion (Bigliardi *et al.*, 2014). Complete uterine prolapse is reported in cats aged between 10 months to 6 years (Ucmak *et al.*, 2018) and the incidence is less than 0.03% (Senna *et al.*, 2015). It mostly occurs as a sequel of dystocia due to increased straining after delivery of the last kitten or after a prolonged queening or abortion (Jarolmasjed, 2017). The treatment methods include amputation of the everted uterus, manual reduction and repositioning of uterus by abdominal palpation and use of infusion as well as manual reduction of the prolapse through laparotomy, followed by ovariohysterectomy (Deroy *et al.*, 2015). The present report describes bilateral cornual prolapse in a cat after queening.

### Case History and Observations

A six year old multiparous queen cat weighing

3.2kg was presented at Multispeciality Veterinary Hospital Kudapanakunnu with the history of a mass protruding out from vulva and had queened two dead fetus five days back. Clinical examination revealed pale pink mucous membrane and all other vital parameters were within normal range. On gross examination of prolapsed mass it was identified as uterine horns and body, the mass was found to be necrotised and soiled with dirt. Haematological findings revealed elevated total leucocyte count with neutrophilia and anemia. Radiograph revealed absence of retained fetuses.

**Table I.** Haematological findings

Parameters	Haematological value	Reference Range
Haemoglobin (g/dl)	6.4	11.0-19.0
Packed Cell Volume (%)	22.6	30.0-45.0
Red blood cell count ( $10^6/\mu\text{l}$ )	4.1	5.0-9.0
MCH(pg)	15.7	13.0-17.0
MCHC(g/dl)	28.5	32.0-36.0
MCV(fl)	55.1	39.0-55.0
Total leucocyte count ( $10^3/\mu\text{l}$ )	24.2	5-15
Neutrophils (%)	89	60.0-75.0
Lymphocytes (%)	4	18.0-21.0
Platelet ( $10^3/\mu\text{l}$ )	267	160-510

### Treatment and Discussion

The present case report of uterine prolapse in cat describes reduction of prolapsed mass, followed by ovariohysterectomy. Ovariohysterectomy

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**Fig 1:** Uterine prolapse (cat)



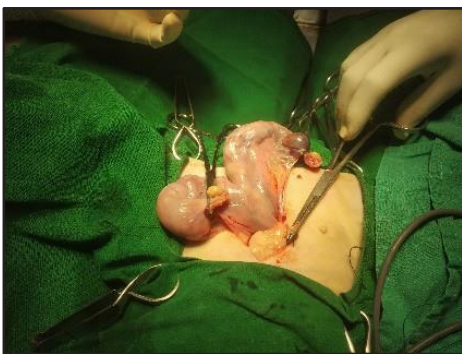
**Fig 2:** Prolapsed uterine horns and uteine body



**Fig 3:** Radiograph showing absence of retained fetus



**Fig 4:** Midventral celiotomy



**Fig 5:** severed ovarian pedicles after proper ligation



**Fig 6:** severed uterine body after proper ligation

was done considering possibility of infection, damage of uterine mucosa, and recurrence in future deliveries in addition to request of owner as described by (Binli *et al.*, 2021). Surgical site was prepared aseptically and anaesthesia was induced with combination of xylazine @ 0.5 mg/kg and ketamine @25mg/kg bodyweight intramuscularly and the prolapsed mass was washed with hypertonic saline and repositioned to abdominal cavity manually as described by Sathiamoorthy *et al.*, (2011). Maintenance of anaesthesia was done using ketamine and diazepam @ 1:1 ratio given up to effect. Under general

anaesthesia ovariohysterectomy was performed through midventral incision and the abdominal incision was closed as per standard procedure. In the present case of uterine prolapse not much damage was noticed at perimetrium (fig 4), only endometrial damage (fig 2) was present.

Postoperatively antibiotic ceftriaxone tazobactam @ 20mg/kg, H2 receptor antagonist pantoprazole @ 1mg/kg was administered intravenously for 7 days and antiinflammatory drug meloxicam @0.2 mg/kg was administered subcutaneously for 3 days and alternate day dressing of suture site was done, suture were removed

on 15<sup>th</sup> day after surgery. Cat had uneventful recovery without any complications.

Uterine prolapse may occur with protrusion of both horns from the vulva (bicornuate prolapse) or one part of the uterine body (Ucmak *et al.*, 2018) and one horn (unicornuate prolapse) (Deroy *et al.*, 2015). In the present report the prolapse was bicornuate and both left and right uterine horns and the uterine body were visible from outside. Increased total leucocyte count observed could be due to contamination of the prolapsed tissue as well as prolonged duration of prolapse as described by (Sabancu *et al.*, 2016) and (Binli *et al.*, 2021). Contamination of the prolapsed tissue could be the likely cause of neutrophilia. Binli *et al.*, (2021) reported that the cause of anemia could be pregnancy and early postpartum period rather than infection in uterine prolapse in cat. Varying degrees of edema, ischaemia, ulceration and necrosis were observed depending on duration and severity of the case (Deroy *et al.*, 2015). In the present case report, not much damage was noticed at perimetrium, only endometrial damage was present.

Ovariohysterectomy is preferred ahead of manual reduction unless the cat is a valuable breeding queen. Ovariohysterectomy can be performed after or before reduction (Deroy *et al.*, 2015). Jarolmasjed S, (2017) reported that complete uterine prolapse will not regress spontaneously and is an emergency case of surgery, as there is risk of uterine rupture and hemorrhage (Deroy *et al.*, 2015); and should be aimed to facilitate management before accumulation of edema, mucosal trauma and contamination (Deroy *et al.*, 2015). Rangasamy *et al.*, (2021) reported that prognosis in case of uterine prolapse improves if treatment is insti-

tuted rapidly and is excellent following ovariohysterectomy. The cat in the present report was presented after 5 days of queening, undoubtedly, this case is an individual situation, and uterine prolapse typically requires urgent intervention because it is life-threatening.

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