

## Case report

# Clinical Management of Uterine Prolapse in a Multiparous Persian Cat: A Case Report

### ABSTRACT

The present case report deals with the clinical management of uterine prolapse in a female Persian cat with the history of prior parturition presented to Veterinary Clinical Complex, Rajendranagar. The prolapsed mass was displaying congestion, enlargement, oedema and mild straining with no lacerations or injuries. After thorough cleaning, reduction of edema and antiseptic dressing, the prolapsed uterus was repositioned properly. Purse string suture was applied to prevent reoccurrence. The queen showed good response to the manual correction, with no complications. This report demonstrates effective clinical management of postpartum uterine prolapse by manual repositioning in a queen cat avoiding surgical intervention.

*Keywords: Persian cat, Post partum, Uterine prolapse, Purse string suture, Kittinging.*

### 1. INTRODUCTION

An obstetrical emergency that affects cats is uterine prolapse. In this condition uterus protrudes out of the vulvar lips. It has been recorded in felines of age ranging from 10 months to 6 years, and the illness develops either immediately or upto 48 hours after kittinging [1]. It has been noted that uterine prolapse can develop in both primiparous and multiparous queens [2,3]. The prolapse may be complete, resulting in the protrusion of both horns, or only one horn, or the uterine body, depending upon the degree of cervical dilation [4].

Uterine prolapse can be predisposed by excessive relaxation of cervix, uterine atony, rough handling during parturition, acute tendinitis, inadequate placental separation, oxytocin induced contractions and prior rupture of the mesometrium and mesovarium [5]. The duration of prolapse determines the severity of the clinical indications and the prognosis. The everted uterus can be manually reduced and repositioned by palpation of uterus and infusion. Surgical interventions include reducing prolapse through laparotomy or ovariohysterectomy or the prolapsed uterus can

be amputated [1]. Manual reduction is the recommended therapy method for simple instances. In the cases of unsuccessful reduction amputation of uterus combined with ovariectomy is done to reduce the stump. The present case report describes the clinical management of complete uterine prolapse in a Persian cat.

### 2. CASE HISTORY AND OBSERVATION

A 3.5 years old female Persian cat of body weight 3kg was presented to the Teaching Veterinary Clinical Complex, College of Veterinary Science, Rajendranagar with the history of uterine prolapse through the vulva soon after the delivery. The cat was multiparous; the present labour started 9hr prior to clinical examination. In the duration of 6hr, five healthy kittens were delivered with proper lactation and nursing by the queen.

On clinical examination, it was noticed as a condition of prolapse of both uterine horns. The uterine mucosa was found moist, reddish-pink, and grossly enlarged (fig 1), with no ruptures. But the everted uterus is congested, enlarged

**Commented [KD1]:** Rajendranagar

**Commented [KD2]:** Use either "Oedema" or "edema" uniformly throughout the manuscript. Don't use both the version in the manuscript.

**Commented [KD3]:** Purse string suture. Spell Check please

**Commented [KD4]:** Up to

**Commented [KD5]:** Please remove the title and change it as journal format as "PRESENTATION OF CASE"

and oedematous. Food intake and activity were decreased. The vitals recorded are temperature of 101.2°F, pink conjunctiva, pink buccal mucus membrane, skin tenting time of 2-3 seconds, respiration rate of 30 per min and heart rate of 110 bpm with normal amplitude.



fig 1 Prolapse of complete uterus with both horns.

## 2.1 Treatment

As the prolapsed uterine tissue is healthy and the owner is not willing to accept surgical intervention, the manual method of repositioning of the uterus was opted. Firstly, the cat was stabilised by slow intravenous administration of 100 ml of 5% dextrose normal saline. Injections xylazine 1mg/kg, atropine sulphate 0.04 mg/kg and ketamine 10 mg/kg intramuscular used for pre-anaesthesia. For general anaesthesia induction injection ketamine 10mg/kg and diazepam 0.05mg/kg were given intravenously. The prolapsed uterus was cleaned thoroughly with normal saline (fig 2). To reduce the size and oedema of the uterus, hyperosmotic solution (50% Dextrose) was applied over the prolapsed mass and left for few minutes. Gradually, the oedema and size of the prolapsed mass was reduced, and gained loose consistency.



fig 2 cleaning prolapsed uterine with 0.9% normal saline

After the adequate reduction in size, the prolapsed mass was thoroughly cleaned with plain water, 0.9% normal saline to remove hypertonic fluid and protect tissue from dehydration and damage. Antiseptic dressing was done. Lignocaine Hydrochloride gel (LOX-2% Jelly) was applied over the prolapsed mass (fig 3). Both the prolapsed uterine horns having the tip with point of protruding. By applying gentle pressure with the finger on the protruding portion slowly a uterine horn and part of uterine body was pushed into the pelvic cavity. The same procedure was repeated to replace other horn and remaining portion of the uterus. Gradually the complete uterus was repositioned to its original position as much as possible with finger. With the non-absorbable 1-0 nylon suture material purse string suture was applied to prevent the reoccurrence of the prolapse (fig 4.1 and 4.2) leaving the way for normal micturition.

Antibiotic injection Ceftriaxone Tazobactam (Intacef Tazo PET) 20 mg/kg/day I/M for 5 days was given. Injection of 5% Dextrose 20 ml/kg/day I/V fluid therapy was given for 2 more days. For the prevention of hypoglycemia slow intravenous administration of 10% calcium gluconate 0.8 mL/kg over 20-30 minutes, also per-oral calcium supplementation as syrup Ostopet 5ml twice daily also advised for 3 weeks. Injection Oxytocin 1 I.U./kg IM is administered to ease uterine involution [6].

**Commented [KD6]:** In the figure, the legend shows 4a & 4b. Please replace the fig 4.1 & 4.2 accordingly.

**Commented [KD7]:** Reference please....



fig 3 Application of Lignocaine Hydrochloride gel (LOX-2% Jelly) over the prolapsed mass.



fig 4a Application of purse string suture.



fig 4b After application of purse string suture.

### 3. DISCUSSION

Uterine prolapse in cats is rare, if occurs seen shortly before or after queening [7]. It may also occur in pregnant cats [8]. The diagnosis was done based on anamnesis and clinical examination [6]. The possible causes include improper handling during queening, severe

tenesmus, excessive relaxation and stretching of the pelvic muscles, rupture of the mesovarium and mesometrium, uterine atony due to metritis, incomplete separation of the placental membranes, excessive dilatation of the cervix [9]. Both the horns and a portion of the uterine body were prolapsed in eight out of nine affected cats [6]. In this case, uterine horns prolapse occurred with uterine body.

Manual reposition of uterus can be opted in cases of healthy prolapsed mass with no lacerations or necrosis [10]. Manual reduction followed by ovariohysterectomy is the most common reliable procedure practised in feline uterine prolapse [11, 12]. When the manual reduction is not possible, severe tissue edema, tissue damage and necrosis are present two-steps ovariectomy and then amputation of the prolapsed mass can be opted [13, 14, 15].

Here, in this case owner is not ready to take the risk associated with surgery. Also, there are no ruptures or ulcers on the uterine mucosa and it is fairly good. So, we considered the option of manual correction and repositioning of uterus.

On examining, the following two days of repositioning of uterus, the animal shown good condition, food and water intake were normal. Vital signs were normal with rectal temperature 101°F. After 5 days the purse string suture was removed and antiseptic dressing is done. The animal recovered within a few days and the prognosis is good.

### 4. CONCLUSION

It is essential that clinicians are aware of various this medical condition in order to approach this unusual clinical problem correctly in feline obstetrics. In this case, the prolapsed mass was healthy with no lacerations or necrotic lesions. After uterine repositioning to its normal anatomical position, the cat shown good prognosis with no complications. Thus, we can consider the manual reposition avoiding the surgical intervention in suitable cases.

### REFERENCES

1. Deroy C, Bismuth C, Carozzo C. Management of a complete uterine prolapse in

Commented [KD8]: Please rephrase this sentence...

Commented [KD9]: Please rephrase this sentence.

a cat. *J. Feline Med Surg Open Rep.* 2015; **1**(1):2055116915579681.

2. Vaughan L, McGuckin S. Uterine prolapse in cat. *Vet. Rec.* 1993; **132**:568.

3. Nöthling JO, Knesl O, Irons P, Lane E. Uterine prolapse with an interesting vascular anomaly in a cheetah: a case report. *Theriogenology.* 2002;**58**(9):1705-12.

4. Davidson A, Baker T. Postpartum disorders in the bitch and queen. 2009. In *81st Annual Western Veterinary Conference* (p. V239).

5. Bigliardi E, Di Ianni F, Parmigiani E, Cantoni AM, Bresciani C. 2014. Complete uterine prolapse without uterine mucosal eversion in a queen. *J Small Anim Pract.* **55**(4):235-237.

6. Johnston SD, Kustritz MR, Olson PNS. 2001. The postpartum period in the cat. *Canine and Feline Theriogenology, WB Saunders Company, Philadelphia* :442.

7. Wallace LJ, Henry JD, Clifford JH. Manual reduction of uterine prolapse in a domestic cat. 1970. *Veterinary medicine, small animal clinician: VM, SAC* **65**(6): 595-596.

8. Uçmak ZG, Uçmak M, Cetin AC & Tek Ç. Uterine prolapse in a pregnant cat. *Turk J Vet Anim Sci.* 2018; **42**(5): 500-502.

9. Sabarinathan A, Arunmozhi N, Kalyaan US, Rangasamy S, Sathiamoorthy T, Kulasekar K. Management of Bilateral Uterine Horn Prolapse in a Queen Cat. *Int J Curr Microbiol App Sci.* 2020; **9**(5):2754-2757.

10. Alagar S, Rangasamy S, Arun R, Methai A and Richard Jagatheesan PN. Bicornual Total Uterine Prolapse in a Domestic Shorthair Cat - A Case Report. *Indian Vet J.* 2024; **101**(4):62-64.

11. Binli F, Buyukbudak F, Inan I, Findik M and Serhat S. Complete uterine prolapse in a cat. *Ankara Univ Vet Fak Derg.* 2021; **68**:417-421.

12. Ammu PA, Aleena R, Vidya VK and Lekshmi V. Management of Uterine Prolapse in a Cat – A Case Report. *Indian Vet J.* 2024; **101**(3):62-64.

13. Roberts D, Straw Rodney C. 1988. Uterine prolapse in a cat. *Compendium: Continuing*

*education for practising veterinarians*; **10**: 1294-1296.

14. Özyurtlu N and Kaya D. Unilateral uterine prolapse in a cat. *Turk J Vet Anim Sci.* 2005; **29**(3):941-943.

15. Sikra Cherşunaru AA, Roşca P, Ciornei ŞG, Drugociu DG. 2021. Bilateral uterine prolapse in queen: case study. *Scientific Papers IULS Series Veterinary Medicine* **64** (2): 37-40.

Commented [KD10]: Recent reference please...

Commented [KD13]: Adhere to journal format.

Commented [KD11]: Adhere to journal format

Commented [KD12]: Please include recent reference