



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

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

This case report deals with the clinical management of uterine prolapse in a 3.5 years old Persian cat with the history of prior parturition. The prolapsed mass was displaying congestion, enlargement, edema 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 up to 48 hours after kittinging (Deroy et al., 2015). It has been noted that uterine prolapse can develop in both primiparous and multiparous queens (Sabuncu et al., 2017, Nöthling et al., 2002). 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 (Davidson and Baker, 2009).

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 (Bigliardi et al., 2014). 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 (Deroy et al., 2015). 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. PRESENTATION OF CASE

A 3.5 years old female Persian cat of body weight 3kg was presented to the 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 was congested, enlarged and edematous, with no fetal membranes found retained. 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.

2.1 Treatment

As the prolapsed uterine tissue was healthy and the owner was 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 was 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. To reduce the size and edema of the uterus, hyperosmotic solution (50% Dextrose) was applied over the prolapsed mass and left for few minutes. Gradually, the edema and size of the prolapsed mass was reduced, and gained loose consistency.



Fig. 1 Complete uterine prolapsed involving both horns

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. Both the prolapsed uterine horns had the tip with point of protruding 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 recurrence of the prolapse

(Figs. 2 and 3) leaving the way for normal micturition. During process of reduction few ml of 0.9% Normal Saline was slowly flushed into uterine lumen to prevent recurrence. After abdominal ultrasonography was performed and no major abnormalities were noticed. The cat was timely examined for 24 hours.

Antibiotic injection Ceftriaxone Tazobactam (Intacef Tazo PET) was given (Sabuncu et al.,2017) 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 (Johnston et al., 2001).



Fig. 2. Application of purse string suture



Fig. 3. After application of purse string suture

3. DISCUSSION

Uterine prolapse in cats is rare, if occurs seen shortly before or after queening (Kimani and Mbugua,2020) It may also occur in pregnant cats (Uçmak et al.,2018) The diagnosis was done based on anamnesis and clinical examination (Johnston et al., 2001). 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 (Sabarinathan et al., 2001). Both the horns and a portion of the uterine body were prolapsed in eight out of nine affected cats (Johnston et al.,2001). 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 (Alagar et al., 2024). Manual reduction followed by ovariohysterectomy is the most common reliable procedure practised in feline uterine prolapse (Binli et al., 2021, Ammu et al., 2024). 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 (Roberts and Straw, 1988, Özyurtlu and Kaya, 2005, Sikra et al., 2001).

The owner is unwilling to take surgery on his pet. Also, there are no ruptures or ulcers on the uterine mucosa and it is fairly good. Abdominal

ultrasonography was performed and no abnormalities like internal bleeding were noticed. 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. The owner was advised not to breed the cat. Also, advised to prevent male cats' availability till the ovariohysterectomy is performed, to prevent accidental pregnancy which may cause recurrence of uterine prolapse in the subsequent parturition.

4. CONCLUSION

It is essential for clinicians to be aware of this medical condition. 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.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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