

## SURGICAL MANAGEMENT OF UNUSUAL PYOMETRA IN A CAT

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## SUMMARY

A 7-year-old, non-descript female queen weighing approximately 4.4 kg was presented by an owner at Bhopal pet care and research center with complaints of vomiting, weight loss, haemopurulent fetid vulvar discharge, depression, lethargy and anorexia. Physical examination revealed severe abdominal distension, dehydration and pyrexia. On abdominal ultrasonographic examination severely distended uterine body and horns were observed as pyometra. On the basis of ultrasonographic finding severe pyometra was diagnosed and ovariohysterectomy was planned under general anaesthesia. Cat recovered uneventfully without any complication. Present case reported successful surgical management of a severe unusual pyometra in a queen.

**Keywords:** Cat, Surgical management, Pyometra, Uterus

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Pyometra in cat is an acute or chronic suppurative inflammation of the uterine wall in intact queens and characterized by endometrial hyperplasia with cystic dilation of endometrial glands and accumulation of purulent exudate in the uterine lumen. The disease is most often observed as pseudo-pregnancy in the queen, which is a phase of progesterone dominance that lasts approximately 40 days. The relatively long progesterone-dominated diestrus phase occurs in queens that predispose them to the development of cystic endometrial hyperplasia (CEH) and subsequent pyometra caused by infection from bacteria ascending through the vaginal cavity from the vagina. The most common bacteria involved is *E. coli*. Similar to the bitch, regardless of the underlying cause, the presence of progesterone (endogenous or exogenous in source) facilitates the development of pyometra (Singh *et al.*, 2019). Most queens present with uterine lesions after 5–7 years of age (average 7.6 years, range 1–20 years). Clinical signs most commonly occur within 4 weeks of the onset of oestrus in queens that are either mated, spontaneously ovulated or are induced to ovulate (mechanical stimulation or hormone induction). The disease is most often observed in diestrus stage of the estrus cycle (Hagman *et al.*, 2014).

A queen weighing approximately 4.4 kg was presented to Bhopal pet care and research center with the complaints of vomiting, weight loss haemopurulent fetid vulvar discharge, depression, lethargy and anorexia. Physical examination showed abdominal distension, dehydration and pyrexia. Trans abdominal ultrasonography revealed irregular edges and small hypoechoic areas consistent with cystic changes to the endometrial glands

and distended uterine horns typically with hypoechoic fluid. It was decided for ovariohysterectomy under standard anaesthetic protocols.

Preoperatively the cat was stabilized by Inj. normal saline 40 ml I/V, Inj. Amoxicillin sulbactam @ 15 mg/kg, Inj. Ketoprofen @ 2 mg/kg, and Inj. Ondansetron @ 0.5mg/kg body wt. I/V were given for 3 days. Cat was kept off fed and water withheld for twelve hours before surgical intervention. Surgical site was prepared aseptically (ventral middle area). Surgical area ventral midline was prepared for aseptic surgery. Premedication included Xylazine hydrochloride @ 0.7 mg/kg body weight I/M and anaesthesia was induced by Ketamine Hydrochloride @ 10 mg/kg body weight I/M. The cat was positioned in dorsal recumbency and midline abdominal incision was made on the skin, with sterile surgical blade No.12, approximately 1 cm caudal to the umbilicus and extended about 3 to 5 cm caudally, after laparotomy huge and severely distended uterine horn approximately 10 times than the normal size was observed occupying almost more than half of the abdomen. With great difficulty right uterine horn was taken out above the level of incision. Gradually cranially ovary and caudally body of uterus was lifted out. Serosa of uterine horn and body was ischemic light bluish in color and showing fragile tendency. By lifting right ovary, it was ligated by double transfixation sutures and thus right then left then after body of uterus were ligated by standard surgical procedure. Lukewarm normal saline mixed with antibiotic was poured time to time over the abdominal organs. Both the ovary and uterine horn with the uterine body cranial to cervix were removed. All the three stumps checked for any hemorrhages and left

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at its normal place. Povidone iodine and metronidazole solution was topically applied.

Peritoneum with transversus abdominis and internus abdominis were sutured by simple continuous lock stitch pattern using vicryl no. 3/0. Interrupted suture were placed on all musculature (abdominis externus, transversus and internus) by using vicryl no. 2/0. Subcutaneous sutures applied in simple continuous pattern using vicryl no 2/0. Skin was sutured using black braided silk by no. 1 in interrupted pattern weight of the uterus taken after removal was 1.47 kg.

Antiseptic ointment was applied at the incision site after suturing. For post-operative care, antibiotic Inj. Amoxicillin sulbactam was given @ 15 mg/kg body wt. for 7 days intra-muscularly and anti-inflammatory and analgesics inj. Ketoprofen was given @ 2 /kg body wt. intramuscularly for 5 days. Antiseptic dressing of incision site was done on alternate days and sutures were removed on 10<sup>th</sup> day post surgery after healing of wound.

For medicinal treatment of pyometra in cats PGF<sub>2α</sub> is used in conjunction with antibiotic therapy. There are

two forms of PGF<sub>2α</sub> (natural form Dinaprost and synthetic form cloprostenol). It was reported that Dinaprost has more side effects than Cloprostenol due to its powerful myometrial contraction and shorter half-life leading to evacuation of purulent material from the uterus compared with synthetic prostaglandins (Kiani *et al.*, 2014). Surgical treatment for pyometra in cat through ovariohysterectomy was a permanent elimination of the site of infection (Tarik *et al.*, 2020).

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