

SURGICAL MANAGEMENT OF RETAINED OVARIES AND STUMP PYOMETRA IN A CAT

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A three year old, non-descript female cat, neutered seven months back was presented to the University Veterinary Hospital, Kokkalai with history of purulent vaginal discharge for the last four months and repeated oestrous signs. No palpable abnormalities could be detected on physical examination of abdomen. Abdominal ultrasonography revealed an anechoic sac located posterior to the bladder. Vaginal smear examination revealed presence of numerous degenerated neutrophils. The case was presumptively diagnosed as stump pyometra. Two ovaries along with distended remnant uterine horns and uterine stump were removed by laparotomy. Post operatively the animal was treated with antibiotics, fluids and analgesics for a week. The animal had an uneventful recovery.

Keywords: Ovarian Remnant Syndrome, Stump pyometra, Cat.

Ovariohysterectomy (OHE) is a common veterinary practice among dogs and cats used as a population control measure. It is also practiced to prevent oestrus, unwanted pregnancies, pyometra and certain neoplasia related to reproductive system (Ball *et al.*, 2010; Becha *et al.*, 2017). Improper surgical procedures like retention of ovaries or part of ovarian tissue and uterine tissue can lead to complications like ovarian remnant syndrome (ORS), pyometra and neoplasia (Kokkinos *et al.*, 2019). The ORS is more commonly seen in cats than dogs. These cats show clinical and behavioural signs of oestrus like vocalisation, lordosis and attraction of tom cats (Karneva *et al.*, 2017). Methods for diagnosis include behavioural signs, exfoliative vaginal cytology, ultrasonography, hormonal analysis (estradiol, progesterone, LH), hormone challenge tests (GnRH, hCG) and exploratory laparotomy (Heffelfinger, 2006).

Case history and Observations

A three year old non-descript female neutered cat was presented to the University

Veterinary Hospital, Kokkalai with a history of purulent vaginal discharge for the last four months. The cat was neutered seven months before at a private veterinary clinic. The animal was active and alert. She showed intermittent oestrus behaviour even after spaying. Clinical examination showed that all vital parameters are within the normal range.

On abdominal palpation, no abnormal structures were palpable. Per-vaginal examination revealed the presence of purulent discharge. Exfoliative vaginal cytology revealed presence of numerous degenerated neutrophils along with superficial cells. Haematology revealed a normal haemogram with a total erythrocyte count of 6.74millions/ μ L, Volume of packed red cells of 34.4%, Total leukocyte count of 16,000/ μ L, Total lymphocyte of 3400/ μ L, Total granulocyte of 12,000/ μ L and a Total thrombocyte count of 1,72,000/ μ L. Abdominal ultrasonography revealed the presence of an irregularly elliptical anechoic sac with thickened corrugated walls with a size of 11.4 \times 16.4mm, located posterior to the urinary bladder (Fig. 1).



Fig. 1 US image showing anechoic sac of diameter 16.4×11.4mm

Treatment and Discussion

The condition was medically managed with mifepristone orally at the rate of 5 mg/Kg body weight for five days followed by cabergoline at the rate of 5 µg/Kg body weight orally for 14 days, along with antibiotics (Amoxicillin-sulbactam at the rate of 15 mg/Kg body weight). After four months of therapy, animal showed continuous oestrus behaviours and purulent vaginal discharge. Mid ventral laparotomy was performed under general anaesthesia using xylazine- ketamine combination along with 2% isoflurane inhalant anaesthesia. The distended uterine stump was found adhered to the urinary bladder (Fig. 2). The adhesion of the stump with the urinary bladder was separated carefully; ligations were applied on the cervical end and removed. On thorough, peritoneal exploration two retained ovaries were identified *in situ*. Both ovaries were attached with distended remnants of uterine

horns of about 2-2.5 cm in length. Both the intact ovaries and the remnant horns were ligated and removed. The surgical incision was then closed as per standard surgical procedures. Post-operatively, the animal was treated with antibiotics and supportive therapies. The animal had an uneventful recovery.

On exploration of the removed stump, pus mixed haemorrhagic contents with cystic changes on the inner surface, suggestive of uterine tissue could be identified. Both the ovaries were active with developing follicles of about 0.1mm in size. The distended remnant uterine horns attached to the ovaries were filled with greyish pus (Fig. 3). Here, the gonad sparing spaying procedures has led to complications like ovarian remnant syndrome and stump pyometra. Surgical intervention through laparotomy or laparoscopy is the treatment of choice, as also recommended by Naiman *et al.*, 2014 and Park *et al.*, 2015.

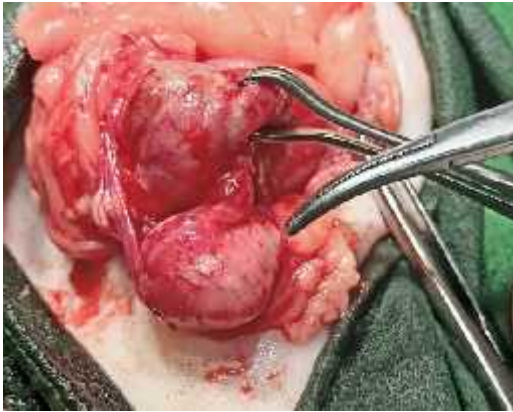


Fig. 2 Uterine stump adhered to the urinary Bladder



Fig. 3 Retained ovaries with distended uterine remnants

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