

UTERINE STUMP PYOMETRA AND INTACT LEFT OVARY IN SPAYED MIXED BREED YOUNG BITCH

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A female dog of one year old, spayed at local animal birth control centre fifty days back was reported to dept of Veterinary Clinical Complex, College of Veterinary Science, Proddatur with a complaint of vaginal bleeding since last one week. In ultrasonography, the retained left ovary and uterine stump filled with fluid was observed. The exploratory laparotomy performed to remove a completely retained left ovary and infected uterine stump. It was concluded that the remnant ovary was responsible for the cyclicity and in the occurrence of stump pyometra surgical contamination cannot be precluded.

Keywords: Exploratory laparotomy, Remnant ovary, Stump pyometra, Ultrasonography.

Uterine stump pyometra is development of cystic endometrial hyperplasia (CEH) - pyometra in uterine tissue left behind after ovariohysterectomy (Fathima *et al.*, 2020). Ovariohysterectomy has been described as a surgical method of contraception in canines (Moxon *et al.*, 2023) and one of the method in the control of reproductive tract diseases including pyometra, ovarian neoplasia (Noakes *et al.*, 2019). The various complications of ovariohysterectomy are incomplete removal of the ovaries, reactions of surgical suture material, flank fistulas and intra abdominal adhesions affecting the functions of other organs. One of the sequel of remnant ovaries is development of stump pyometra. The major clinical sign of remnant or left over ovary is the resumption of cyclical activity, if associated with stump pyometra discharges may be purulent and symptoms will be similar to CEH pyometra. The present case describes a case of remnant ovary that developed stump pyometra in a short span of one month 20 days after spaying.

Case History and Observation

A one year old female dog was presented to the department of veterinary clinical complex, College of Veterinary Science, Proddatur with the history of spaying done 50 days back and showing vaginal discharges since last one week. The animal was alert, active and taking food normally and all clinical parameters within normal range. The discharge of serosanguinous fluid was observed from vulva. The vaginal exfoliative cytology (VEC) revealed the presence of superficial epithelial cells and neutrophils. The serum biochemical profile was normal and on ultrasonography, an anechoic pocket was present anterior to the urinary bladder (Fig 1). The remnant left ovary was observed caudal to the left kidney. Based on the history, clinical findings, VEC and ultrasonography, the case was diagnosed as stump pyometra and ovarian remnant syndrome.

The dog was preanesthetized with atropine sulphate @ 0.04mg/Kg Bwt and xylazine @ 1mg/Kg Bwt intramuscularly. General anesthesia was induced and maintained with ketamine 5mg/Kg Bwt administered intravenously. A midventral laparotomy incision was taken one cm behind the umbilicus and entered into the abdomen. Upon exploration, the intact left ovary was identified (Fig 2) and was transected. No traces of right ovary remnants were found. The incision was extended posterior to find

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the enlarged uterine stump. After careful removal of adhesions with omentum by blunt dissection the uterine stump was removed. The abdomen was lavaged with metronidazole before closing the laparotomy incision. Surgical wound was dressed with

povidone iodine ointment and bandaged. The dog was administered postoperatively with inj. ceftriaxone (25mg/kg Bwt), inj. Tramadol (2mg/kg bwt) and inj. Metronidazole (100ml I/V) for five days.



Fig 1: Ultrasonographic image of stump pyometra and the transected mass of stump of uterus filled with pus

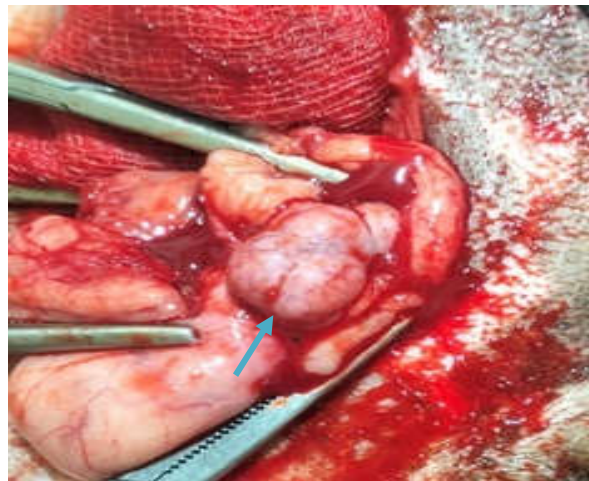


Fig 2: The remanant left ovary (Arrow) after exploratory laparotomy

Results and Discussion

The ovarian remnant syndrome is the key factor in triggering the occurrence of uterine stump pyometra through the hormonal influence. Progesterone available from the remnant ovary makes the uterus susceptible to invasion of bacteria, due to downregulation of the immune system (Schlafer and Foster, *Indian Journal of Canine Practice* 42 ISSN: 2277-6729 e-ISSN: 2349-4174

2016). The remnant ovary was diagnosed by VEC (Jyothi *et al.*, 2016), and stump of uterus filled with pus was identified by ultrasonography. However in the present case, within a short span the occurrence of stump pyometra was indicative of contamination that might have occurred before or during ovariohysterectomy, and the

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infection, accumulation of pus proceeded following operation until development of heat signs. The heat signs were displayed by the dog due to leftover intact ovary and surgical removal of it has resolved the clinical signs of heat. Few dogs developed stump pyometra due to causes other than ovarian remnant, contamination at OHE, exposure to human topical estrogen hormone as mentioned by Serman *et al.*, 2019, administration of tamoxifen, a non steroidal anti estrogen as also reported by Ehrhardt *et al.*, 2023.

Conclusion

Ovariohystrectomy should be performed without leaving ovarian and uterine tissue and with right procedures, following aseptic conditions to prevent the recurrence of clinical signs of estrus and development of stump pyometra.

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