PYOMETRA IN A DOG

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Pyometra is an acute or chronic polysystemic disease in mature bitches or an acute or chronic endometritis occurring in metestrous in middle aged intact bitches. Cystic endometrial hyperplasia (CEH) predisposes the uterus to secondary infection and subsequent pyometra**.** The most common clinical signs of pyometra in dogs include polyuria, lethargy, vomiting or inappetance, abdominal pain on palpation and vaginal discharge. Clinical signs in bitches may be more severe when the cervical canal is occluded, the cervix may spontaneously open or close during the disease, causing intermittent vaginal discharge or a sudden deterioration in the clinical status. Ovariohysterectomy generally results in rapid recovery and a minimal risk for reoccurrence and negates the risk of ovarian or uterine neoplasia or unwanted pregnancy (Wilson and Hayes, 1983).

Case history and Clinical findings

A 7 years old Spitz bitch was presented to Department of Veterinary Surgery and Radiology, OUAT, Bhubaneswar with the complaint of polyuria, lethargy, vomiting, anorexia, enlarged abdomen since last 3 weeks. Radiography showed a gigantic distended uterus and homogenous ground glass appearance of the uterine horns. It was diagnosed as closed pyometra as there was no vaginal discharge. Blood smear showed leucocytosis with neutrophilia and mild left shift. Biochemical profile revealed hypoglycaemia and mild elevation of alkaline phosphatase. The case was diagnosed as closed pyometra. It was decided to perform ovariohysterectomy under general anaesthesia.

Surgical Management

The animal was premedicated with atropine sulphate @ 0.04 mg/kg body wt. and xylazine hydrochloride @ 1 mg/ kg body wt., the G.A. with ketamine hydrochloride @ 10 mg/kg body wt. IM and was maintained with incremental doses of ketamine hydrochloride along with 5% dextrose normal saline. The patient was restrained in lateral recumbency and ovariohysterectomy was performed by giving left lateral laparotomy incision.

The pus-distented and friable uterus was manipulated with extreme care to avoid perforation. A cystocentesis was performed. The suspensory ligament was stretched from the weight of the uterus. Vessels in the broad ligaments were ligated with 2-0 monofilament absorbable suture. Ovarian AV complex was located and a "window" was made in the mesovarium immediately close to the ovarian AV complex. The ovarian AV complex was double clamped with Rochester-Carmalt hemostatic forceps.

A third clamp was placed over the proper ligament between the ovary and uterine horn; then the pedicle was severed between the middle clamp and the ovary. Circumferential suture was loosely placed around the proximal clamp (Fig.1). The clamp was removed as the circumferential suture was tightened so that the circumferential suture lies in the groove of the crushed tissue created by the clamp. A Transfixation suture was placed between the circumferential suture and the cut end of the pedicle. The pedicle was grasped with thumb forceps, the final clamp was released, and the pedicle was inspected for bleeding. Both horns were ligated in the same manner. Uterine body was triple clamped with Doyen's forcep immediately proximally to the cervix. The uterine body was severed between the middle clamp and

the proximal clamp. The uterine arteries and veins were individually ligated between the distal clamp and the cervix. A circumferential suture was loosely placed around the distal clamp, the clamp was removed, and the suture was tightened in the groove of crushed tissue. A transfixation suture was placed between the circumferential suture and the remaining clamp, which then was removed (Fig.2). The uterine stump was evaluated for bleeding and replaced into the abdomen. The mass was removed. Peritoneum, abdominal muscle and skin were closed in a routine manner.

Fig. 1: Circumferential suture around ovarian pedicle

Fig.2: Pus-distended uterus removed after ovariohysterectomy

Results and Discussion

Postoperatively the dog was treated with Ceftriaxone 20mg/kg body wt. and melonex 0.5mg/kg body wt. along with fluid therapy, antiseptic wound dressing. Skin sutures were removed on 12th day postoperative day. Radiography and clinical symptoms are the only diagnostic methods for diagnosing Pyometra. Traditional theories suggest that hormonal changes render the uterus susceptible to infection. Estrogen alone seems to play a less important role but appears to enhance the endometrial response to progesterone and exogeneous estrogen administration, used to terminate pregnancy, to increase the risk of pyometra. Progesterone stimulates endometrial glandular secretion and suppresses contractions of the uterus, creating an intrauterine environment predisposed to bacterial growth. The dog showed fruitful recovery in 15 days.

References

Wilson, G.P. and Hayes, H.M. (1983). Ovariohysterectomy in dog and cat. *In:* Current Techniques in Small Animal Surgery. 2nd Ed. Bojrab, M. J. (Ed). Lea & Febiger, Philadelphia. Pp. 334-338.