PYOMETRA WITH OVARIAN AND PAROVARIAN CYSTS IN GERMAN SHEPHERD BITCH- A CASE REPORT

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Introduction

The term Pyometra describes a pusfilled uterus and the associated ovarian and systemic changes. It is associated with the diestral phase of the ovarian cycle, at which time, the corpus leuteum is actively secreting progesterone which increases secretion of the uterine glands, inhibits myometrial contraction and maintains closure of the cervix (Stone, 2003). The role of reproductive hormones in pyometra is now well documented. Pyometra is also associated many times with the cystic ovarian disease. The ovarian cysts, follicular and luteal, have been reported fairly common, however, parvoarian cysts are rarely observed. The uterine accumulate increases resulting in engorgement of uterine horns to such an extent that the discharge may leak through the genital passage soiling the vulva, as in open pyometra or may be retained in the uterus causing distension of the abdomen. The results of conservative treatment are refractory and surgical removal of the diseased uterus and the ovaries is still continued to be the method of choice for surgeons. A case of pyometra with ovarian and parovarian cysts and its surgical management in a German shepherd bitch is reported.

Case History & Clinical signs

A German shepherd female of about twelve years age was reported for the treatment of chronic vomiting over a period of about fifteen days. The history revealed that the bitch had conceived only once about three years back and did not show signs of heat since then, polyurea, polydypsia and inappetance. Clinical examination revealed temperature, pulse and respiration within the normal physiological limits, pale mucous membranes, moderate dehydration and distended abdomen. Palpation of abdomen revealed distended, coiled uterine

horns. The ultrasound examination revealed fluid filled uterine horns, with close cervical *os*. The anechoic shodows just posterior to the left kidney were suspected to be the ovarian cysts. Rest of the abdominal organs were normal sonographically. The case was diagnosed to be closed pyometra with cystic ovarian disease. Hematobiochemical studies revealed leucocytosis with neutrophilia and increased Blood Urea Nitrogen and Serum Creatinine values (BUN 97 mg/dl and S. Creatinine 2.8 mg/dl).

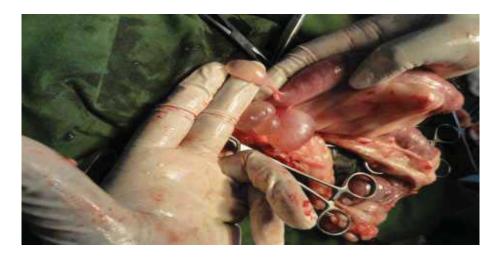
In view of the severely distended horns, ovariohysterectomy was the treatment of choice hence the surgery was planned accordingly.

Surgical procedure

The dog was given supportive treatment for three days with intravenous infusion, antibiotic and multivitamin drugs. The surgical intervention was scheduled on the fourth day. The bitch was premedicated with atropine sulphate, betamethasone and sedated with inj. xylazine @ 1 mg/kg body weight intravenously. Dissociative anaesthesia was inducted with inj. Diazepam @ 1 mg/kg body weight and Ketamine @10mg/kg hydrochloride body intravenously. The laparotomy was performed to distended uterine horns. exteriorize the Examination of the ovaries showed cysts on the left ovary. The parovarian cysts were also observed on the serosal surface of the horn and area between the ovary and the horn. The uterine blood vessels and body was ligated posterior to the cervix using 1.0 catgut. The right ovary was normal in shape and size, however, the left ovary was severely enlarged with multiple luteal cysts and parovarian cysts located between the ovary and left horn (Fig. 1). Both the ovarian ends were ligated at the ligaments to block the blood vessels. The laparotomy incision was closed in routine manner. Post-operatively, the bitch was given inj. ceftriaxone 500 mg and inj. Meloxicam

20 mg intramuscularly twice a day for 5 days and three days respectively. The patient was given intravenous fluid therapy for two days postoperatively. The skin sutures were removed

on eighth postoperative day. The hematological and biochemical parameters examined on eighth day revealed normal values. The bitch responded well to the treatment and was clinically healthy during one year follow-up period.



Discussion

The canine pyometra is one of four stages of the cyclic hyperplasia-pyometra complex (Dow, 1957) and is clinically charectorized by varying degrees of inappetance, vaginal discharge, in open pyometra cases, polydypsia, polyurea, and in severe cases, distension of abdomen. Similar clinical findings were reported in the present case, except the vaginal discharge. Pyometra shows polysystemic involvement and nulliparous or primiperous bitches have a moderately higher risk of pyometra as compared to multiparous bitches ((Niskanen and Thrusfield, 1998) as also reported Leukocytosis, anemia in present case. hypoalbuminemia, hyperglobulinemia increased alkaline phosphatase levels, azotemia, and acidosis can all occur to various degrees (De Schepper, 1985). Leucocytosis and azotemia were also observed in present case, which returned to normalcy postoperatively.

The condition can be diagnosed due to its peculiar symptoms, clinical history, physical examination, and laboratory values. Vaginal discharge is usually present unless the cervix is closed. Pyometra occurs at any age after first estrus, reported age range from 6 months to 18 years (Niskanen and Thrusfield, 1998). In the present case, the bitch was twelve years old and cervix was closed leading to distension of horns.

The confirmatory diagnosis was made with ultrasound examination, which indicates fluid uterine horns with typical compartmentalization of horns as seen in the present investigation. The ovariohysterectomy was the choice since the medicinal and hormonal therapy has varying degree of success. Laparoovariohysterectomy was performed in the present case. The left ovary showed cysts. Similarly, parvarian cysts between the ovary and uterus were seen. One cyst was also observed on the serosal surface of the horn. Stone (2003) reported that the lutein cysts may be associated with cystic endometrial hyperplasia or pyometra, as observed in present investigation. However, he also opined that the luteal cysts they may be asymptomatic and found incidentally during routine ovariohysterectomy or laparotomy. Rivers and Johnston (1991) reported that the parovarian originate from the remnants of either mesonepfric (wolfian) or paramesonephric tubules and ducts. They are more frequently encountered in dogs as compared to cats and are located between the ovary and uterine horns. They are not associated with any clinical signs are usually diagnosed accidently during ovarohysterectomy. However, in the present case, the ovarian and parovarian cysts could be seen on ultrasound examination.

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