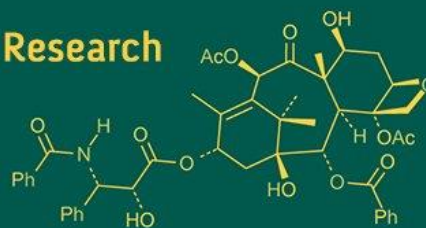


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Case report: Ovariohysterectomy, post-surgical complications and its management in a Labrador-Spitz female dog

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Abstract

A six-year old female dog is presented with an enlarged abdomen, showing restlessness, vomiting, polyuria, polydipsia, with decreased appetite. The physical examination revealed yellowish to brownish purulent vaginal discharge with an unpleasant smell. Hematology result revealed hypochromic, normocytic anemia, including an elevated level of alkaline phosphatase. Diagnosis of pyometra based on history, physical examination, hematology, biochemical tests and ultrasonography of the abdomen, it was concluded that the female dog was diagnosed with open cervix pyometra. Based on the following examination, an ovariohysterectomy was performed. The Patient treated with Ampicillin-cloxacillin (Injection Megapen® 500 mg) antibiotics were administered intramuscularly at a dose @ 15 mg/kg of body weight, for 7 days thrice a day, tablet pantoprazole 40 mg empty stomach to reduce the amount of acid production in stomach, Darbepoetin alfa (Cresp®40 mcg, 0.4 ml S/C-super-sialylated analog of human erythropoietin) injection causes the bone marrow to produce red blood cells to treat low hemoglobin and RBC count, Supportive therapy: Vitamin-B complex (Injection Tribivet, 2.5 ml for 7 days) and Pronefra® palatable oral suspension.

Keywords: Pyometra, discharge, ovariohysterectomy, darbepoetin, antibiotics, haemoglobin

Introduction

Canine Pyometra is a serious and Life-threatening infection that affects nearly one fourth of all female dogs before they reach 6-10 years of age. That begins with mild symptoms such as polydipsia, polyuria and vaginal discharge. Without timely treatment, it can progress to peritonitis, sepsis and the dysfunction of multiple organs. In the pyometra case, the body temperature of the female dog was between 38 °C to 38.8 °C (Aini *et al.*, 2024) ^[1]. Prompt recognition and treatment of pyometra are critical, with ovariohysterectomy being the most effective treatment (Jitpean *et al.*, 2021) ^[5]. Life-threatening complications after surgery in pyometra may also occur, like septic shock, hemorrhage (Pitroda *et al.*, 2025). This case report presents open pyometra with purulent and bloody discharge from the vulva. Diagnosis of pyometra based on history, physical examination, hematology, biochemical tests and ultrasonography of the abdomen (Taqwa & Syah, 2024) ^[7].

History and Clinical Diagnosis

Six-year-old Labrador-Spitz cross female dog weighing 27 kg was presented to TVCC, Durg. On the basis of history female dog having rectal temperature of 39.4 °C with heart rate 119 beats/min, it is very difficult to palpate the uterine cervix, pyometra with light chocolate brown colour vulval discharge. Clinical blood chemistry includes mild to moderate increase of Alanine aminotransferase and Alkaline phosphatase with neutrophilia, lymphopenia, and thrombocytopenia. Ultra-sonographic findings include an enlarged uterus with convoluted tubular horns filled with anechoic to hypoechoic fluid and pus pockets in uterine lumen (Fig.1). In open cervix pyometra with significant drainage of uterine content through the vagina, the uterus may not be visualized radiographically.

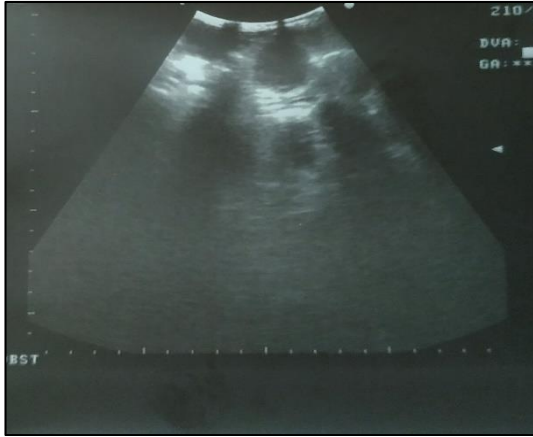


Fig 1: Ultrasound Imaging of pus pockets in uterine lumen

Treatment

The main treatment for pyometra is ovariohysterectomy (Fig.2). The female dog was fasted for 12 hours before surgery. By using atropine sulphate, 1.33 ml (0.02 mg/kg body weight) premedication was done. Then @ 5 mg/kg of body weight ketamine and @ 1 mg/kg body weight xylazine were given to anesthetize the female dog. The surgical site was shaved, scrubbed and disinfected aseptically. Midline laparotomy was performed to remove both sides of the ovaries and uterus. 6-7 cm incision was made from below the umbilicus to the pubis after proper anesthesia, then the abdominal wall and peritoneum were incised and exposed abdominal cavity. The ovaries were located using an ovariectomy hook and the ovarian bursa was clamped by using artery forceps and rupture the suspensory ligament. Ligate the vessels securely, cut between the clamps and remove both the ovaries. The uterine body was exposed, clamped, ligated and excised at the level of the cervix. Hemostasis was checked and the abdomen was lavaged with 3 liters of warm normal saline and metrogyl. The abdominal wall, muscle and skin were sutured. Ampicillin-cloxacillin (Injection Megapen® 500 mg) antibiotics were administered intramuscularly at a dose @ 15 mg/kg of body weight, for 7 days thrice a day, tablet pantoprazole 40mg empty stomach to reduce the amount of acid production in stomach, Darbepoetin alfa injection causes the bone marrow to produce red blood cells to treat low hemoglobin and RBC count (Cresp® 40mcg, 0.4 ml S/C), Supportive therapy: Vitamin-B complex (Injection Tribivet, 2.5 ml for 7 days), Pronefra® Palatable oral suspension given to support the normal function and health of kidneys which is combination

of two intestinal phosphate binders decrease dietary availability of phosphorus and antiseptic dressing with ointment Mupirocin to speed up the wound healing.



Fig 2: Intraoperative view of pus-filled uterus

Results & Discussion

The physical examination revealed yellowish to brownish purulent vaginal discharge with an unpleasant smell, anorexia, lethargy, vomiting are the symptoms are consistent with clinical symptom of pyometra in female dog described by Hagman (2022) ^[3] including pyrexia, tachycardia, polydipsia, uterine enlargement and dehydration. Hypochromic normocytic anemia (Fauzi *et al.*, 2020) ^[2] suggested that female dog may be due to hemolysis, acute blood loss, bacterial infection and bleeding in the endometrium (Hasan *et al.*, 2021) ^[4]. Increased neutrophil indicated bacterial infection while lymphopenia indicated several conditions including hormonal disorders. Open pyometra is more common and characterized by purulent vaginal discharge while in closed pyometra has no clinical signs (Hasan *et al.*, 2021) ^[4]. To treat the hypochromic normocytic anemia, the female dog was administered with Darbepoetin alfa (Cresp® 40 mcg, 0.4 ml S/C-super-sialylated analog of human erythropoietin) injection causes the bone marrow to produce red blood cells to treat low hemoglobin and RBC count. The dog also received supportive therapy with Vitamin-B complex (Injection Tribivet, 2.5 ml for 7 days) and Pronefra® palatable oral suspension.



Fig 3: Healed wound dehiscence



Fig 4: Dog after Treatment

Conclusion

Based on anamnesis, clinical findings and ultrasonography, the female dog was diagnosed with open pyometra with good prognosis. Female dog treated with Ampicillin-cloxacillin antibiotics, tablet pantoprazole 40mg empty stomach, Darbepoetin alfa with supportive therapy. The treatment resulted in the absence of nasal and vaginal discharge with normal physiological parameters having normal bowel movements and calmness.

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