

SUCCESSFUL SURGICAL MANAGEMENT OF OPEN CERVIX PYOMETRA IN A LABRADOR BITCH

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ABSTRACT

A eight year old unspayed female Labrador dog weighing 20 kg was presented with a history of dehydration, vomiting, pyrexia, anorexia. General examination revealed that animal was depressed, with abdominal distention, sanguine purulent vaginal discharge, anuria and inability to walk. On clinical examination, the rectal temperature was recorded as 101.3°F, with swollen vulva and seropurulent vaginal discharge. On haematological examination revealed neutrophilia with left shift. The bitch was treated with one shot of cloprostenol sodium with dose rate 2 mcg/kg intramuscular and inj. cefotaxime sodium 250 mg for 5 days. But, it failed to respond to the treatment. Based on the history, radiography and clinical observations the condition was diagnosed as pyometra. Hence ovariohysterectomy was performed under general anaesthesia and the animal recovered eventually.

Keywords: Labrador bitch, pyometra, ovariohysterectomy, ultrasonography

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INTRODUCTION

Pyometra is the accumulation of pus within the uterine lumen, typically occurring during or immediately following a period of progesterone dominance. It is one of the major causes of infertility in bitches. In older bitches it is one of the common causes of death due to sepsis induced kidney damage and nephritis (Roberts, 2004 and Smith, 2006). Based on patency of cervix and presence of vaginal discharge closed cervix pyometra is comparatively more serious in nature because of absorption of toxins from the pus accumulated uterus followed

by toxemia. Pyometra is best managed by OHE. However medical or hormonal therapy (prostaglandins) is a option in patients not fit for surgery due to high risk of anesthesia. The adverse side effects of prostaglandin therapy ranging from simple allergy to anaphylactic reaction after therapy. Hence, it requires a cautious approach to treat pyometra with prostaglandins. Increased values of BUN in pyometric bitches indicate that the efficiency of kidneys to remove nitrogenous waste from the circulation (Gayakwad *et al.*, 1999). Non regenerative normocytic normochromic anemia has also been reported in canine pyometra (Balasubramanian *et al.*, 1993). The main cause of pyometra in bitches is infection overlying cystic endometrial hyperplasia (CEH) with subsequent formation of intrauterine purulent fluid (Roberts, 2004). Canine pyometra is a common reproductive disorder of intact, diestrus bitch affects nearly one fourth of all female dogs before they reach ten years of age (Baithalu *et al.*, 2010). Certain breeds like Golden retriever, Miniature schnauzer, Irish terrier, Saint Bernard, are more prone to uterine infection whereas others viz. Drovers, German shepherds, Miniature dachshunds are less susceptible (Egenvall *et al.*, 2001).

In old and aged pyometra affected animals, ovariohysterectomy is always more complicated and carries a higher risk than routine spaying because of bacteremia and haemato-biochemical alterations. The commonest clinical signs associated with pyometra include vaginal discharge, lethargy, polyuria, polydipsia, emesis and hyperthermia followed by hypothermia

(Verstegen and Karine, 2006). In order to prevent endotoxemia and potential renal failure, ovariohysterectomy was chosen (Mahesh *et al.*, 2014). Animals that are seriously ill should be medically stabilized with appropriate intravenous fluid therapy and broad-spectrum antibiotics prior to surgery (Smith 2006).

CASE HISTORY AND OBSERVATIONS

An eight-year old 20 kg Labrador bitch, whelped twice was presented to the Veterinary Clinical Complex of college of veterinary science and animal husbandry, Kumarganj, Ayodhya with the history of dehydration, distended abdomen, vomiting, anorexia, polyuria, inability to walk and pyrexia. On clinical examination, the animal was dull with 101.3°F temperature, pulse and respiratory rate were 97/min. and 62/min. respectively with swollen vulva and sanguineous pus discharge from vagina. Haematological examination revealed normal haemoglobin (13.3 g/dl) levels with increased neutrophils (88%) and predominant shift to left, decreased lymphocyte (10%), platelets count (0.90 lacs/cu mm), total red blood cells (5.81 million/cumm), mean corpuscular volume (66.2 fl), mean corpuscular hemoglobin (23.1 pg). The kidney function test results show that the serum urea level is 28.6 mg/dl, blood urea nitrogen (BUN) is 13.3 mg/dl, serum creatinine is 1.2 mg/dl and serum uric acid is 4.3 mmol/l. In the electrolyte profile, the serum sodium level is 139.0 mmol/l, potassium is 4.1 mmol/l, and calcium is 8.6 mmol/l. In the liver function test, the

total serum bilirubin is 0.78 mg/dl, SGOT (AST) is 35 IU/L, SGPT (ALT) is 29.8 IU/L, and alkaline phosphatase is 95.7 u/L. The serum total protein is 6.7 gm/dl, with serum albumin at 4.3 gm/dl and serum globulin at 2.4 gm/dl. The conjunctival mucous membrane was dry and deeply congested indicative of toxemia and dehydration. Serum biochemical examination revealed liver and kidney function test was normal. Ultrasonographic examination revealed distended uterine horns filled with anechoic fluid, confirming the diagnosis of pyometra.

Hence, to stabilize the animal medical treatment was initiated for fluid therapy with inj. DNS 250 ml IV, inj. RL 250 ml IV, inj. ranitidine 1 ml IM, inj. cefotaxime sodium 250 mg IM @ of 30 mg/kg body weight, inj. dexamethasone 4 mg IV, inj. metoclopramide 1 ml IV for 5 days and one shot of inj. cloprostenol sodium with dose rate 2 mcg/kg IM to stabilize the patient. After five days the dog was re-examined, and radical surgery was planned under aseptic standard surgical procedure to save it's life.

TREATMENT AND DISCUSSION

Feed and water were withheld for 12 and 6 hours, respectively, prior to surgery. Intravenous (IV) fluid line was established to stabilize the patient. Pre-operatively the animal was administered ceftriaxone @ 10 mg/kg body weight IV and meloxicam @ 0.5 mg/kg IM. With taking all aseptic precautions the animal was positioned in dorsal recumbency and the caudal mid

ventral abdomen was prepared for aseptic surgery. The animal was premedicated with inj. atropine sulphate @ 0.04 mg/kg body weight intramuscularly and general anaesthesia was induced by ketamine @ 7 mg/kg body weight and xylazine @ 0.7 mg/kg body weight intramuscularly and maintained by a combination of Inj. ketamine hydrochloride and inj. diazepam (1:2) intravenously. The laparotomy was performed through 6-7 cm caudal mid ventral abdominal incision and the heavy blood tinged pus filled uterine horns and body were carefully exteriorized. The both ovaries, ligaments and blood vessels were ligated and resected after application of modified transfixation ligatures with catgut (no.1). Further, the cervical end was ligated anterior cervix and transfixed by catgut (no.1) and resected. The laparotomy incisions were closed by simple continuous and simple interrupted suture pattern by catgut and nylon (no.1) suture material. The postoperatively animal was subjected to inj. DNS 300 ml IV, inj. metronidazole 100 ml intravenously, along with inj. cefotaxime sodium 250 mg IM @ 30 mg/kg body weight, inj. meloxicam 1 ml IM and inj. B-complex 1 ml IM daily for five days. Daily dressing of wound was done with povidone iodine ointment. The skin sutures are removed after the 12th day of postoperative treatment and the dog's hematological and biochemical values were monitored. The post-operative blood profile revealed all parameters within normal reference ranges, indicating systemic recovery and absence of ongoing infection or organ dysfunction.

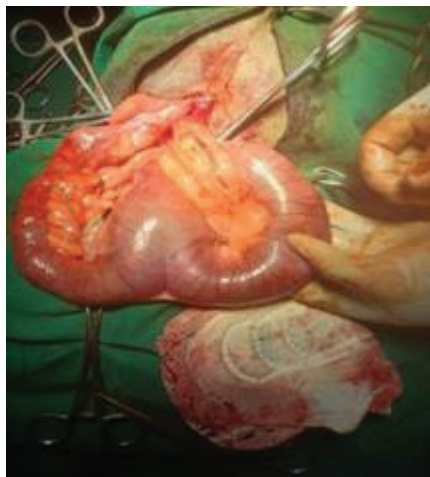


Fig 1: Large pus filled uterus after exteriorization



Fig 2: All the layers were sutured by catgut and nylon suture material (no.1)

CONCLUSION

This case could be concluded as successful surgical management of open cervix pyometra in a labrador bitch which was diagnosed on the basis of signs and symptoms. However, confirmatory diagnosis with ultrasonography is gold standard for canine pyometra.

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