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Successful surgical management of canine pyometra

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Abstract

A four-year-old non-descript bitch was presented with inappetence and purulent vaginal discharge since 5 days. Haematology and ultrasonography were performed and case was diagnosed as an open cervix pyometra. Medicinal treatment was given for a week due to severe thrombocytopenia and leucocytosis. On improvement of condition after a week, ovariohysterectomy was performed with uneventful recovery.

Keywords: Bitch, ovario-hysterectomy, pyometra

Introduction

Canine Pyometra is a common reproductive issue in unneutered or intact female dogs (Paudel *et al.*, 2023) ^[1], where the accumulation of pus within the uterine lumen, typically observed during or immediately following a period of progesterone dominance. Pyometra can be categorized as open cervix pyometra with vaginal discharge and closed cervix pyometra without vaginal discharge (Singh *et al.*, 2025) ^[2]. Closed cervix pyometra is more dangerous and needs early recognition, diagnosis and appropriate treatment to avoid any disastrous consequences i.e. death of patient due to septicemia and toxemia (Kumari *et al.*, 2010) ^[3]. The diagnosis of condition is best made with ultrasonography and radiology (Troxel *et al.*, 2002) ^[4]. Elevated WBC count, hyperproteinemia and hypoalbuminemia are common in affected bitches (Smith, 2006 ^[5]; Gupta *et al.*, 2013 ^[6]). Medicinal management is common in open pyometra (Xavier *et al.*, 2023) ^[7]; while, surgical management with ovariohysterectomy is the treatment of choice to vanish chances of reoccurrence (Wallace *et al.*, 2015) ^[8].

Case History and Observation

A four-year-old non-descript bitch was presented with inappetence and purulent vaginal discharge since 5 days. Bitch had pro-estral bleeding before a month. On the day of presentation animal was in lateral recumbency, distended abdomen, normal rectal temperature (100.6 °F) and pale conjunctival mucous membrane. Haematological examination revealed thrombocytopenia ($1.3 \times 10^5/\mu\text{l}$), leucocytosis (77800 cell/cumm) and neutrophilia (82%). Ultrasonography revealed multiple anechoic saccules with hyperechoic structure of septa in uterine lumen with fully filled urinary bladder. On the basis of history, clinical examination, haematological report and ultrasonography, the case was diagnosed as open cervix pyometra.

Treatment and Discussion

To stabilize the condition, Inj. Ringer lactate @300 ml, Inj. enrofloxacin @5 mg/kg, Inj. pantoprazole @1 mg/kg, Inj. N-acetyl cystine @70 mg/kg and Inj. vitamin B complex and Inj. vitamin C @2.5 ml was given intra venously along with Inj. ceftiofur sodium @2.2 mg/kg sub-cutaneously and Inj. isoflupredone @1 ml intra muscularly for seven days. Following treatment, the condition of animal was improved with decreased total leucocyte (45200 cell/cumm), elevated platelet count ($1.58 \times 10^5/\mu\text{l}$), improved appetite and alertness. Ovariohysterectomy was performed through ventral midline incision under general anaesthesia using Inj. diazepam @0.5 mg/kg and Inj. ketamine @5 mg/kg and huge size pus-filled uterus weighing around 2.700 kg was removed. Uterine ligation, muscle suture (simple interrupted

pattern) and sub-cutaneous suture (simple continuous pattern) was taken using absorbable suture material (Dectin # 1/0) and cutaneous wound was closed by horizontal mattress pattern using non-absorbable suture material (Declon # 1). Post-operative care was given as Tab. amoxicillin clavulanate potassium @12.5 mg/kg BID, Tab. meloxicam @0.2 mg/kg SID, Tab. pantoprazole @1 mg/kg BID and Tab. penetrat pet® @1 tablet SID orally for 5 post-operative days. Daily twice antiseptic dressing of suture line was done by 5% povidone iodine and cutaneous suture was removed on 12th post-operative day. Animal was uneventfully recovered post-operatively.

Incidence of canine pyometra is approximately 23% of unneutered and intact bitches (Paudel *et al.*, 2023) ^[1]. While, timely diagnosis and management of pyometra affected patients exhibit favourable prognosis, late diagnosis leads to septicemia and vital organ dysfunction, ultimately lead to poor prognosis (Venkatesh *et al.*, 2024) ^[9]. Surgical intervention remains the treatment of choice in canine pyometra (Fransson and Ragle, 2003) ^[10], followed by medicinal management. In present case study, the bitch was successfully recovered post-operatively.



Fig 1: Pus filled uterus

Conclusion

The present case highlights the importance of integrating clinical examination, haematological evaluation and ultrasonography for accurate diagnosis of open cervix pyometra. Although ovariectomy is the definitive treatment, pre-surgical stabilization through intensive medical management played a crucial role in improving the general condition of the patient as well as to minimize post-operative complications.

Conflict of Interest

Not available

Financial Support

Not available

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