Short Communication

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Surgical Management of Uterine Torsion in a Nulliparous Mongrel Bitch

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ABSTRACT

A two year old full term nulliparous mongrel bitch was presented with the history of impending parturition and presence of greenish, blood tinged vulval discharge observed since twenty four hours. Upon physical examination, animal was dull with evident signs of dehydration. Per vaginal examination revealed presence of foul-smelling greenish discharge and absence of any foetal parts in the birth canal. Hematology revealed anemia with regenerative shift to left. Further ultrasonography revealed non-viable, multiple foetal skeletons with less echogenicity. Following, emergency caesarean section, torsion was found in the uterine horn and four dead foetuses were removed and ovariohysterectomy was performed. Post operative care was given with antibiotics and analgesics, eventually animal showed uneventful recovery.

Keywords: Bitch, Nulliparous, Ovariohysterectomy, Uterine torsion

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INTRODUCTION

Uterine torsion in canines is a rare but potentially life-threatening condition that occurs when one or both uterine horns twist along their longitudinal axis and moreover, this condition is most often seen in late gestation, due to the increased weight and movement of the gravid uterus, but it can also occur in non pregnant females (Arunmozhi *et al*., 2014) Uterine torsion results in compromised blood flow, leading to ischemia and necrosis of the uterine tissue, which poses a significant risk to both the mother and fetuses (Kumru *et al.,* 2011). Clinical signs can vary widely, ranging from mild abdominal discomfort to severe shock and collapse. Diagnosis often requires imaging, such as ultrasound or radiography (Bhathra *et al.,* 2024), but confirmation is typically achieved during exploratory laparotomy (Chamber *et al.,* 2011). Prompt surgical intervention is crucial for a successful outcome, generally involving detorsion or more commonly ovariohysterectomy (Noakes *et al*., 2001). This case report discusses the successful surgical management of uterine torsion in a nulliparous mongrel bitch

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CASE HISTORY AND OBSERVATIONS

A two year old full term nulliparous mongrel bitch was presented with the history of impending parturition and presence of greenish, blood tinged vulval discharge observed since twenty four hours. Upon physical examination, bitch was dull and depressed with inappetence along with evident signs of dehydration. Clinical examination revealed congested mucus membrane along with pyrexia. Per vaginal examination revealed presence of foul-smelling greenish discharge and absence of any fetal parts in the birth canal. Hematology revealed anemia with regenerative shift to left. Further ultrasonography revealed non-viable, multiple foetal skeletons with less echogenicity.

TREATMENT AND DISCUSSION

Based on the history, clinical signs, and ultrasonographical examination, the case was diagnosed as dystocia. As the patient's condition began to deteriorate, an emergency cesarean section was performed. Preoperatively, the patient was premedicated with Atropine (0.04 mg/kg, S/C) and Xylazine (1mg/kg, I/M). General anesthesia was induced with intravenous Ketamine (5 mg/kg, IV) and Diazepam (0.25 mg/kg, I/V). A ventral midline incision was made just caudal to the point of umbilicus, followed by incising the linea alba. Then, the gravid ischemic uterus was exteriorized, with the right uterine horn appearing enlarged and rotated 180° counter clockwise and it was detorted. Further, four dead foetuses were taken out by making an incision on the dorsal surface of uterine horn followed by ovariohysterectomy.

Fig. 1: Torsion at the level of right ovary

The abdominal cavity was flushed with Metronidazole solution, and the surgical incision was closed layer-by-layer following standard procedures. Postoperatively, medical care was diligently provided, including antimicrobials (Ceftriaxone, 20mg/kg I/V) and analgesics (Tramadol, 2mg/kg S/C) for five consecutive days. Antiseptic dressing of the suture line was performed with povidone iodine. Sutures were removed on the 10th postoperative day. After two weeks, the patient showed an uneventful recovery, displaying activity, alertness, normal vital parameters, and normal blood parameters. When compared to cows and goats, dogs have an extremely low incidence of uterine torsion; the current case was only found out by exploratory laparotomy (Chambers *et al.,* 2011) Although the exact cause of this disorder is unknown, predisposing factors such as the lack of fetal fluid, excess fetal movements, violent uterine contractions, and hyperactive movement of the bitch towards the end of gestation (Jackson, 2004; Arunmozhi *et al*., 2014).The clinical signs in the present case are consistent with those described by Barrand (2009). Ovariohysterectomy with releasing uterine torsion is the treatment of choice to prevent complications associated with uterine torsion, such as sepsis, reperfusion injury, or the release of toxins into the systemic circulation (Jutkowitz, 2005).

CONCLUSION

Uterine torsion in dogs is a rare but potentially life-threatening condition that requires prompt diagnosis and intervention. Surgical intervention, often through ovariohysterectomy or detorsion procedures, is the most effective treatment, which was followed in this case. Further research is needed to better understand the underlying causes and risk factors associated with uterine torsion in dogs to improve prevention and management strategies**.**

CONFLICT OF INTEREST

None

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