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Surgical management of Parametritis in a bitch

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Abstract

Parametritis, an inflammatory condition around the uterus, challenges veterinary care, especially in puerperal infections in animals. This case study details a 5-year-old Labrador with post-whelping symptoms such as foul vaginal discharge, vomitions, loss of appetite, inactivity, fever, depression, and increased water consumption and urination, leading to an ovariohysterectomy revealing parametritis and necrosed broad ligament. Surgical intervention facilitated a successful recovery, emphasizing the need for timely diagnosis and treatment in canine parametritis.

Keywords: Parametritis, ovariohysterectomy and puerperal infections

Introduction

Parametritis is the inflammation of the loose connective tissue and smooth muscle around the uterus (The parametrium). The condition may be associated with puerperal infection. Despite the widespread use of antibiotics, puerperal infection, particularly prevalent in cattle, continue to perplex the veterinary community. This intricate interplay involving uterine manipulation, infiltration of septic material, and subsequent inflammatory responses within the connective tissue surrounding the uterus constitutes the complex pathogenesis of these infections. Suppurative parametritis, irrespective of its temporal association with the puerperium, may precipitate abscess formation not solely at the site of initial invasion but also in more secluded anatomical recesses, ostensibly originating from suppurative lymph glands. Subsequent stages of pelvic abscess development may witness perforations into the rectum, bladder, or other segments of the genital tract, often manifesting in the vaginal cavity, thereby precipitating the exudation of purulent discharges (Fenger, 1885) [2]. Janke *et al.* (1989) [3] discerning analysis establishes the perianal and genital regions as primary reservoirs for the notorious *E. coli* organism, acknowledged for its role in canine urinary tract infections. The ascent of *E. coli* bacteria from the vaginal milieu into the reproductive tract subsequent to urine voiding, thereby substantiating a plausible causative link to uterine abscess formation in canines (Khaliq *et al.* 2019) [4]. Additional putative causes encompass antecedent haematocele of the uterus with secondary infection due to pelvic cellulitis, among other conceivable factors.

Case History

A 5-year-old female Labrador dog which was whelped one-month back was presented to State Institute of Animal Health, Tanuku with history foul vaginal discharge, vomitions, loss of appetite, inactivity, fever, depression, and increased water consumption and urination. Physical examination revealed distended abdomen and vaginal discharges are noticed. Clinical examination of bitch revealed high rise in body temperature (104 °F), moderate dehydration, congested oral mucus membrane, dyspnoea, rapid and shallow respiration. Inspection of the dog revealed passing of reddish bloody discharge from vagina. There was mild uterine enlargement on abdominal palpation. Lateral abdominal radiography revealed thickened indistinct uterine border, thickening of the uterosacral ligaments, pelvic fat stranding or haziness. Further the dog was subjected to complete blood count examination which revealed leucocytosis and neutrophilia with shift to left.

Treatment

The bitch was prepared with routine operation procedures, premedicated with atropine (0.04 mg/ kg body weight) and anesthetised with Xylazine (2 mg/kg body weight) and ketamine (10–20 mg/kg body weight) intramuscularly and maintained with ketamine and Diazepam combination. Ovariohysterectomy was performed with midline incision, which revealed an slightly enlarged uterus with necrosed broad ligament due to parametritis (Fig: 1). Following the removal uterus along with necrosed broad ligament and ovaries (Fig: 2), the abdominal wall was closed using simple interrupted sutures with PGA NO 1. Finally, the skin was sutured using simple interrupted sutures with Silk. The wound is then disinfected with antiseptic solution and protected with a few swabs and an adhesive dressing. Animal was fed with moist food for at least three days, daily parenteral antibiotics administered and sutures were removed on the 10th postoperative day. No serious postoperative problems were observed in either anesthetic recovery or wound healing.



Fig 1: Radiograph showing indistinct uterine border and pelvic fat haziness

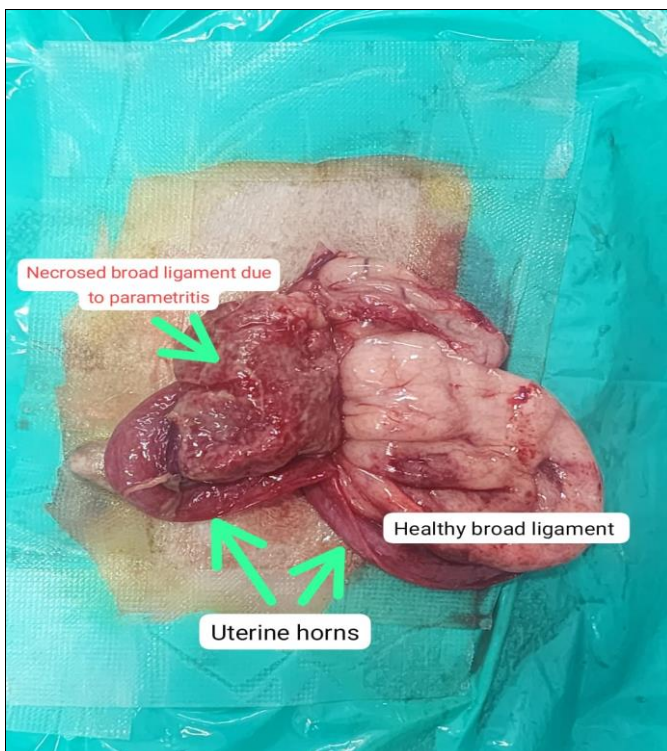


Fig 2: Photograph showing uterus along with inflamed and necrosed broad ligament



Fig 3: Photograph showing surgically excised uterus along with broad ligament

Discussions

Puerperal infections, colloquially known as postpartum infections, represent a bacterial invasion of the uterus and surrounding areas subsequent to birth, encompassing endometritis, myometritis, and parametritis (Ross, 2013) [5]. These infections often manifest with postpartum fever and uterine tenderness, and while most cases respond well to antibiotic therapy, severe complications such as peritonitis, intra-abdominal abscesses, and sepsis may ensue if the infection extends to the peritoneal cavity. Uncommon complications include necrotizing myometritis, necrotizing fasciitis of the abdominal wall, septic pelvic thrombophlebitis, and toxic shock syndrome (Ross *et al.*, 2017) [4]. Prophylactic antibiotics have proven effective in diminishing the incidence of postpartum endometritis, with a notable higher risk observed in Caesarean section deliveries compared to normal deliveries (Dass *et al.*, 2016) [1]. In dogs, postpartum infections can lead to complications analogous to human pelvic inflammatory disease (PID). Similar principles apply, with sexually transmitted or asymptomatic infections causing ascending microorganisms to the upper genital tract. This can result in inflammation of the fallopian tubes and surrounding structures, mirroring the complexities of PID in humans. The occurrence of canine PID is influenced by factors such as hormonal changes, antibiotic treatments, and the role of intercourse in a manner reminiscent of human reproductive health. Recognizing clinical signs is pivotal in both human and canine contexts. Lower abdominal tenderness, abnormal discharge, and fever serve as crucial indicators requiring prompt intervention. The parallels between these two realms underscore the need for a comprehensive understanding and tailored care approaches in both human and canine reproductive health.

Conclusion

In conclusion, puerperal infections and their canine counterparts exemplify the intricate interplay between bacterial invasion, clinical manifestations, and therapeutic responses. The shared nuances emphasize the importance of holistic healthcare strategies and a nuanced understanding of these conditions, ultimately contributing to enhanced outcomes for individuals and their furry companions alike.

References

1. Das BB, Ronda J, Trent M. Pelvic inflammatory disease: Improving awareness, prevention and treatment. *Infection and Drug Resistance*. 2016;9:191-7.
2. Fenger C. *Annals of Surgery*. 1885;1(5):393-423.
3. Janke BH, Francis DH, Collins JE, Libal MC, Zeman DH, Johnson DD. Attaching and effacing *Escherichia coli* infections in calves, pigs, lambs, and dogs. *Journal of Veterinary Diagnostic Investigation*. 1989;1:6-11.
4. Khaliq K, Nama N, Mahdy H, Waheed A. Pelvic Abscess In Stat Pearls [Internet]. StatPearls Publishing; c2019.
5. Ross J, Guaschino S, Cusini M. European guideline for the management of pelvic inflammatory disease. *International Journal of Sexually Transmitted Diseases*. 2018;29(2):108-114.
6. Ross J. Pelvic inflammatory disease. *BMJ Clinical Evidence*. 2013;2013:1606.