CASE REPORT

Clinical Management of Endometritis in a Mare: A Case Report

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Equine endometritis is an inflammatory condition of the uterus mainly caused by contamination of the uterine lumen with microorganisms, debris, or abnormal substances, which may originate from pathogenic bacteria, reproductive tract defects (such as pneumovagina and urovagina), poor perineal conformation, or unhygienic management practices during breeding and parturition (LeBlanc, 2010; Brinsko, 2011; Christoffersen and Troedsson, 2017). It is a complex disorder involving both physiological and pathological responses; normally, mares develop a transient inflammatory reaction after breeding (acute post-breeding endometritis) that clears contaminants within 24-48 h, creating a favourable environment for embryo survival (Morris *et al.,* 2020). However, failure of this clearance mechanism leads to persistent forms such as persistent post-mating endometritis or chronic infectious endometritis, which impair fertility and increase embryonic loss (Malschitzky *et al.,* 2003; Brinsko, 2011). Since the embryo enters the uterus around 6-7 days post-ovulation, timely resolution of inflammation is essential, as prolonged inflammation characterized by uterine fluid accumulation and cytokine activity reduces embryo viability (Robertson *et al.,* 2018). Diagnosis of endometritis in mares is commonly achieved through ultrasonography, uterine cytology, microbial culture and in some cases, endometrial biopsy. Therapeutic management typically involves uterine lavage, administration of appropriate antimicrobial agents, use of ecbolic drugs to enhance uterine clearance and correction of predisposing anatomical defects, such as performing Caslick's surgery (Samper, 2009; Dascanio and McCue, 2014). Overall, effective management depends on early diagnosis, proper hygiene and targeted therapeutic strategies to improve reproductive efficiency in mares (LeBlanc, 2010; Scoggin, 2016). This document reports on the successful clinical management of endometritis in a mare.

Case History and Observations

A 7-year-old Marwari mare was presented with a history of repeated breeding and whitish vaginal discharge for the past 10 days, along with estrus observed 4 days earlier, indicating reproductive inefficiency. On clinical examination, the mare was alert with a body temperature of 102.2 °F and normal pink conjunctival mucous membranes, while vaginal examination revealed a mildly edematous vulva with mucopurulent discharge. Transrectal ultrasonographic examination using a 7.5 MHz probe revealed hypoechoic area with anechoic uterine fluid accumulation (~53 mm) (Fig. 1) with a speckled appearance, suggestive of inflammatory exudate, along with a small follicle in the right ovary and functionally active corpus luteum on the left ovary. For confirmatory diagnosis, an endometrial sample was collected using a cytobrush technique. Cytological evaluation revealed a presence of inflammatory cells, along with Gram-negative rod-shaped bacteria, indicative of uterine infection (Fig. 2). Subsequent bacterial culture and antimicrobial sensitivity testing confirmed a Gram-negative isolates showing sensitivity to gentamicin, amikacin and amoxicillin (Fig. 3). Based on the clinical history, presenting signs, ultrasonographic findings, cytological evidence and sensitivity results, a definitive diagnosis of infectious endometritis was confirmed.

Treatment and Discussion

The treatment regimen included the parenteral administration of 6 g of amoxicillin and sulbactam with normal saline intravenously for three consecutive days. Additionally, 200 mL of normal saline with 20 mL of gentamicin was administered intrauterine, and 2 mL of synthetic prostaglandin Cloprostenol @ 500 µg/mL and 20

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Fig. 1: Transrectal ultrasonography of mare's uterus showing 53 mm of anechoic fluid accumulation in the uterine lumen

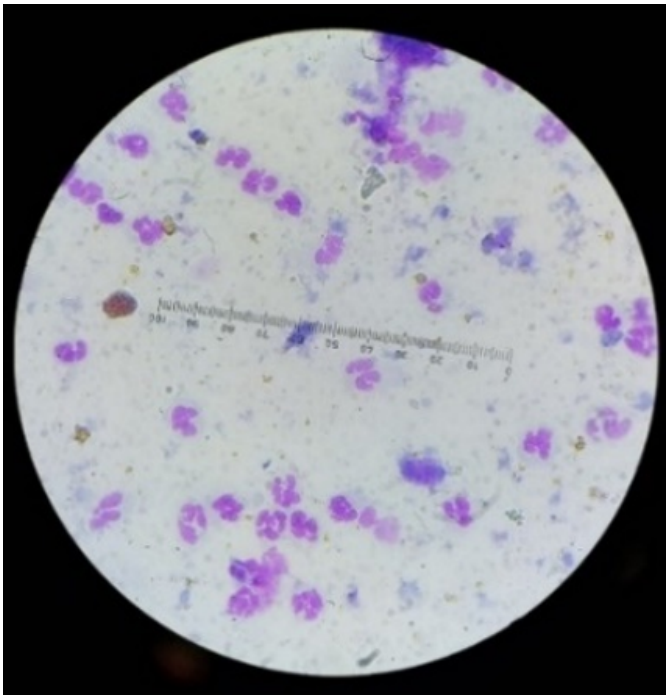


Fig. 2: The endometrial cytology marked with neutrophilic infiltration

IU oxytocin were given intramuscularly to promote uterine contractions. Subsequent endometrial cytology on day 16 post-treatment showed very few to none neutrophils (Fig. 4). and ultrasonographic examination showed a clear uterus with no discharge and uterus showing pronounced uterine edema score 3 (Fig. 5) as well as 32.1 mm oval-shaped dominant follicle in the right ovary (Fig. 6). The mare successfully bred and pregnancy checkup at 20 days post-breeding was positive (Fig. 7).

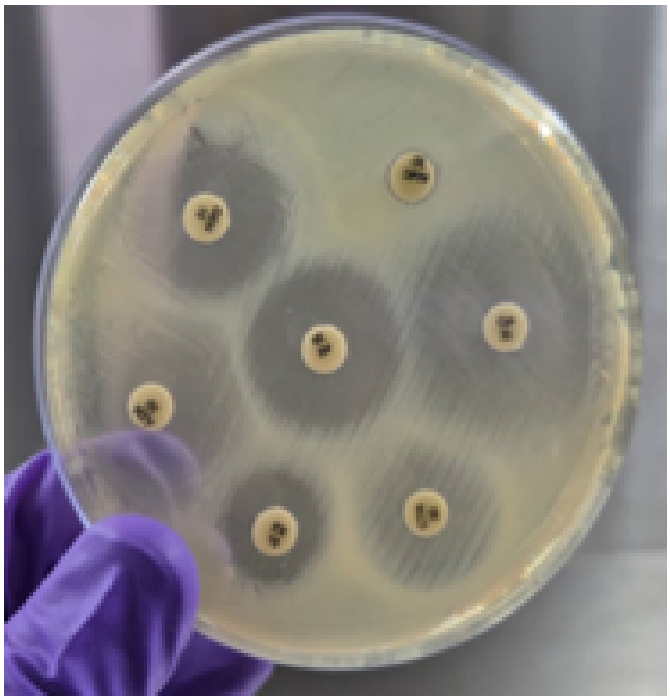


Fig. 3: Antimicrobial sensitivity tests

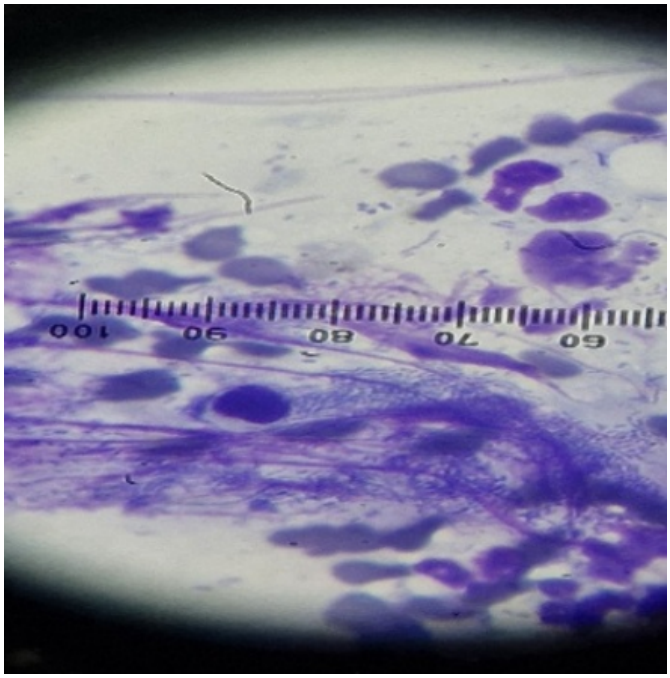


Fig. 4: Post-treatment endometrial cytology with less to none neutrophilic infiltration



Fig. 5: Post treatment ultrasonographic image of the mare uterus with pronounced uterine edema (score 3) (cart wheel pattern).



Fig. 6: Post-treatment ultrasonographic image with a 32.1 mm oval-shaped dominant follicle during the estrous cycle

The infectious endometritis in a mare is generally managed using a combination of hormonal therapy, antimicrobial treatment systemic and locally and uterine lavage to enhance uterine clearance and control infection



Fig. 7: Ultrasound image of a 20-day equine conceptus showing the embryonic vesicle with an echogenic embryonic mass located at the ventral aspect of the vesicle, orientation type.

(Dascanio and McCue, 2014). The inj. prostaglandin (cloprostenol) is used to induce luteolysis and stimulate uterine contractions, along with Oxytocin to promote myometrial activity and facilitate expulsion of inflammatory exudate (Assad and Pandey, 2012). In the present case, additional systemic antimicrobial therapy was administered and intrauterine lavage was performed using warm normal saline combined with Gentamicin, based on antimicrobial sensitivity results, to eliminate pathogenic organisms from the uterine lumen as recommended by LeBlanc (2010). The use of ecbolic agents along with uterine douching plays a crucial role in improving uterine clearance, particularly in mares with fluid accumulation and impaired uterine defense mechanisms (Troedsson, 1999).

Infectious endometritis in mares is a multifactorial condition that arises due to the interaction between post-breeding inflammatory responses and opportunistic microbial invasion (Christoffersen *et al.,* 2012). Although the physiological inflammatory response after breeding is essential for clearing contaminants, its persistence may predispose mares to infection and reduce fertility (Canisso *et al.,* 2020). Timely therapeutic intervention based on cytology and antibiotics sensitivity findings significantly improves treatment success and prevents chronicity of infection (Skive *et al.,* 2017). Diagnosis of endometritis can be challenging due to the ability of

pathogens to establish latent infections deep within endometrial glands or intracellular compartments, making routine detection difficult (LeBlanc and Causey, 2009). Therefore, a comprehensive diagnostic approach including ultrasonography, cytology and bacteriological examination is essential for accurate diagnosis and effective management (Samper, 2009).

This case demonstrates that early diagnosis and a comprehensive therapeutic approach involving ultrasonography, cytology, antimicrobial sensitivity testing, uterine lavage and hormonal therapy are essential for the successful management of infectious endometritis in mares. Timely and targeted treatment not only ensures effective uterine clearance and recovery but also improves reproductive efficiency and future fertility, emphasizing the importance of proper reproductive management practices.

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References

Assad, N. I., & Pandey, A. K. (2012). Endometritis in mares due to coliform and its successful treatment. *The Indian Journal of Animal Reproduction, 33*(2), 76–78.

Brinsko, S. (2011). Endometritis and surgery of the mare reproductive tract. In *Manual of equine reproduction* (3rd ed., pp. 74–84, 228–241). Mosby Elsevier.

Canisso, I. F., Segabinazzi, L. G. T. M., & Fedorka, C. E. (2020). Persistent breeding-induced endometritis in mares—A multifaceted challenge: From clinical aspects to immune-pathogenesis and pathobiology. *International Journal of Molecular Sciences, 21*(4), 1432.

Christoffersen, M., & Troedsson, M. H. T. (2017). Inflammation and fertility in the mare. *Reproduction in Domestic Animals, 52*, 14–20.

Christoffersen, M., Troedsson, M. H. T., Woodward, E. M., Jensen, L. H., Bojesen, A. M., & Squires, E. L. (2012). Effect of immunomodulatory therapy on the endometrial inflammatory response to induced infectious endometritis in susceptible mares. *Theriogenology, 78*(5), 991–1004.

Dascanio, J. J., & McCue, P. M. (2014). Hormone therapy in cycling mares. In *Equine reproductive procedures* (pp. 151–153). Wiley-Blackwell.

LeBlanc, M. M. (2010). Advances in the diagnosis and treatment of chronic infectious and post mating-induced endometritis in the mare. *Reproduction in Domestic Animals, 45*(Suppl. 2), 21–27.

LeBlanc, M. M., & Causey, R. C. (2009). Clinical and subclinical endometritis in the mare: Both threats to fertility. *Reproduction in Domestic Animals, 44*(Suppl. 3), 10–22.

Malschitzky, E., Schilela, A., Mattos, A. L. G., Garbade, P., Gregory, R. M., & Mattos, R. C. (2003). Intrauterine fluid accumulation during foal heat increases embryonic death. *Pferdeheilkunde, 19*, 246–249.

Morris, L. H. A., McCue, P. M., & Aurich, C. (2020). Equine endometritis: A review of challenges and new approaches. *Reproduction, 160*(3), R95–R110.

Robertson, S. A., Chin, P. Y., Femia, J. G., & Brown, H. M. (2018). Embryotoxic cytokines: Potential roles in embryo loss and fetal programming. *Journal of Reproductive Immunology, 125*, 80–88.

Samper, J. C. (2009). Hormone therapy in the mare. In *Equine breeding management and artificial insemination* (2nd ed., pp. 89–97). Elsevier.

Scoggin, C. F. (2016). Endometritis: Nontraditional therapies. *Veterinary Clinics of North America: Equine Practice, 32*(3), 499–511.

Skive, B., Rohde, M., Molinari, G., Braunstein, T. H., & Bojesen, A. M. (2017). *Streptococcus equi* subsp. *zooepidemicus* invades and survives in epithelial cells. *Frontiers in Cellular and Infection Microbiology, 7*, Article 465. https://doi.org/10.3389/fcimb.2017.00465

Troedsson, M. H. T. (1999). Uterine clearance and resistance to persistent endometritis in the mare. *Theriogenology, 52*(3), 461–471.