PYOMETRA IN SMALL ANIMALS

Pooja Joshi, applicant for higher education under the program "Veterinary Medicine"
Supervisor – **Peter Zaika**, Candidate of Veterinary Sciences, Docent
State Biotechnological University, Kharkiv, Ukraine

Introduction: "Pyometra" is derived from Latin "pyo" meaning pus and "metra" meaning uterus. Pyometra is a life-threatening condition that primarily affects unspayed female dogs and cats. It is characterized by the accumulation of pus within the uterus, often resulting from hormonal changes associated with the estrous cycle. Pyometra could be of two types i.e. open and closed. Open pyometra is characterised by a typical purulent/foul smelling discharge from vulva. Whereas, closed pyometra progresses quickly and is more severe because, the infectious discharge accumulates within the uterus with no escape. Pyometra requires prompt diagnosis and treatment to prevent serious complications and mortality.

Classification:

o Clinical endometritis: When the uterine discharge is thrown by the animal, is mucopurulent, it is called clinical endometritis.

o Subclinical endometritis: When the uterine discharge is thrown by the animal is almost clear, but give positive reaction to white side test, this condition is called subclinical endometritis.

Causes:

The primary cause of pyometra is hormonal changes that occur during the estrous cycle. But factors like prolonged estrous cycle in older females, failed mating/AI are also considered. It develops during the luteal phase of the estrous cycle when the progesterone concentration is high. Following estrous, the uterus becomes receptive to bacterial infection. Bacteria, usually Escherichia coli, enter the uterus through the cervix, leading to infection and the accumulation of pus. Additionally, factors such as age, breed can predispose animals to pyometra.

Symptoms:

o Vaginal discharge: Typically, a thick, pus-like discharge.

o Lethargy and weakness: Affected animals may appear depressed and unwilling to participate in normal activities.

o Anorexia: Loss of appetite is common in animals with pyometra.

o Increased thirst and urination: Some animals may drink and urinate more frequently than usual.

o Enlarged abdomen: The accumulation of pus may cause the abdomen to become distended.

o Vomiting: Nausea and vomiting can occur, particularly in severe cases.

Diagnosis: Diagnosing pyometra often involves a combination of physical examination, blood tests, imaging studies, and possibly uterine cytology. Veterinarians may perform blood tests to assess organ function and white blood cell counts. Imaging techniques such as ultrasound or radiography may reveal an enlarged uterus filled with fluid. Uterine cytology, obtained through a uterine flush or aspiration, can help identify the presence of pus and bacteria within the uterus.

Treatment: Treatment for pyometra typically involves surgical removal of the infected uterus, known as an ovariohysterectomy (spay). This procedure not only removes the source of infection but also prevents recurrence and reduces the risk of developing other reproductive tract disorders. In cases where surgery is not immediately feasible, medical management with antibiotics and supportive care may be attempted, although it is associated with a higher risk of complications and recurrence.

Prognosis: The prognosis for animals with pyometra depends on various factors, including the severity of the condition, the presence of concurrent diseases, and the promptness of treatment. Early detection and intervention generally result in a more favourable outcome. However, untreated pyometra can lead to systemic illness, septic shock, and death.

Conclusion: Pyometra is a serious condition that requires prompt recognition and treatment. Pet owners should be aware of the potential signs of pyometra and seek veterinary care if their pet exhibits any symptoms. Spaying female dogs and cats not intended for breeding is the most effective means of preventing pyometra and other reproductive disorders. By prioritizing preventive measures and early intervention, veterinarians and pet owners can help ensure the health and well-being of small animals at risk of pyometra.

Post-surgical care:

1.   Pain Management:
• Following prescribed pain medication as directed by the veterinarian to keep the animal comfortable during the recovery period.
• Monitor for signs of pain, such as restlessness, vocalization, or difficulty to move.

2. Activity Restriction:
• Restrict the animal's activity level to prevent excessive movement, jumping, or running, which could disrupt the surgical incision and delay healing.
• Provide a quiet, comfortable environment for rest and recovery.

3. Wound care:
• Monitor the surgical incision for any signs of inflammation, discharge, swelling.
• Keep the site clean and dry.
• Avoid bathing.
• Instructions regarding the wound care, such as applying topical medications or changing the dressing should be followed.

4. Diet and hydration:
• Offer small, frequent meals of easily digestible diet as suggested by veterinarian.
• Ensure access to fresh water to prevent dehydration.

5. Monitoring and precaution:
• Keep an eye on the animal for any sign of post-operative complications, such as infection, excessive bleeding or any sign of discomfort.
• An E-collar/Elizabethan collar to prevent the animal from licking or chewing at the incision site.

References:
1.   Weishaupt, Jeffrey (2021). What Is Pyometra in Dogs? https://www.webmd.com/pets/dogs/what-is-pyometra-in-dogs.
2.   Baker, Lauren (2023). How to prevent pyometra in dogs. https://www.wikihow.com/Prevent-Pyometra-in-Dogs.
3.   Livnjak Amela, Hadžimusić Nejra, Velić Lejla, Cengic Benjamin & Hadzijunuzovic-Alagic, Dzenita (2024). Some Acute Phase Proteins and Biochemistry Parameters of Female Dogs Affected with Pyometra. Annual Research & Review in Biology, 39(4), 41-47. DOI:10.9734/arrb/2024/v39i42073.
4.   Beers, Hannah (2017). Pyometra is a veterinary emergency. https://vetmed.illinois.edu/pet-health-columns/pyometra-infection-dogs-uterus/