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Pyometra Complex

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BASIC INFORMATION

Description

Pyometra is a term used to describe a pus-filled uterus. It occurs more often in dogs than in cats. The severity of this disease is influenced by whether the cervix is open (and draining pus) or closed. Most affected dogs and cats are 6 years of age or older and still have both their ovaries and uterus. Sometimes, spayed animals can get an infection of the remnant of the uterus that is left behind in the abdomen near the cervix; this is called a *stump pyometra*. Stump pyometra is more likely to occur if ovarian tissue was left behind during the original spay surgery and continues to produce hormones.

Causes

The hormone, progesterone, normally causes the lining of the uterus to produce a fluid-like secretion. When the uterus is idle for a long time, such as between the periods of heat (estrus), this fluid may accumulate and the lining of the uterus may become thickened. If inflammation and bacterial contamination occur, the secretions become infected. If the cervix is closed and the infected material cannot drain to the outside, the uterus may become very distended, and the infection can spread to other parts of the body, causing the animal to be seriously ill.

Dogs given estrogen treatments can also develop pyometra within 1-10 weeks after administration.

Clinical Signs

Signs in cats are usually seen within 4 weeks after the last heat cycle. In dogs, they often occur about 8 weeks after the last heat cycle. Because the infection can affect many other organs, the signs can vary:

- Many animals are very ill and often (but not always) have some vaginal discharge.
- Many dogs have decreased appetite, lethargy, increased thirst and urination, depression, vomiting, and diarrhea.
- Signs in cats are often not as obvious; depression and decreased appetite may be the only signs seen until the disease becomes advanced.
- When vaginal discharge does not occur, the diagnosis is more of a challenge.
- Most animals have a fever, but body temperature in some animals may be normal or even below normal.

Diagnostic Tests

It is helpful to know when the animal's last heat cycle occurred. Some animals have obvious uterine enlargement when the abdomen

is palpated (felt by the veterinarian); however, this may be difficult to determine in obese animals.

Because pyometra affects other organs, laboratory tests are often recommended to look for evidence of infection, kidney disease, liver changes, and sometimes anemia. The white blood count is usually greatly elevated. X-rays of the abdomen often show tubular, fluid-filled structures in the area of the uterus. The uterus can have a similar appearance during early pregnancy, and occasionally x-rays are inconclusive, so an ultrasound may be recommended to determine uterine location, thickness, and size and the presence of fluid. Bacterial culture of the uterine fluid may be recommended, especially at the time of surgery.

TREATMENT AND FOLLOW UP

Treatment Options

The treatment of choice is surgery to remove the uterus and the ovaries (ovariohysterectomy). Most animals require hospitalization with aggressive fluid therapy and antibiotics prior to surgery. In rare instances, the uterus ruptures prior to surgery, causing the animal to become very ill. These animals may require emergency surgery followed by intensive care. If the animal has already been spayed, the remaining stump of the uterus and any ovarian remnants left behind from the original spay surgery must be removed.

If the owner wishes to use the animal for future breeding, medical therapy may be considered. Medical therapy using a prostaglandin drug (*Lutalyse*) is limited to those animals that have an open cervix and are not critically ill. However, owners must be aware of the potential risks to the animal if surgery is delayed. If prostaglandin drugs are used when the cervix is closed, the uterus may rupture, with release of its contents into the abdomen. Medical treatment may allow some animals to be successfully bred during the following heat period.

Follow-up Care

Antibiotics are usually given, and laboratory tests may be repeated until the results return to normal. Animals treated medically are monitored for side effects of the drug, such as restlessness, vomiting, drooling, abdominal cramping, and repeated defecation. Repeated x-rays and ultrasounds may be needed to monitor uterine size.

Prognosis

The rate of recurrence of pyometra after medical therapy is 10-77% within 27 months. Animals surviving surgical correction of the problem have an excellent prognosis.