What's Your Diagnosis?

Signalment: Maine Coone (8 month old, female intact)

Presenting complaint: Lethargy, inappetence, serosanguinous vaginal discharge

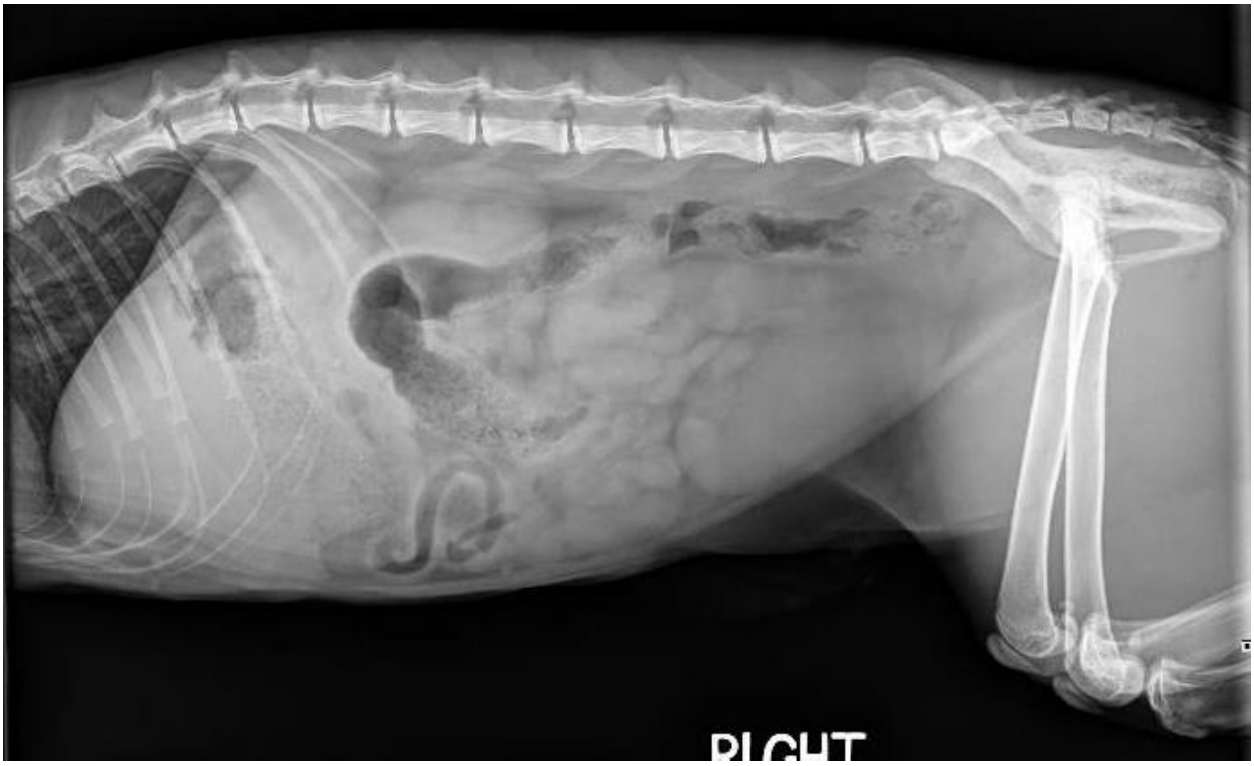
History: Lives with 11 other Maine Coone cats (males and females housed separately). Month-long history of lethargy and decreased appetite. 4 days ago bloody vaginal discharge began. Owners report a heat cycle in the past, but do not recall how long ago. Owners intend to use the cat for breeding.

Physical exam: Bright, alert, responsive. Body Condition Score 3/9. Mild muscle atrophy in the pelvic limbs. Small amount of blood noted in the hair on the base of the tail. Urinary bladder was full on abdominal palpation. Normal heart and lung sounds. TPR within normal limits. No peripheral lymphadenopathy

Diagnostic plan: CBC/Chemistry, abdominal radiographs and ultrasound

Blood work: Mild anemia (PCV=33, ref. 35-50). Hyperphosphatemia (7.2 mg/dl, ref. 2.6-5.3).

Radiographs:


RIGHT

LEFT

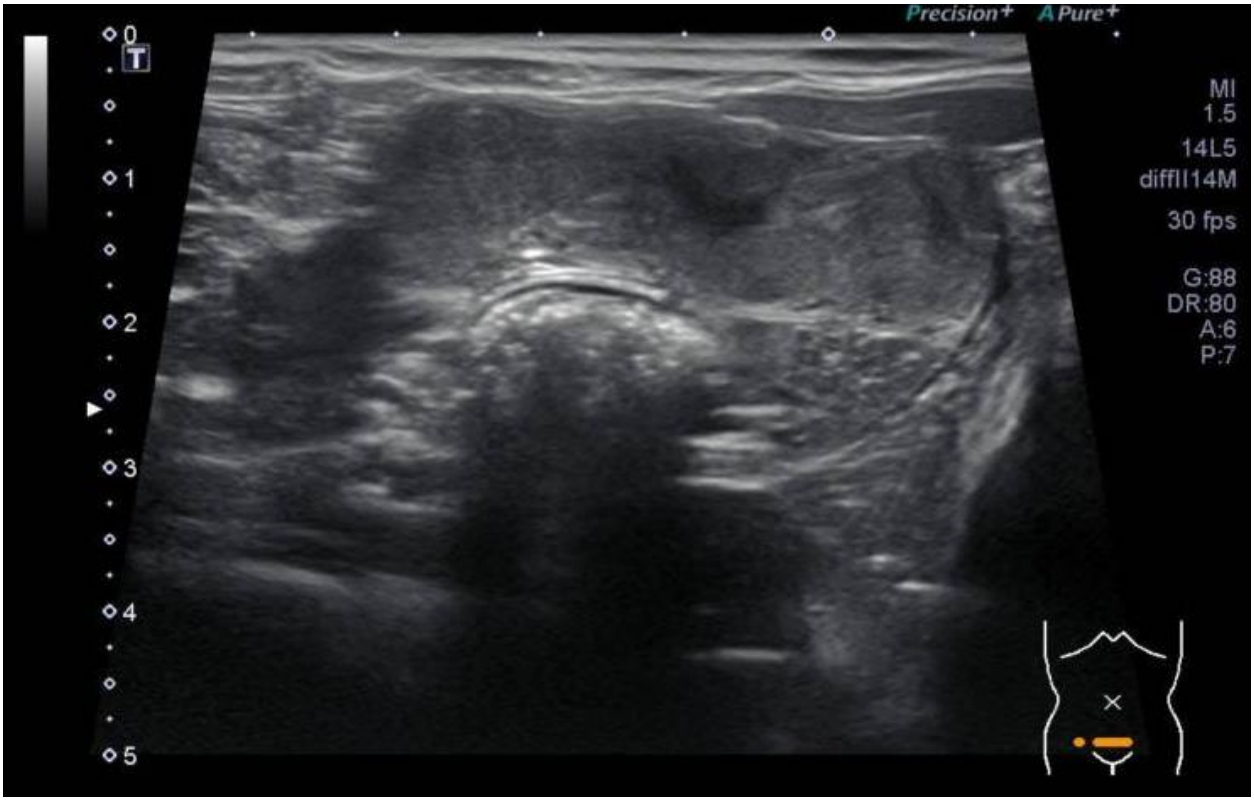
Radiographic interpretations:

There is a large soft tissue tubular structure extending from the caudal abdomen up to the mid abdomen. The tubular structure is dorsal to the bladder and ventral to the colon (consistent with location of the uterus). The colon is dorsally displaced by the abnormal tubular structure. The small intestines are cranially and ventrally displaced. The splenic tail is visualized on the lateral view and the splenic head is mildly enlarged. There is a bilobed to ovoid soft tissue opacity in the inguinal region in an area consistent with the inguinal lymph nodes.

Radiographic Impressions:

Uterine enlargement has differentials of metritis, pyometra, mucometra, hydrometra, and less likely endometrial hyperplasia or neoplasia (lymphoma).
Splenomegaly has differentials of reactive splenitis or neoplasia.
Inguinal lymphadenopathy has differentials of reactive or neoplastic.

Ultrasound:



Ultrasound interpretations:

There is a trace amount of anechoic peritoneal effusion between liver lobes. The spleen is mildly enlarged with normal echogenicity and sharp margins. The mucosal layer of the uterine body and both uterine horns are markedly thickened with irregular mucosal margins. The endometrium is mildly heterogeneously hypoechoic with a mild amount of echogenic luminal material. Ovaries are within normal limits. Jejunal and medial iliac lymph nodes are enlarged with uniform echogenicity.

Ultrasound impressions:

Diffuse, severe metropathy has differentials of metritis, hyperplasia, or neoplasia (lymphoma). Mild luminal fluid has differentials of mucometra, hydrometra, or pyometra. Lymphadenopathy is reactive or metastatic. Trace abdominal effusion has differentials for modified transudate, transudate, or exudate.

Discussion:

Pyometra is a common clinical condition of intact female dogs and cats. One retrospective study found that anorexia, lethargy, and vaginal discharge were the most consistent clinical signs among afflicted cats. The disease usually develops several weeks to months after the patient was last in heat as progesterone production is highest during this time, which plays an important role in the pathogenesis of the disease.

The above radiographs showing marked uterine enlargement are classic and consistent with pyometra, however, without sampling the uterine fluid it is impossible to characterize the effusion, so mucometra and hydrometra cannot be ruled out.

The ultrasound findings in this case were unusual as marked mural thickening is not commonly associated with pyometra. Due to these findings, infiltrative disease of either neoplastic or inflammatory nature was added to the list of differentials.

While the most definitive treatment is ovariohysterectomy, medical management can be successful especially in young, otherwise healthy cats with open pyometra. A number of protocols have been developed and tested to manage these cases using antibiotics with prostaglandin F2α analogs or progesterone receptor blockers. Cases of closed pyometra should always be dealt with surgically.

Case follow-up:

Patient was discharged with pyometra and metritis as the primary differentials. She was prescribed Clavamox and Lutalyse. Ovariohysterectomy was discussed with the owners as the definitive treatment for resolving the uterine pathology. Owners opted for medical treatment with hopes to breed her in the future. It was recommended that the owners consult with a theriogenologist in the case that the patient's condition did not resolve with medical treatment.

Reference:

Hagman, Ragnvi. *Pyometra in Small Animals.* Veterinary Clinics of North America: Small Animal Practice. Volume 48, Issue 4, July 2018, Pages 639-661