IMAGING PERFORMED BY

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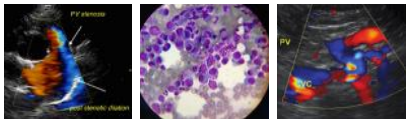

SonoPath
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DATE

2/24/23

PATIENT

Oliver Ring

SPECIES

Canine

BREED

Chihuahua

SEX

Neutered Male

AGE

2/1/17

WEIGHT

16 Pounds

INTERPRETED BY

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

HOSPITAL NAME

Homeward Bound

REFERRING VET

Dr. Sorum

INVOICE

21246

PRESENTING CLINICAL SIGNS

History: One week history of decreased appetite. Rads show abdominal effusion and enlarged liver. Bloodwork - nonregenerative anemia, increased pancreatic and liver values, GGT 16, lymphocytosis. Has had diarrhea (fecal pending). Still not interested in eating, abdominal effusion has improved.

Current Medications: Metronidazole, Cerenia, Convenia, SQ fluids
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Declined by Dr. Sorum at this time.
Imaging Performed By: Stephanie Warga RDCS, RVT.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is mildly distended with anechoic urine, measuring 0.38 cm. The bladder wall is diffusely mildly thickened, and the mucosa is mildly irregular. The trigone, ureteral papillae, and visible urethra (to a depth of 2.0 cm) appear normal with no evidence of severe mucosal irregularities, masses or cystic calculi. Findings are most consistent with bacterial cystitis or lack of urine distension. Recommend urinalysis and culture.

The prostate is normal in size (0.88 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (4.78 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal. Pinpoint nonobstructive nephroliths are noted.

The right kidney has a normal shape and size (4.33 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal. Pinpoint nonobstructive nephroliths are noted.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.64 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.53 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is subjectively large in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. A mixed echogenicity hypoechoic irregular mass effect is visualized adjacent to the gallbladder, measuring approximately 4.14 cm x 3.98 cm.

The gall bladder is prominent and distended with echogenic debris. The gallbladder wall appears mildly thickened at 0.38 cm. The bile duct is not visible.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7 cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. The duodenum measured as normal (between 0.3-0.5 cm in wall thickness) and the jejunum measured as normal (0.27 cm) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

There is a large amount of very echogenic free fluid noted. No lymphadenopathy is noted, but the omentum is severely, diffusely hyperechoic and inflamed.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Large heterogenous liver with ill-defined mixed echogenicity mass lesion adjacent to the gallbladder-
  The nature of this lesion is unclear and the association with the gallbladder is uncertain. Consider a fine needle aspirate.

- Large, distended gallbladder with thickened wall- While no obstruction is visualized, the gallbladder appears somewhat irregular, overdistended and inflamed.

- Large volume echogenic free fluid and hyperechoic mesentery- Findings are most consistent with diffuse peritonitis (septic or sterile). Recommend fluid analysis, cytology +/- aerobic and anaerobic cultures.

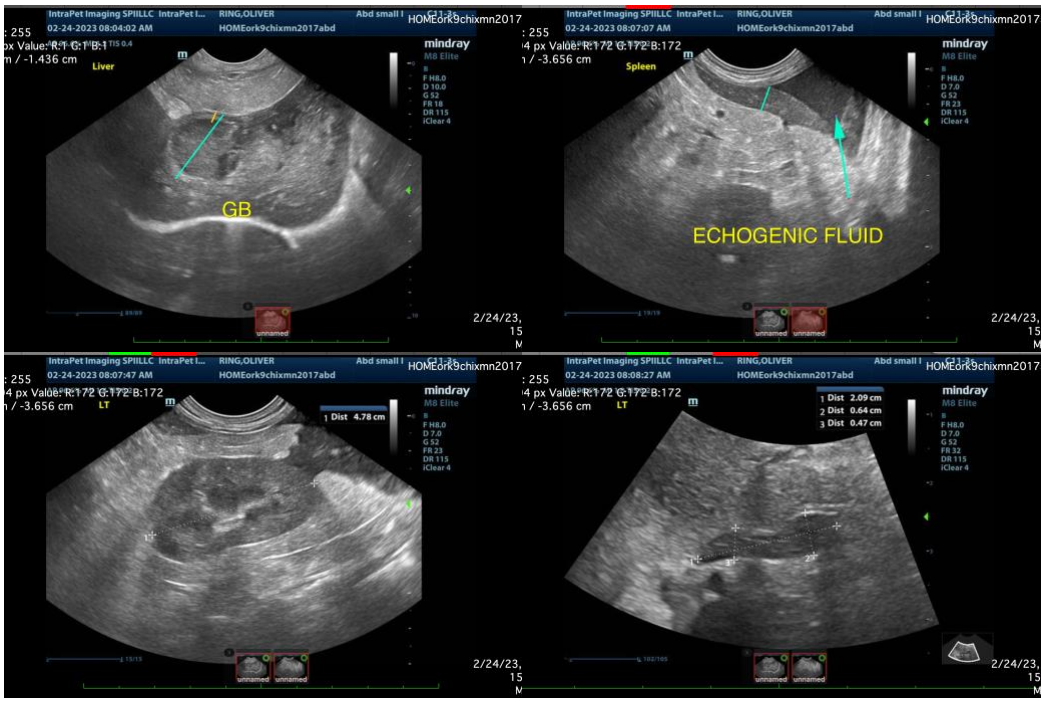
Secondary Findings

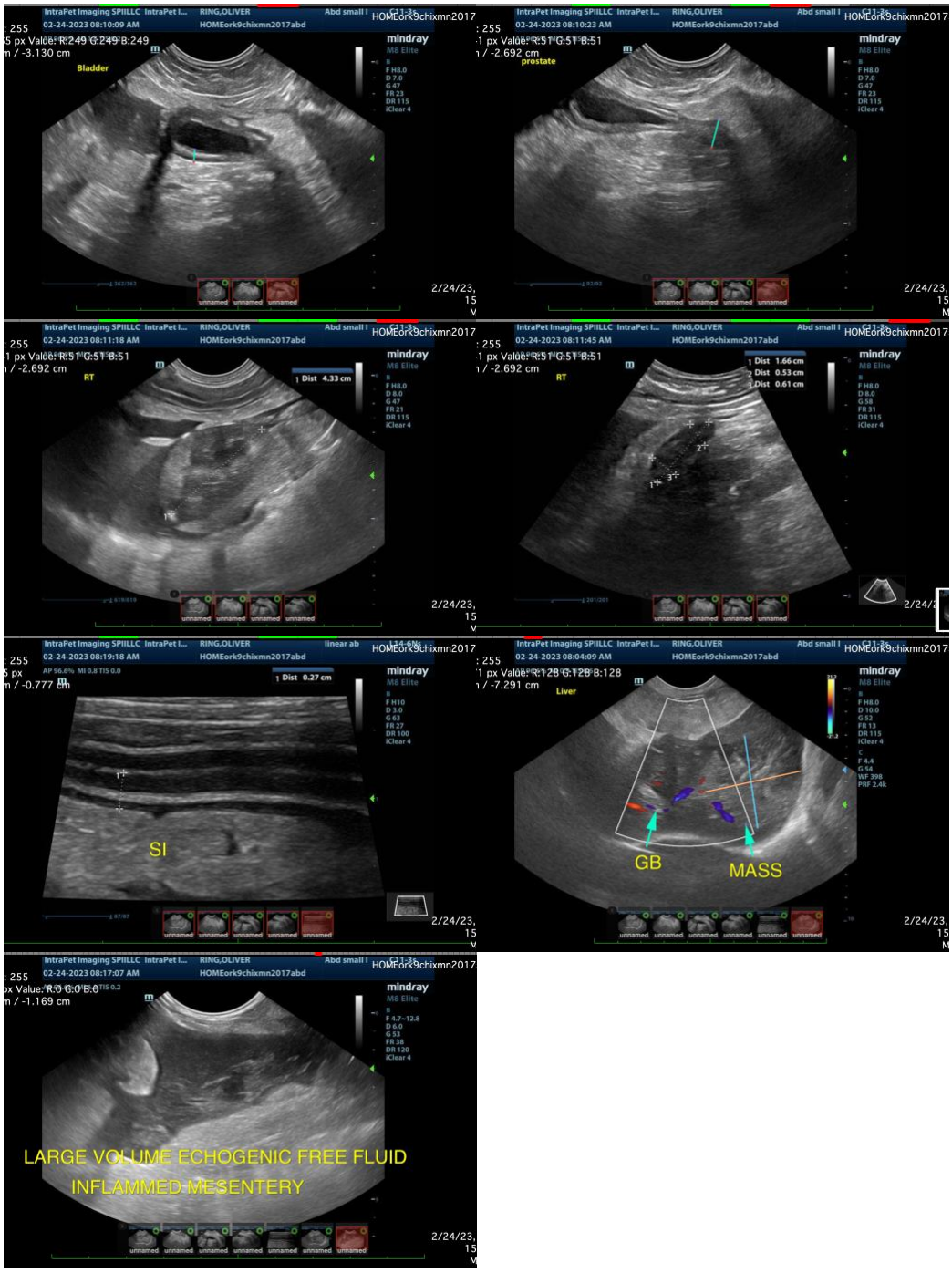
- Subjectively thickened bladder wall- The bladder mucosal changes could be consistent with cystitis or artifactual due to lack of adequate luminal distension. Bladder neoplasia cannot be ruled out but is considered unlikely in this patient.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The general impression of the abdomen is that of peritonitis. There is a large amount of echogenic free fluid and severely hyperechoic mesentery. Recommend sampling of the fluid for fluid analysis, cytology and possible cultures. The source of this is not readily apparent, as the inflammation appears rather diffuse. The liver and gallbladder are abnormal and could be associated with this fluid or could be incidental findings. There is a mixed echogenicity mass effect visualized next to the gallbladder. It is uncertain if this mass lesion is associated with the gallbladder or merely adjacent to it. Additionally, the gallbladder is significantly distended with a thickened wall and echogenic intraluminal material, but the bile duct is not readily visible. This finding could be consistent with cholecystitis and the mass lesion could be benign, neoplastic, an abscess, etc. Consider a fine needle aspirate (provided coagulation parameters are normal) of the mixed echogenicity mass effect and possible treatment for cholecystitis while monitoring the gallbladder closely. Correlate this with clinical signs and lab work results, particularly if a bilirubin elevation is present. Recommend close continued monitoring of the gallbladder and all these lesions, as surgical intervention may be warranted. The primary differentials for this type of an effusion would be a neoplastic effusion or septic peritonitis.

Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.





The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

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