SonoPath
Clinical Sonography & Telecytology
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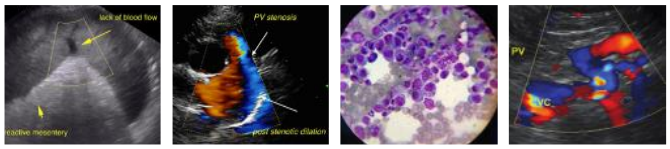


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Tarra Grandel

SPECIES

Canine

BREED

Yorkie

SEX

Spayed Female

AGE

13 Years

WEIGHT

13.6 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Dr. Reyes

HOSPITAL NAME

Mobile Vet Ultrasound

REFERRING VET

Dr. Beltran

INVOICE

21828

DATE

3/27/23

PRESENTING CLINICAL SIGNS

History: Pet presented for lethargy, anorexia and lameness. Pet continues declining and has not eaten in 6 days. Radiographs showed enlarged liver and spleen.

Abnormal PE/Chem/CBC/UA Results: Unable to get records from previous vet.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, mineral or infarcts observed. The left kidney measures 4.4 cm. The right kidney measures 4.5 cm.

Adrenal Glands

Left adrenal gland is normal in size (0.63 cm at cranial pole and 0.77 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Right adrenal gland is normal in size (0.83 cm at cranial pole and 0.68 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Spleen

Spleen is subjectively large in size with a mildly swollen but smooth capsule. Parenchyma is normal and homogenous in echogenicity and echotexture. Multifocal, well-demarcated, hyperechoic, homogenous nodules are noted throughout the parenchyma. Splenic vasculature appears normal.

Liver

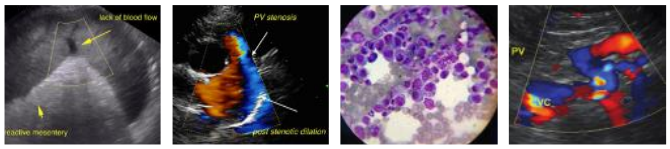
Liver is subjectively enlarged with markedly irregular margins. Parenchyma is mottled by multifocal discrete hypoechoic, hyperechoic and heterogenous nodules of varying sizes “moth-eaten”. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is mildly overdistended with a moderate amount of non-dependent, mildly aggregated/inspissated sludge. Hypo to anechoic cystic areas are noted between the gallbladder sludge and luminal wall. The wall is otherwise smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion.

Gastrointestinal

Fundic mucosal hypertrophy with hyperechoic mucosa and some mucosal remodeling is noted. There is no loss of mural detail. Layering is normal. There is mild luminal fluid accumulation. No evidence of masses/nodules or foreign material present.

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.



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The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The heterogenous/nodular liver could be a benign change associated with chronic inflammatory disease, potential some early fibrosis, combined with nodular hyperplasia, myelolipomas, etc. However, given the marked heterogenicity, infiltrative neoplasia, such as round cell neoplasia or even metastatic neoplasia cannot be definitively ruled out.

- Hypersplenism with hyperechoic splenic nodules – can be associated with congestion caused by sedation (if sedated) but can also be associated with diffuse infiltrative disease. Both benign conditions such as extramedullary hematopoiesis, lymphoid hyperplasia, as well as infiltrative neoplastic diseases such as round cell neoplasia should be considered. The hyperechoic splenic nodules are most consistent with benign myelolipomas. Other differentials such as fibrosis or calcification caused by old hematomas or infarcts, chronic inflammation, granulomatous disease or metastatic disease cannot be ruled out, but are considered less likely.

- Emerging mucocele – Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. The non-dependent nature of this sludge combined with the cystic areas are suggestive, however, of possible emerging cystic mucosal hyperplasia or early gallbladder mucocele.

- Gastritis – Consistent with irritation secondary to dietary indiscretion or intolerance, infection (bacterial, viral, other), parasitic or protozoal disease, toxin, other metabolic disease such as pancreatitis, other. Microulceration cannot be ruled out.

Secondary Findings

- Age-related kidney changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Differentials for this patients reported anorexia and lethargy include, potentially, an emerging gallbladder mucocele, concurrent gastritis, or potentially, the suspected infiltrative hepatopathy. If not recently evaluated, a general metabolic health screen is recommended, beginning with CBC/chemistry panel, electrolytes, urinalysis and, if indicated based on urinalysis results, urine culture is recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

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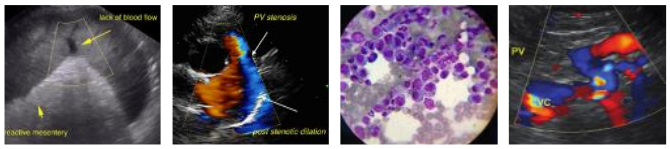

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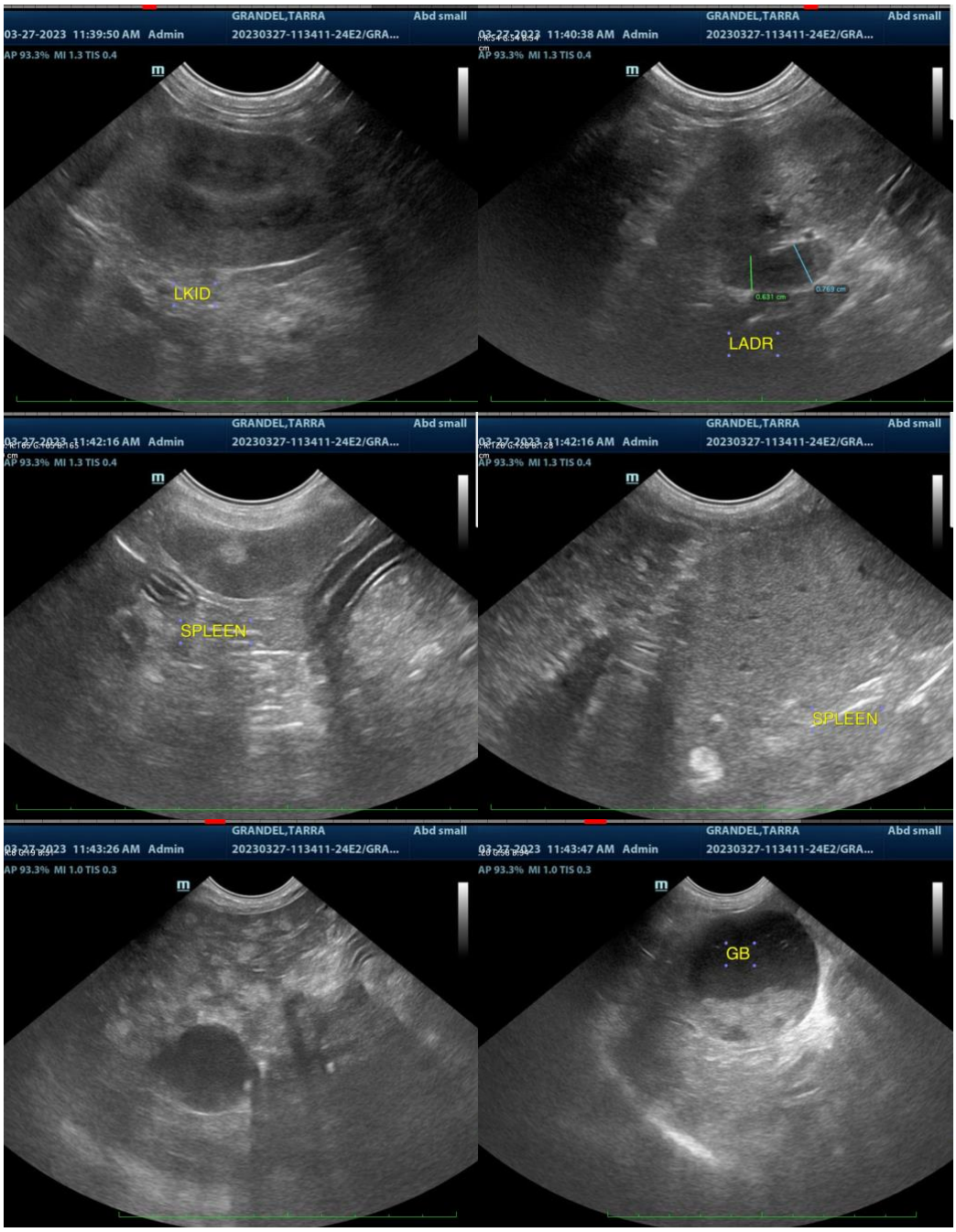
A fine needle aspirate of the liver is recommended if patient coagulation status is appropriate.

In the meantime, while awaiting results, supportive/symptomatic medical management of gastritis is recommended with antiemetics, gastroprotectants, an appetite stimulant, and empirical deworming with a 5-day course of Panacur.

Pending results, an exploratory laparotomy, for liver biopsy +/- cholecystectomy, may ultimately be warranted. If based on physical exam, laboratory changes, etc., the gallbladder is believed to be the primary contributing factor and/or if a diagnosis of the hepatopathy cannot be obtained cytologically.



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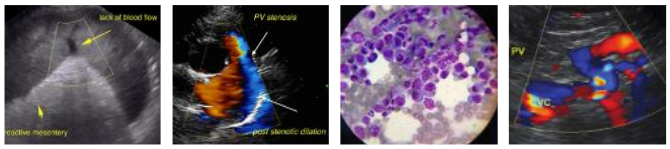

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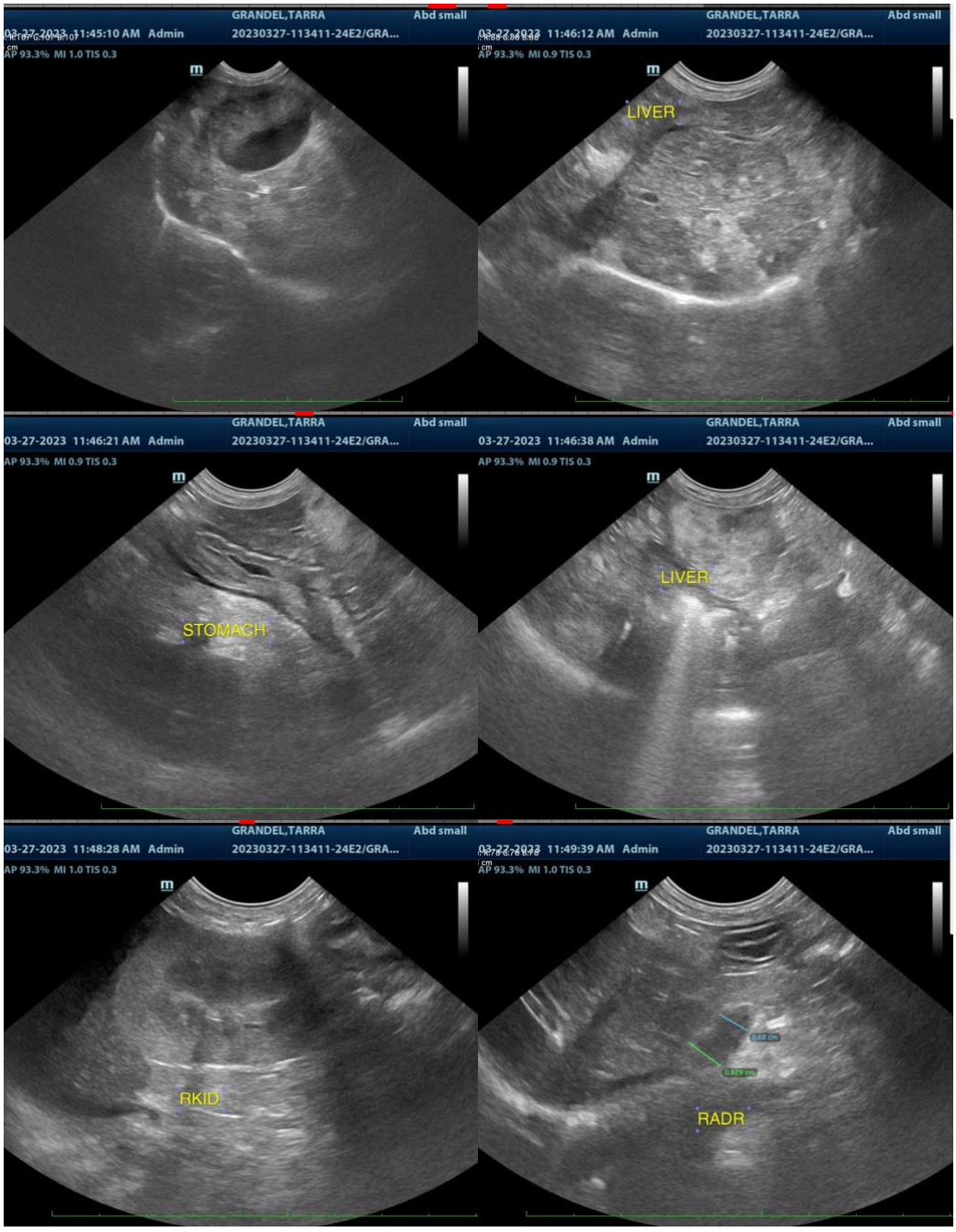

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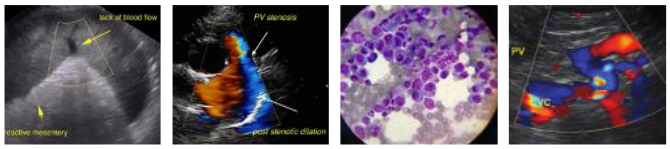

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Beth Johnson, DVM DACVIM

Beth.Johnson@SonoPath.com