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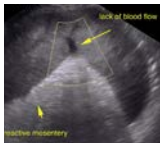
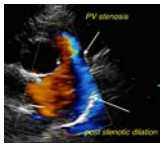
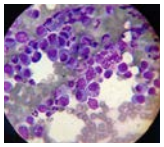
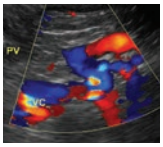

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Alfonsigo Martinez

SPECIES

Canine

BREED

Mixed

SEX

Neutered Male

AGE

14 Years

WEIGHT

39.8 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Ferrer

HOSPITAL NAME

Paseos Vet Center

REFERRING VET

Dr. J De Angel

INVOICE

44562

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8/9/23

PRESENTING CLINICAL SIGNS

The patient is presented as a referral for an abdominal ultrasound to evaluate increased liver enzymes. Pt has a history of pancreatitis, colitis, constipation, and partial Splenectomy.

Abnormal PE/Chem/CBC/UA Results: CBC Low RBC, HCT, HGB, MCV, MCH, ReticHGB High PLT, PCT Anemia 29.9% CHEM High ALT, ALKP, CHOL Fecal: NOS

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The prostate is normal in size (0.60 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 (6.02 cm) with focal cortical mineralizations. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (7.02 cm) with focal cortical mineralizations. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.50 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 0.60 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.

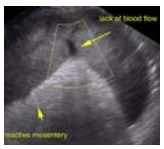
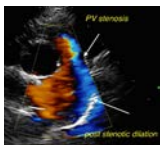
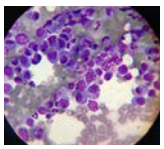
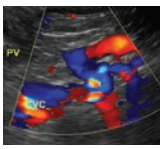
Spleen

The area of the spleen is evaluated, with a possible area of irregular tissue, which could be consistent with the remaining splenic tissue after the reported partial splenectomy.

Liver

The liver is subjectively normal 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. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The majority of the gallbladder wall appears smooth with no significant thickening. There is a moderate amount of somewhat amorphous, slightly

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mineralized material visualized within the lumen of the gallbladder. This could be consistent with debris and small mineralizations/stones but mineralized soft tissue cannot be ruled out. This area measures approximately 1.36 cm x 2.36 cm. There is no evidence of significant bile duct dilation.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of 0.27 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. Duodenum wall measures 0.49 cm. Jejunum wall measures 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. Colon wall measures 0.12 cm.

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

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There are occasional prominent lymph nodes visualized. The right sublumbar lymph node measured 0.36 cm. The omentum is generally of normal echogenicity.

PRIMARY FINDINGS

- Heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.

- Moderate amount of amorphous and mineralized debris/tissue visualized within the gallbladder – This could represent debris or mineralized soft tissue.

SECONDARY FINDINGS

- Decreased corticomedullary distinction in both kidneys with focal cortical mineralizations – The bilateral renal findings are consistent with age-related change.
- Poorly defined tissue visualized in the region of the spleen – I suspect this tissue represents the remaining spleen after partial splenectomy, although identification and distinction of this tissue is poor.

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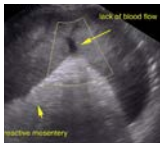
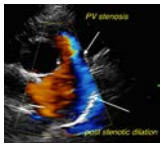
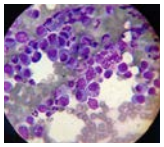
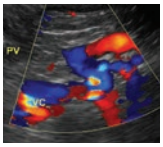

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No focal lesions were visualized associated with the liver to explain the liver enzyme elevations reported. There is a moderate amount of amorphous, slightly mineralized material visualized within the gallbladder. This could represent routine sludgy debris but could also be associated with mild inflammation or even a mineralized soft tissue mass effect. Depending on the degree and which liver enzymes are elevated, you could consider Ursodiol therapy +/- antibiotics and probiotics and reevaluation of the gallbladder 3-4 weeks into therapy. At that time, this area should be evaluated with color flow to see if there is significant vascular uptake. There is no evidence of a biliary obstruction visualized, and there is no inflammation surrounding the gallbladder to support a diagnosis of cholecystitis.

Consider the following diagnostics to further evaluate for primary hepatopathy while considering treatment for the gallbladder material:

- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc...
- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history
- If not already done, consider pre and post prandial bile acids to evaluate liver function
- If the ALP is significantly elevated relative to the ALT and symptoms consistent with Cushing's are present, consider adrenal function testing (ACTH stim)
- Consider Fine needle aspirate if round cell neoplasia is on your differentia list (25 g needle, normal coags)
- If no response to supportive care (Denamarin, fluids, antibiotics, +/- ursodiol etc.) Consider liver biopsy with samples obtained for histopathology, culture, and copper levels.

The remaining portion of the spleen is not clearly visualized, but there is some slightly irregular tissue in this region, which could be normal remaining spleen.

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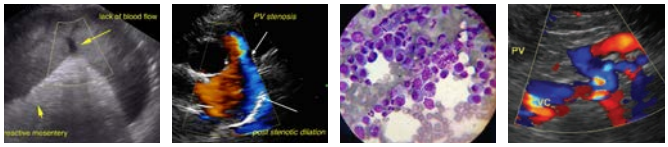

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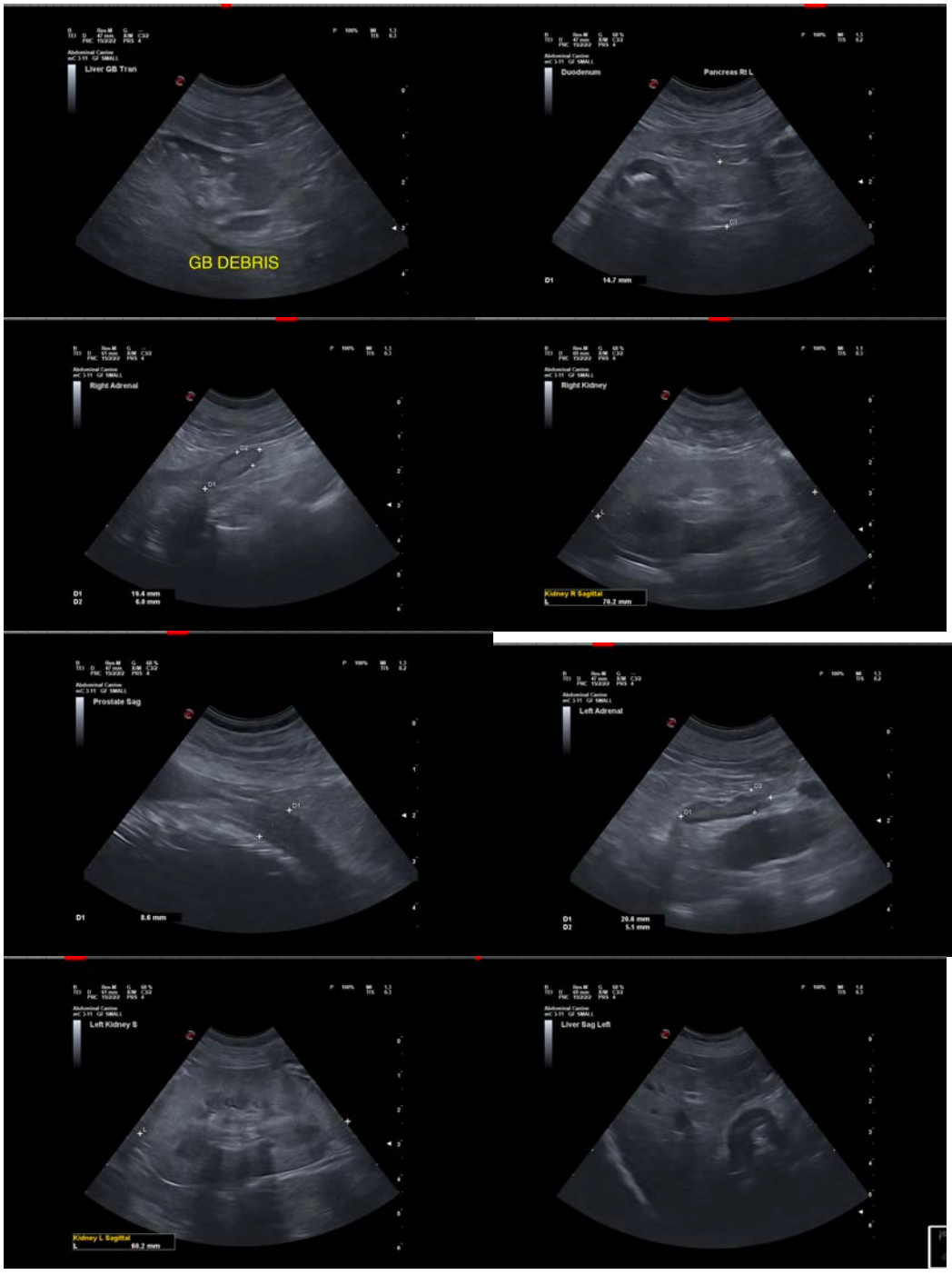

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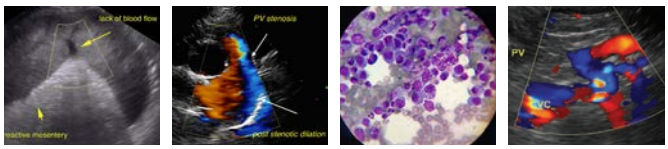

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

info@sonopath.com