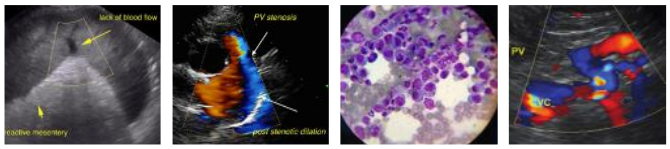
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Bella Comunale

SPECIES

Canine

BREED

Mixed Breed Canine

SEX

Spayed Female

AGE

9 Years 2 Months

WEIGHT

42.6 Pounds

INTERPRETED BY

Dr Brittany Sinclair, BVSc(hons), DACVECC

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Westwood Regional VH

REFERRING VET

Dr. Hartwick

INVOICE

22421

DATE

5/9/23

PRESENTING CLINICAL SIGNS

Patient presents for progressively elevating liver enzymes and chronically elevated CPLI. Presented on 2/24/23 following a possible seizure - (fell over, zoned out for about 2 minutes); no previous seizure history. Blood work at that time: Elevated HCT, lipase 7250, ALT 129, alk. Phos. > 1300, CPLI abnormal. Baytril /omeprazole/cerenia. 3/3/23: CPLI abnormal, ALT 167, all else same. On Low Fat RC G.I. diet, and Denamarin. 4/22: Doing well, great appetite. R/O pancreatitis, hepatopathy, Cushing's, all other.

Abnormal PE/Chem/CBC/UA Results: 3/19/23: Alk. Phos. 2924, ALT 194, CPLI abnormal. 4/22/23: ALT 141, Alk. Phos. 3257, CPLI abnormal. CBC: WNL. 4/22/23: Protein 2+, UP:CR 1.3, USG 1.019. LDDST pending today.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and visible pelvic urethra were of normal thickness. The ureters were not visible which is normal. There was normal wall layering with no masses, uroliths or abnormal thickening visualized. Urine was anechoic. No evidence of inflammatory or neoplastic changes were noted.

The kidneys were both normal size and structure, with smooth capsule and normal corticomedullary definition and ratio (cortex 1/3 of medulla). Medullary structure differed distinctly from that of the cortex. No evidence of pelvic dilation was present. The right kidney measured 5.77 cm. The left kidney measured 5.5 cm.

Adrenal Glands

Both adrenal glands were visualized and recognized. The caudal pole of the left adrenal gland is prominent and rounded and slightly hypoechoic, though no distinct mass or nodule was visualized. Cranial pole was normal. Right adrenal gland was comparatively normal in size and echogenicity. The phrenic vasculature, glandular echogenicity and detail were unremarkable. The left adrenal gland measured 2.51 cm in length and 0.60 cm at the cranial pole and 0.94 cm at the caudal pole. The right adrenal gland measured 2.64 cm in length x 1.03 cm at the cranial pole and 0.78 cm at the caudal pole.

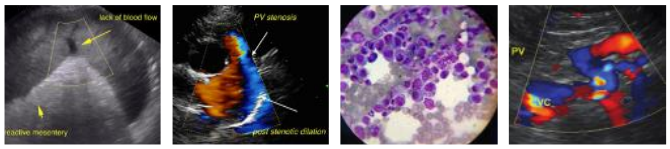
Spleen

The spleen was normal with a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma and smooth capsule, with normal splenic vasculature with no signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarct changes were noted.

Liver

The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed. Gallbladder is moderately distended with normal wall thickness and anechoic contents. Common bile duct is non-distended and tapers normally.

Gastrointestinal



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The stomach contains minimal luminal contents. It measures at a normal thickness of 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. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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

Entire pancreas is visualized and is hypoechoic and slightly irregular with no enlargement, no fluid accumulation and no surrounding signs of inflammation.

Lymph Nodes

No clinically significant lymphadenopathy or abnormalities noted.

Free Abdomen

No masses or free fluid.

ULTRASONOGRAPHIC FINDINGS

- Left adrenomegaly (caudal pole)
- Chronic pancreatitis, non-active
- Normal liver and gall bladder

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Left adrenomegaly is mild, but given corresponding elevated ALKP, could be secondary to hormonal stimulation as is seen with hyperadrenocorticism. It may also represent a variation of normal or response to stressful illness, though bilateral enlargement is more likely in that case. While no distinct adrenal mass was visualized, the more normal size of the right adrenal gland is suggestive of adrenal dependent hyperadrenocorticism. Ultimately adrenal function testing is required for more definitive diagnosis. Pending LDDST should provide clarity.

Pancreatic changes are most consistent with chronic pancreatitis with no active signs of inflammation on ultrasound. Treatment for pancreatitis is entirely supportive and based on clinical signs present. Treatment involves fluid support, GI support (anti-nausea, appetite stimulant), analgesia and enteral nutrition as needed. In the absence of clinical signs, a fat restricted diet is reasonable to prevent flare ups.

The liver parenchyma appears normal and there is no ultrasonographic explanation for the elevated liver enzymes in this patient. There is no significant disruption of architecture noted to suggest significant pathology. Low grade inflammatory hepatopathy/reactive hepatopathy or endocrine stimulation is a likely cause of ALKP elevation. Fine needle aspirate is recommended to further characterize parenchymal changes and bile acid profile to assess liver function. Ultimately liver biopsy is often required for more definitive diagnosis. Empiric treatments (SAM-E, milk thistle, Vitamin E, ursodiol if bilirubin elevated or gall bladder sludge) could be tried and liver enzymes re-evaluated, especially if liver FNA does not show significant pathology before more invasive liver sampling is pursued.

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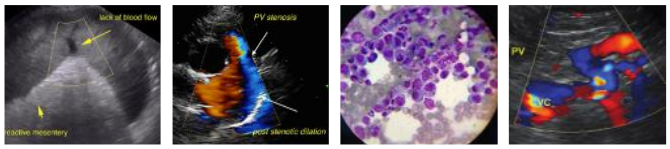

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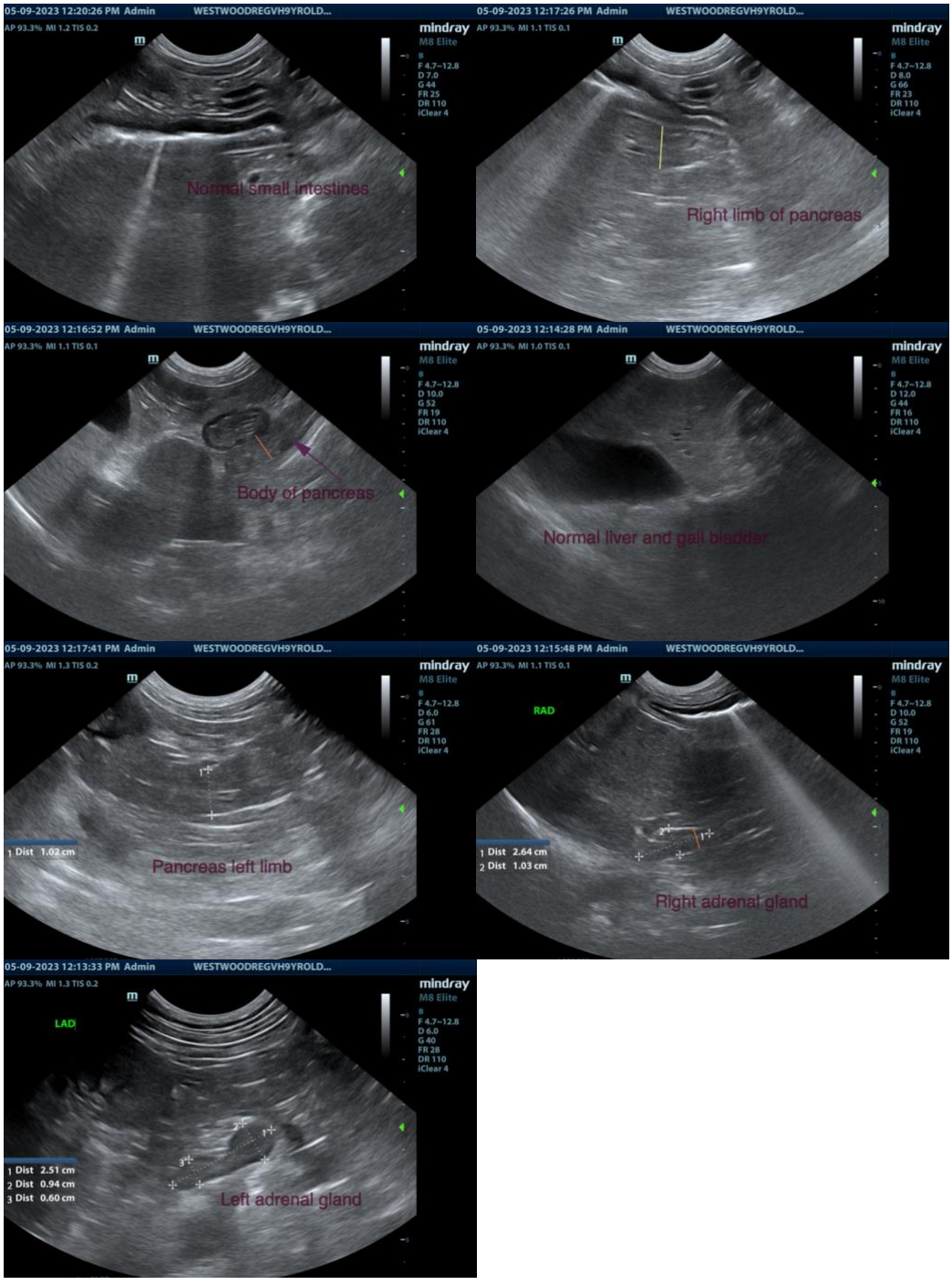

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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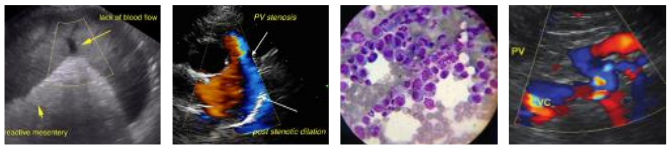

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