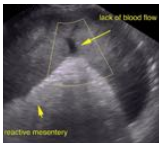
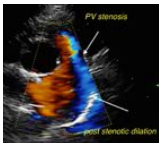
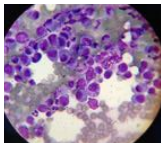
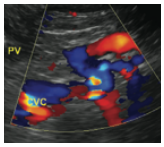
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™





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

PATIENT
Bo Hull

SPECIES
Canine

BREED
Chihuahua

SEX
Spayed female

AGE
9 years

WEIGHT
3.6 kg

INTERPRETED BY
Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY
Dr. Barnes

HOSPITAL NAME
Westview VH

REFERRING VET
Dr. Barnes

INVOICE
31577

DATE
7/11/22

PRESENTING CLINICAL SIGNS

New dog to our practice. O reports hx of dental disease Dog has had suspicion of liver shunt for it's whole life. Older records not available, o knows they did not fully work it up to confirm it. Does get zoned out sometimes, has intermittent episodes of hiding, shaking. Is on now dog food.
Abnormal PE/Chem/CBC/UA Results: Had BA Panel in 2013, Pre 2.7 (N 0-11), Post 46.5 (N 0-22). Suspect possible MVD. ALT mildly elevated 155 (N 18-121) Dec 2021 AUSA to further evaluate,

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.

Left kidney is normal is size (3.27 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. A hyperechoic band parallel to the corticomedullary border is present. There is no evidence of pyelectasia, mineral or infarcts observed.

Right kidney is normal is size (3.51 cm),shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. A hyperechoic band parallel to the corticomedullary border is present. There is no evidence of pyelectasia, mineral or infarcts observed.

Adrenal Glands

Left adrenal gland is normal in size (1.36 cm long, 0.33 at cranial pole and 0.39 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Right adrenal gland is normal in size (1.5 cm long, 0.39 cm at cranial pole and 0.41 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

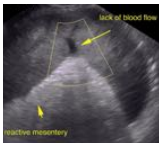
Spleen

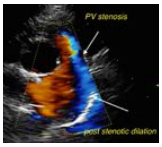
Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

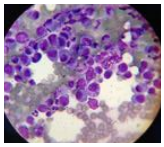
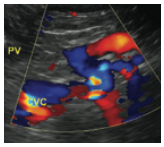
Liver

Liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. The portal vein to vena cava ratio is not consistent with an extrahepatic portosystemic shunt given the normal 1:1 ration. Visible vasculature and biliary tree appear normal without distension or congestion.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™





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

PATIENT

Bo Hull

SPECIES

Canine

BREED

Chihuahua

SEX

Spayed female

AGE

9 years

WEIGHT

3.6 kg

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Dr. Barnes

HOSPITAL NAME

Westview VH

REFERRING VET

Dr. Barnes

INVOICE

31577

DATE

7/11/22

Gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with very echogenic reverbation artifact from intraluminal gas. There is no evidence of obstruction, foreign material or infiltrative disease; however, complete visualization of far wall is partially inhibited by gas. Pyloric outflow tract appears patent.

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.

The visible colon is normal in wall thickness (< 0.2 cm) 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 or apparent lymphadenopathy noted in these images.

ULTRASONOGRAPHIC FINDINGS

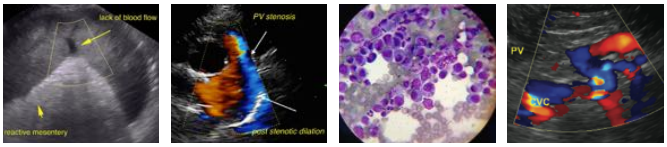
Primary Findings

Medullary rim sign - This finding is of unknown clinical significance and can be a normal variant, often idiopathic. Medullary rim sign can be present with renal disease including FIP, lymphoma, hypercalcemic nephropathy, Leptospirosis, tubular disease, other and should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc. This is a common incidental finding in patients with diabetes mellitus.

No evidence of an extrahepatic portosystemic shunt in these images.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The top differential for the mildly increased bile acids historically is microvascular dysplasia versus a portosystemic shunt based on these images or even gastrointestinal disease can result in mildly increased bile acids.



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

PATIENT

Bo Hull

SPECIES

Canine

BREED

Chihuahua

SEX

Spayed female

AGE

9 years

WEIGHT

3.6 kg

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Dr. Barnes

HOSPITAL NAME

Westview VH

REFERRING VET

Dr. Barnes

INVOICE

31577

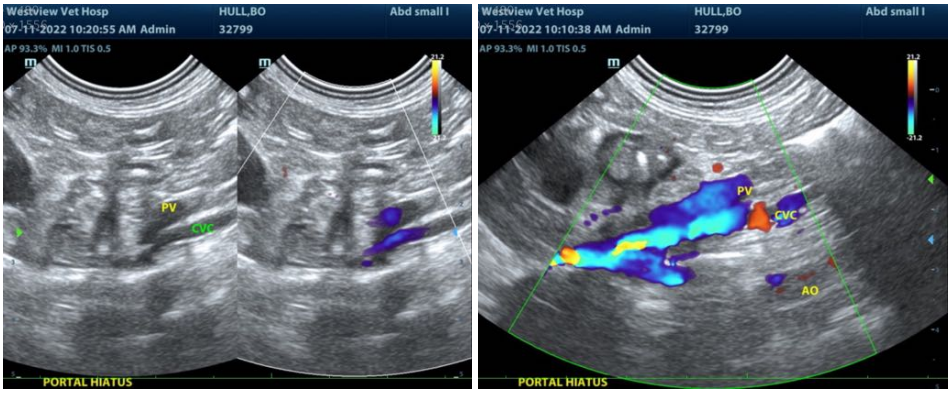
DATE

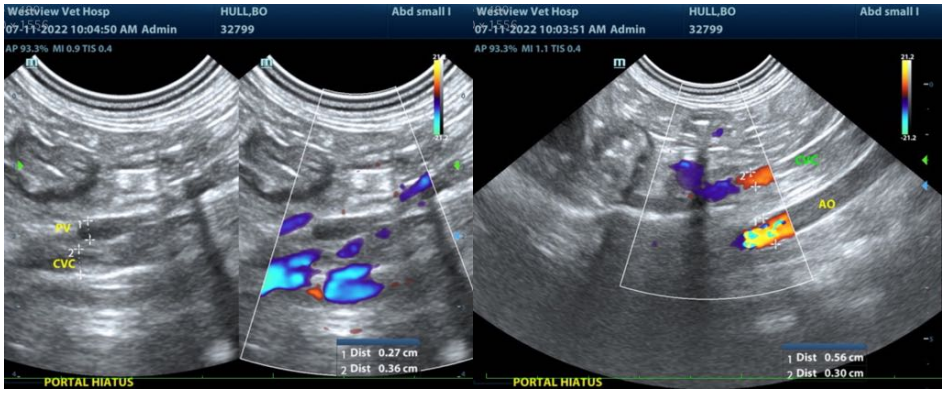
7/11/22

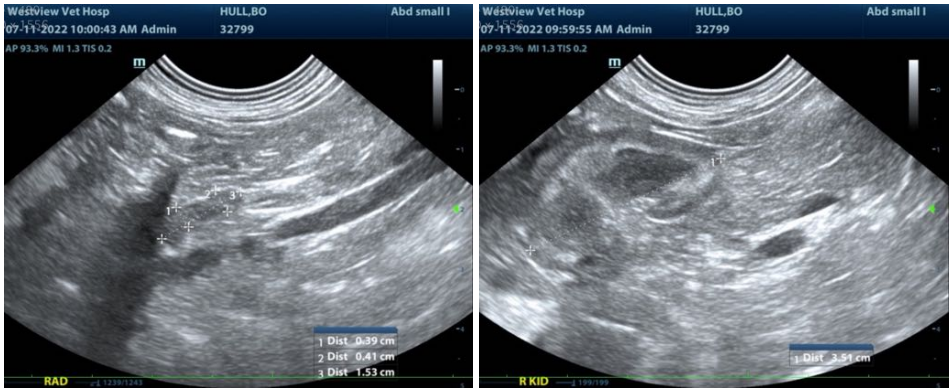
Recheck bile acids and if they are still mildly high then further investigation of the gastrointestinal tract can be considered with a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

In the meantime, empirical therapy with liver diet if not already in place +/- broad spectrum antibiotics and/or potential lactulose to treat mild hepatic encephalopathy given the reported occasional mentation abnormalities.

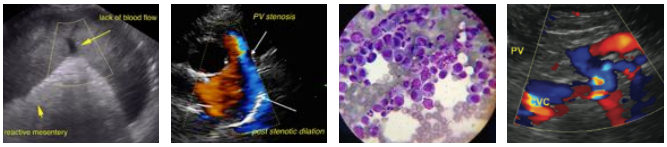
Given the lack of suspicion for a shunt if neurologic signs progress then consultation with a neurologist for advanced imaging of the brain can be considered.







SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Bo Hull

SPECIES

Canine

BREED

Chihuahua

SEX

Spayed female

AGE

9 years

WEIGHT

3.6 kg

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Dr. Barnes

HOSPITAL NAME

Westview VH

REFERRING VET

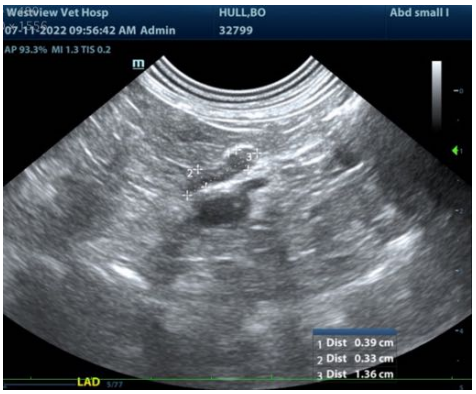
Dr. Barnes

INVOICE

31577

DATE

7/11/22



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.

Beth Johnson, DVM DACVIM

Beth.Johnson@SonoPath.com