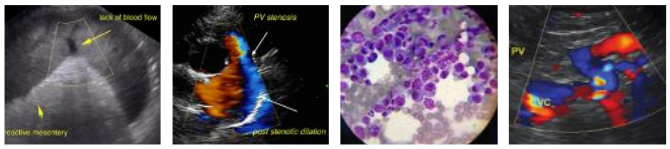
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Violet Palmer

SPECIES
Canine

BREED
Border Collie

SEX
Spayed Female

AGE
7 Years

WEIGHT
21 kg

INTERPRETED BY
Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY
Dr. Callihan

HOSPITAL NAME
Animal Emergency Hospital

REFERRING VET
Dr. Counsell

INVOICE
17339

DATE
9/17/22

PRESENTING CLINICAL SIGNS

History: Ultrasound requested to assess liver due to ascites, low albumin, radiographically small liver, low cholesterol Pt is current on preventive care **rDVM drained 2.8L light amberish/clear fluid yesterday and submitted for cytology; I drained another 2L today just to facilitate ultrasound

Abnormal PE/Chem/CBC/UA Results: Chems: -hypocholesterolemia (57, ref 110-320), which has been low on blood checks past 2 years -hypoalbuminemia alb 1.6, TP 5.1, glob 3.5 -gluc normal -low ALKP 14 (ref 23-212) -CBC: nonregen anemia HCT 33% Radiographs 9/16/22 (radiologist interpretation): -decreased hepatic volume -large volume ascites -edematous mesenteric fat -normal appearing caudal thorax -TFAST Thorax (today): no pleural effusion, no right atrial mass, subjectively normal heart appearance

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some minor age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The left kidney measured 6.57 cm. The right kidney measured 6.08 cm.

Adrenal Glands

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 0.5 cm. The left adrenal gland measured 0.5 cm.

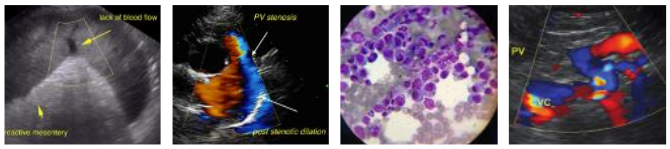
Spleen

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

Liver

The **liver** appeared subjectively subnormal in size, yet no evidence of vascular congestion noted. In fact, the vena cava appeared volume contracted owing to 3rd spacing and fluid. The hepatic parenchyma was relatively uniform. The gallbladder was normal.

Gastrointestinal



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Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

Pancreas

The **pancreas** revealed coalesced omentum, yet no overt masses were noted.

Free Abdomen

A large amount of **ascites** was noted in the abdomen.

ULTRASONOGRAPHIC FINDINGS

- Subnormal liver size
- Large amount of ascites
- Age-related renal changes
- Pancreas, coalesced omentum

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the low cholesterol and low albumin in this patient, a protein losing enteropathy is likely. However, I cannot rule out the possibility of underlying lymphomatosis or carcinomatosis. I recommend reassessment of the albumin level at the time of the sonogram to ensure it was <1.5. 1.6 is borderline level for spontaneous 3rd spacing of fluid and therefore a congestive or hydrostatic process may also be involved. Given the hepatic veins are not dilated and the vena cava is volume contracted, thoracic disease with passive congestion could be ruled out. The liver is slightly subnormal in size, yet the parenchyma is fairly unremarkable with minor remodeling and not enough to cause portal hypertension, therefore, either protein losing disease through protein losing enteropathy and/or protein losing nephropathy should be considered. However, an occult neoplastic process, such as lymphomatosis or carcinomatosis should also be considered. Cytospin of a fresh abdominocentesis sample with immediate slide preparation is recommended to assess for any potential neoplastic cell exfoliation.

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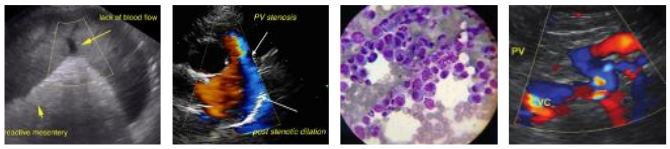

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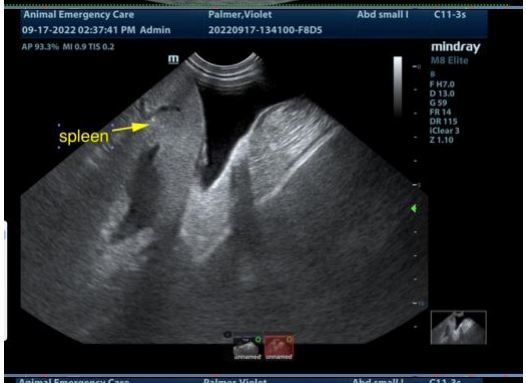

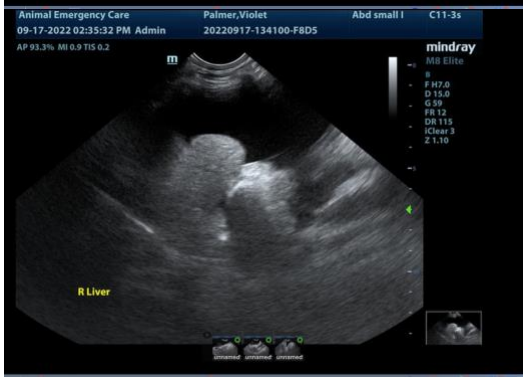

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com
info@SonoPath.com