



PATIENT

April Tatrow

SPECIES

Canine

BREED

Maltese

SEX

Spayed female

AGE

11 years

WEIGHT

11.4 lbs

INTERPRETED BY

Dr Brittany Sinclair,
BVSc(hons), DACVECC

IMAGING PERFORMED BY

Dr. Carpenter

HOSPITAL NAME

Pennridge AH

REFERRING VET

Dr. Carpenter

INVOICE

46491

DATE

8/8/23

PRESENTING CLINICAL SIGNS

History: Hx: 11.4 yo FS Maltese 11.4# Sedated with butorphanol Chronic severe allergies and yeast dermatitis. Has had IDST and management with dermatology. Recent treatment with terbinafine and clavamox. Has been on desensitization therapy (sublingual) for years with no response. Poor reaction (site pain) with cytopoint. Has been on LED of temaril p (pred equiv 2 mg daily to EOD) for a couple of years, hydroxyzine, gabapentin for MPL/prev CCL tear. Had one bout of elevated ALT in 2018 and AUS. AUS CONCLUSIONS 2018 1. Mildly mottled liver is nonspecific and may represent metabolic/vacuolar hepatopathy +/- nodular hyperplasia vs. chronic active hepatitis (infectious, toxic, immune-mediated, heavy metal deposition, etc). Neoplasia (ie. round cell, carcinoma, others) is considered unlikely. Was treated with 4 week course of zeniquin and ALT returned to normal. Recent hx of recurrent LE elevation. 6/23/23 ALT 142 (H), ALP 98 (N) 8B/1/23 ALT 266 (H) ALP 72 (N) Tbili 1.8 (H) Here for follow up AUS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder lumen volume is relatively small and walls are diffusely thickened measuring 0.34 cm most consistent with pseudohypertrophy. The ureters were not visible which is normal. There was normal wall layering with no masses, uroliths or abnormal focal thickening visualized. Urine was anechoic. No evidence of inflammatory or neoplastic changes were noted.

The kidneys have a smooth capsule and with hazing of corticomedullary definition to the point of inability to determine cortical/medullary ratio. There are hyperechoic striations in left renal cortex consistent with mineralization and a spherical anechoic fluid accumulation consistent with cortical cyst. Right kidney contains pinpoint areas of cortical mineralization. No evidence of pelvic dilation was present. The left kidney measured 4.28 cm and the right kidney measured 4.04 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 left adrenal gland measured 2.05 cm in length and 0.6 cm at the cranial pole and 0.61 cm at the caudal pole. The right adrenal gland measured 1.85 cm in length and 0.9 cm at the cranial pole and 0.54 cm at the caudal pole.

Spleen

The spleen had a generally smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma and smooth capsule, with normal splenic vasculature with no signs of congestion or thrombosis. Perivascular hyperechoic nodules visualized most consistent with benign myelolipomas. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarct changes were noted.

Liver

The liver is subjectively normal in size with slightly rounded lobes and otherwise normal structure. The parenchyma is slightly heterogenous with a coarse appearance. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed.



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The gall bladder is moderately distended with anechoic fluid, with hyperechoic non-shadowing debris present, some adherent to the gall bladder wall. There is no surrounding free fluid or signs of active inflammation.

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Gastrointestinal

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.

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Maltese

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.

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The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness.

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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

WEIGHT

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The base and limbs of the pancreas were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour and parenchyma were normal. No overt evidence of active inflammatory or neoplastic disease was noted.

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Lymph Nodes

No clinically significant lymphadenopathy or abnormalities noted.

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Free Abdomen

No masses or free fluid were noted.

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ULTRASONOGRAPHIC FINDINGS

Primary Findings

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1. Slightly mottled liver
2. Gall bladder debris
3. Perivascular splenic myelolipomas
4. Degenerative renal changes
5. Thickened urinary bladder wall - suspect pseudohypertrophy

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

. The mild mottling of liver parenchyma is a nonspecific change and may represent metabolic/vacuolar hepatopathy +/- nodular hyperplasia vs. chronic active hepatitis (infectious, toxic, immune-mediated,



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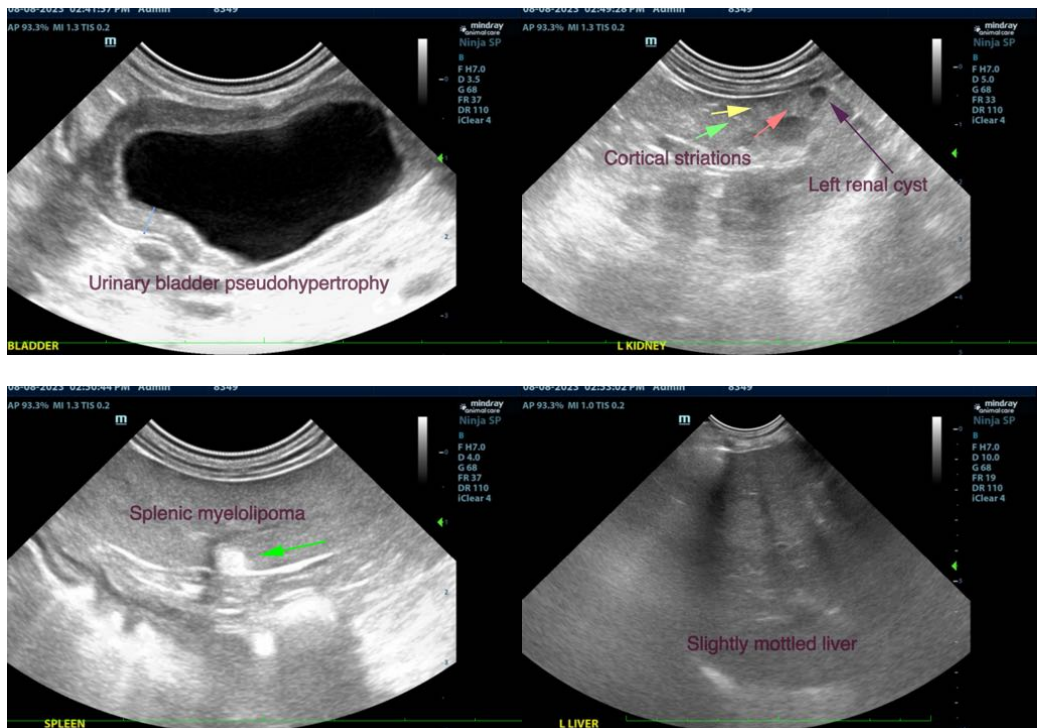
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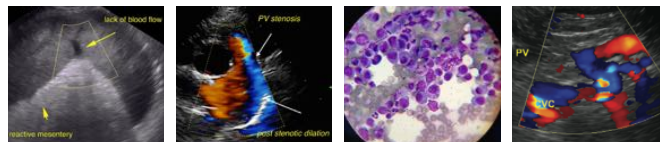
heavy metal deposition, etc) or represent benign age related degeneration. Neoplasia (ie. round cell, carcinoma, others) is considered unlikely as there is no significant disruption of architecture noted to suggest significant pathology, but must be considered. In light of lack of anemia and no evidence of hemolytic disease, the bilirubin elevation must be owing to hepatic parenchymal disease and fine needle aspirate is recommended to further characterize parenchymal changes. If total bilirubin normalizes bile acid profile to assess liver function should be pursued. 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.

Splenic changes are a common age related change and nodules are most consistent with benign myelolipomas, but infiltrative disease (lymphoma, MCT, other) cannot be definitively ruled out. No significant disruption of architecture noted to suggest significant pathology. Fine needle aspirate could be considered to further characterize parenchymal changes if clinically indicated, especially if any weight loss is noted or for baseline cytological assessment.

Renal changes are likely age related degeneration. Continue to correlate clinical significance with semi-annual blood work/urinalysis findings and clinical signs.

Urinary bladder wall thickening is likely pseudohypertrophy secondary to low volume of urine and lack of luminal distension, however, true mural thickening cannot be definitively ruled out. Re-examination when urinary bladder lumen volume is increased with time and/or fluid therapy should be considered if clinical suspicion for urinary bladder disease is high.





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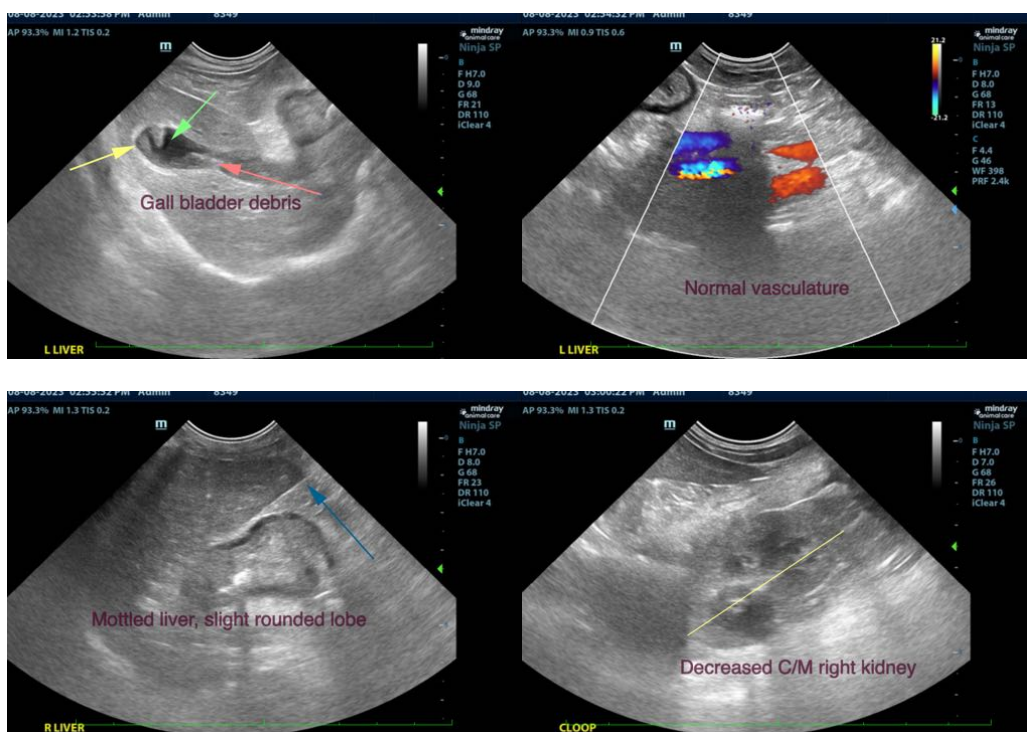
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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