



PATIENT PRESENTING CLINICAL SIGNS

Jake Shebib Jake has chronic active hepatitis, reasonably well controlled since diagnosis by ultrasound and biopsy/histopathology in May of 2017. Jake has recently lost 4.5kg, has diarrhea and has now started vomiting. He is not jaundiced. Labwork last week shows a large increase in all liver related enzyme values meds: Prednisone 12.5mg q 24 hours, Ursodiol 375mg q 24 hours, Metronidazole 250mg q 12 hours, FortiFlora

SPECIES Canine

BREED Lab

SEX Neutered Male

AGE 12 Years

WEIGHT 35 kg

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

IMAGING PERFORMED BY Kelly Reschny

HOSPITAL NAME Simcoe AH

REFERRING VET Dr. Kennedy

INVOICE 37411

DATE 5/5/22

Abnormal PE/Chem/CBC/UA Results: HgB 126 g/L (134-207) MCHC 323.1 (326-392) Cl- 106 mmol/L (108-119) ALT 1329 U/L (18-121) AST 173 U/L (16-55) ALP 2109 U/L (5-160) GGT 82 (0-13) TBili 5.6 umol/L (0-5.2) Lipase 504 U/L (0-250) Creat Kinase 203 U/L (10-200) please see attached labs

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with mild primarily suspended echogenic debris present. 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 calculi. Echogenic debris of this type can be associated with small crystals, cellular debris and proteinaceous debris.

The prostate is borderline large in size (1.8 cm in the sagittal view) 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 (7.54 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of 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 (7.36 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of 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 0.93 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.

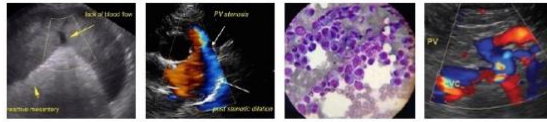
The right adrenal gland is normal in size measuring 0.66 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is large in size and irregular. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. The liver is severely nodular with numerous ill-defined, partially cystic regions coalescing, causing an



PATIENT

Jake Shebib

irregular silhouette. On lower resolution deep views, there appears to be a hyperechoic mass effect, measuring approximately 8.9 x 9.9cm, and on higher resolution there is a second very irregular area measuring 6.0 cm x 6.4 cm. The liver is diffusely nodular.

SPECIES

Canine

The gall bladder lumen is significantly distended. Some areas of the wall appear mildly thickened with adherent debris. There is a large amount of primarily non-organized echogenic debris, but there is some early organization and stranding around the edges, which is most consistent with an early mucocele. There is no evidence of bile duct dilation. These changes can be consistent with an early gall bladder mucocele.

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Lab

Gastrointestinal

SEX

Neutered Male

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm 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.

AGE

12 Years

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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) 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. 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.

INTERPRETED BY

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(Small Animal Internal
Medicine)

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.

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Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

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ULTRASONOGRAPHIC FINDINGS

- Large, diffusely nodular liver with suspected mass lesions– Some of these changes could be consistent with chronic active hepatitis, but the progression is uncertain, and there is the concern for the development of discrete mass effects.
- Large amount of gallbladder debris with early mucosal stranding – Findings are consistent with early mucocele development.
- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.
- Mildly echogenic debris in the urinary bladder – The echogenic debris in the bladder lumen could be consistent with cells, crystals, and/or mucus.
- Large, normal appearing prostate – Correlate findings with age of neutering. If neutered prior to puberty, consider a fine needle aspirate of the prostate. If neutered after puberty, this is

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PATIENT likely within normal limits.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

SPECIES

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The liver is large and irregular with numerous small nodules and large mass effects. It is not uncommon with chronic active hepatitis to see regenerative nodules, and this condition can progress to cirrhosis, but this liver is large and nodular with large mass effects, which is somewhat atypical for chronic active hepatitis, so these changes could be consistent with an atypical presentation or with concurrent masses/nodules. Options moving forward would include:

BREED

Lab

- Ideally a contrast CT scan to get a better global view of the liver to determine if there are defined mass effects, which could potentially be surgically removed, or if this all coalescing liver nodules and mass effects. Alternately, you could consider several fine needle aspirates in different locations. Chronic active hepatitis is typically a histologic diagnosis, but some types of neoplasia can be ruled out with a fine needle aspirate.

SEX

Neutered Male

- Lastly, if no additional intervention is desired, you could continue treatment for chronic active hepatitis, as well as concurrent treatment for cholecystitis, as there are very early signs of mucocele development. If not currently on Ursodiol, recommend starting it along with a course of antibiotics.

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In many cases of chronic active hepatitis relapse, a repeat biopsy is the most ideal to determine what medical management is indicated, and if new conditions have arisen, such as infection, etc. Therefore, repeat biopsy could be considered.

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The prostate appears relatively normal in shape, but is large in size for a neutered male dog. Correlate this with the age of neutering. If the pet was neutered at an early age, this could be atypical, and a fine needle aspirate of the prostate could be considered. If neutered after puberty, this could be within normal limits.

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Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.

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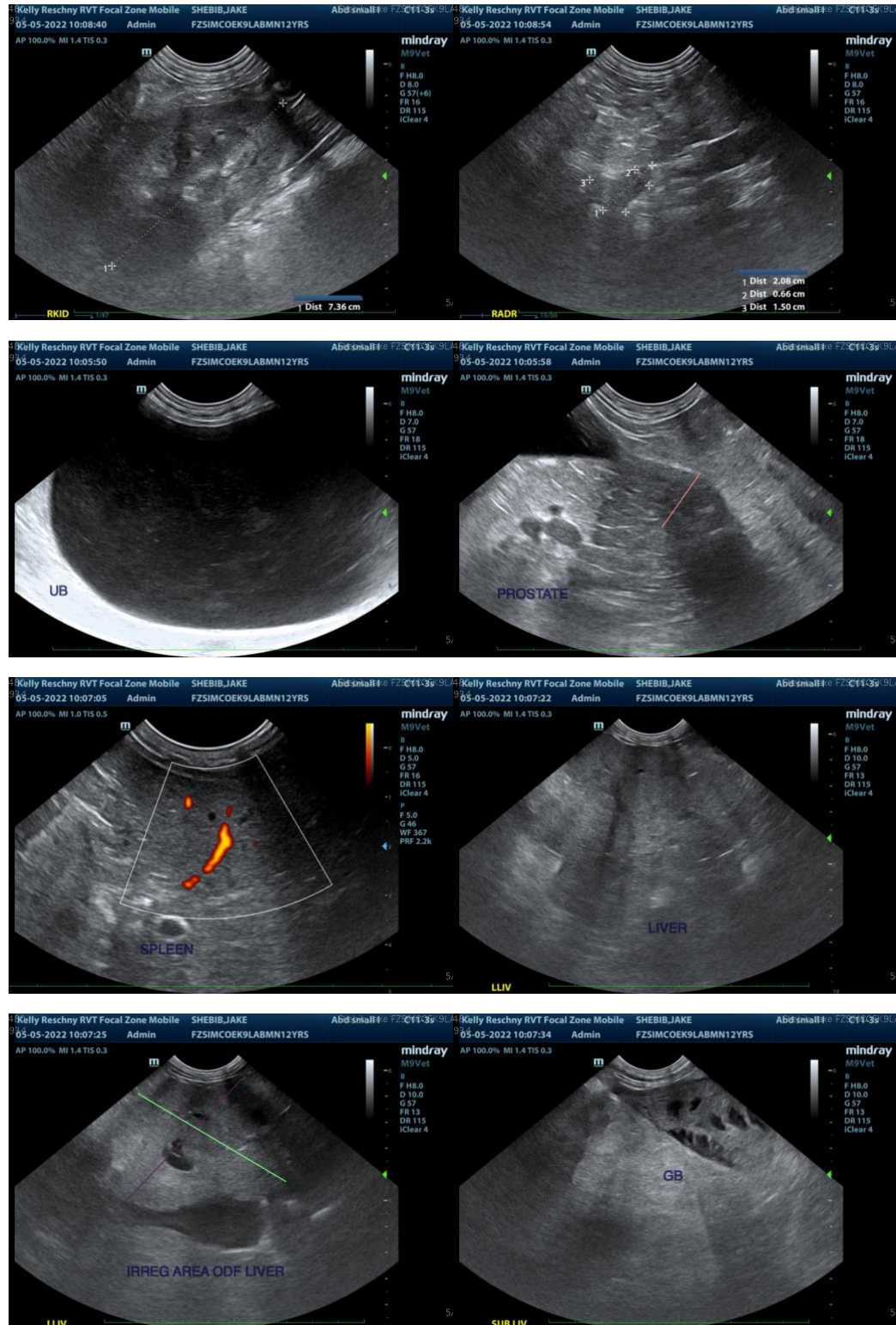
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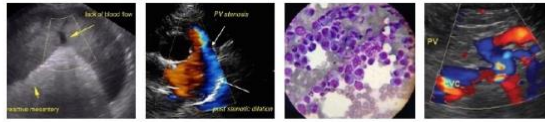
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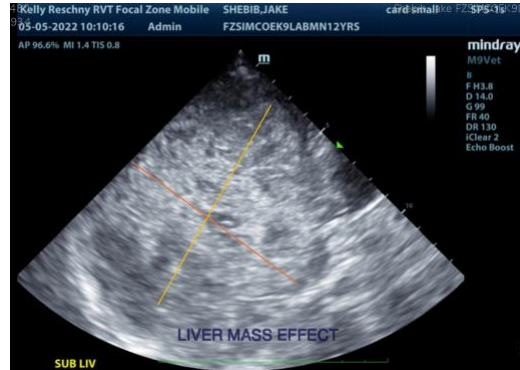
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

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