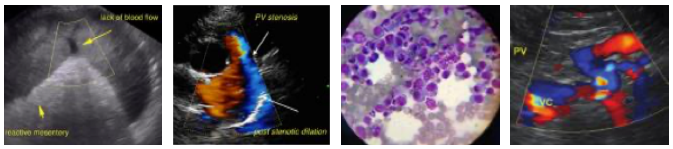
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Toby Miller

SPECIES
Canine

BREED
Havanese

SEX
Neutered Male

AGE
17 years

WEIGHT
16 lbs

INTERPRETED BY
Jessica Midence, DVM, DACVIM (SAIM)

IMAGING PERFORMED BY
Charlie Rodriguez

HOSPITAL NAME
Bethany Family PC

REFERRING VET
Mark Norman

INVOICE
12701

DATE
4.7.23

PRESENTING CLINICAL SIGNS

History: Toby presented for annual exam a week ago. General 17-year-old dog findings. Hx of elevated liver values however, bw this time showed even further elevations. Also showed cocci and rods in ua and currently on Clavamox.

Abnormal PE/Chem/CBC/UA Results: ALT 506, ALK 1890, GGT145, PSL 344, T4 0.7 but does not look hypothyroid.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder has a small volume of urine that is mostly anechoic. At the trigone of the bladder, there is hyperechoic debris both on the dorsal and ventral surface. It is difficult to determine if this is mineralization adherent to the wall (such as with bladder calculi) versus mineralization of abnormal tissue. Towards the apex of the bladder are two larger round structures that are hyperechoic and shadows. They are suspected to be bladder calculi (approximately 0.42 cm x 0.40 cm), though in certain ultrasound loops, it has a tendency to appear more tissue-like.

The left kidney is small in size (4.30 cm) with a normal shape and architecture and smooth peripheral margins. There is moderately decreased corticomedullary distinction and normal echogenicity. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

The right kidney is small in size (4.20 cm) with a normal shape and architecture and smooth peripheral margins. There is moderately decreased corticomedullary distinction and normal echogenicity. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

Adrenal Glands

The left adrenal gland is enlarged (cranial pole 0.52 cm / caudal pole 0.75 cm) and has a plump appearance overall. The left adrenal gland has normal in shape generally and is normal in appearance and echogenicity.

The right adrenal gland is enlarged (cranial pole 0.75 cm / caudal pole 0.68 cm) and has a plump appearance overall. The left adrenal gland has normal in shape generally and is normal in appearance and echogenicity.

Spleen

The splenic echotexture is homogeneous with parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule is smooth with no irregularities. The splenic vasculature is normal without signs of congestion or thrombosis.

Liver

The liver is subjectively enlarged in size with rounded contours, structure and smooth peripheral margins. The echogenicity appears hyperechoic with decreased portal markings. No overt evidence of inflammatory, infiltrative or regenerative pathology is evident. The visible portions of the vasculature and biliary tract appear normal. No pathological hepatic lymphadenopathy observed.

The gallbladder lumen is moderately distended with organized Inspissated bile, consistent with an insipient mucocele. The wall is a normal thickness and smooth. The cystic and common bile ducts are normal/not visible.

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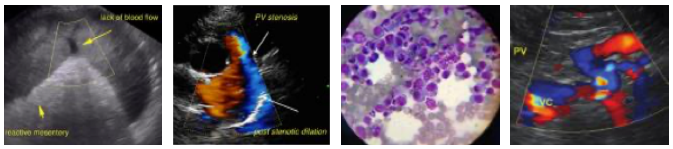

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Gastrointestinal Tract

The gastric lumen contains minimal ingesta. The stomach wall is of normal wall thickness with some variability due to rugal folds. There is normal gastric wall layering. There are no masses or focal lesions observed and the pyloric outflow tract appears normal.

The visualized areas of duodenum, jejunum and ileum appear normal in thickness. The duodenum is normal with distinct wall layering. The remainder of the small intestines are normal with normal wall layering. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material. No focal lesions observed.

The sections of colon are visualized with formed fecal material and gas shadowing distally.

Pancreas

Within the area of the right pancreas, there is a 2.00 x 2.10 cm structure that appears cystic. This structure is deep to the stomach, duodenum and the portal vein. The structure generally appears in the area of the caudate liver lobe and right kidney. It appears most consistent with a cystic structure that is suspected to be the right pancreas. However, it is difficult to discern if this is truly a cystic area versus a confluence of vasculature in that area or some other cystic structure (such as a lymph node or mass). The right pancreas could not be discretely visualized to confirm this is arising from the pancreas. It is simply in the area of the right pancreas.

Peritoneum

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The omentum is of normal uniform echogenicity.

ULTRASONOGRAPHIC FINDINGS

Findings

- Bladder stones versus mineralized emerging mass
- Cystic pancreas versus other cystic structure
- Gall bladder mucocele
- Hyperechoic hepatomegaly
- Bilateral adrenomegaly
- Chronic degenerative renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Within the bladder, there are mineralized shadowing structures that are suspected to be bladder calculi. However, it is not possible to definitively determine whether they represent mineralization of emerging proliferative tissue, such as polypoid cystitis or neoplasia. Bladder calculi are suspected over that possibility, however. Consider repeat ultrasound once the urinary tract infection has been treated fully. Alternatively, a urine cytology or BRAF test of the urine could be considered after the treatment of the UTI for more definitive information.

There is a gall bladder mucocele that is not inflamed. Consider Ursodiol therapy at a higher dose (if not contraindicated in this patient).

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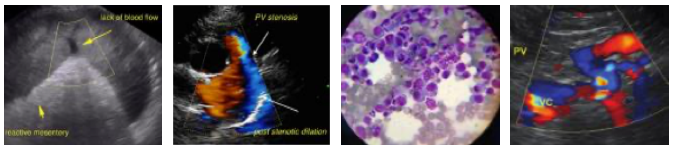

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The appearance of the liver would be consistent with a vacuolar hepatopathy, and given the adrenomegaly, adrenal gland hyperfunction/hyperadrenocorticism should be considered if there are symptoms to warrant testing. Other possibilities for the enlarged adrenal glands would include chronic physiologic stress.

The cystic structure in the area of the stomach/pancreas is suspected to be a cystic right pancreas, though this is soley based on location of the structure rather than definitive visualization of the right pancreas. This could be consistent with prior pancreatitis. Consider repeat ultrasound in several months to monitor appearance/progression of this structure.

There is evidence of chronic kidney disease. Contine to monitor with routine lab-work.

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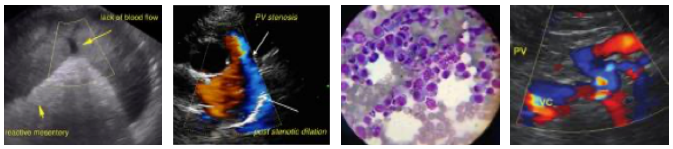

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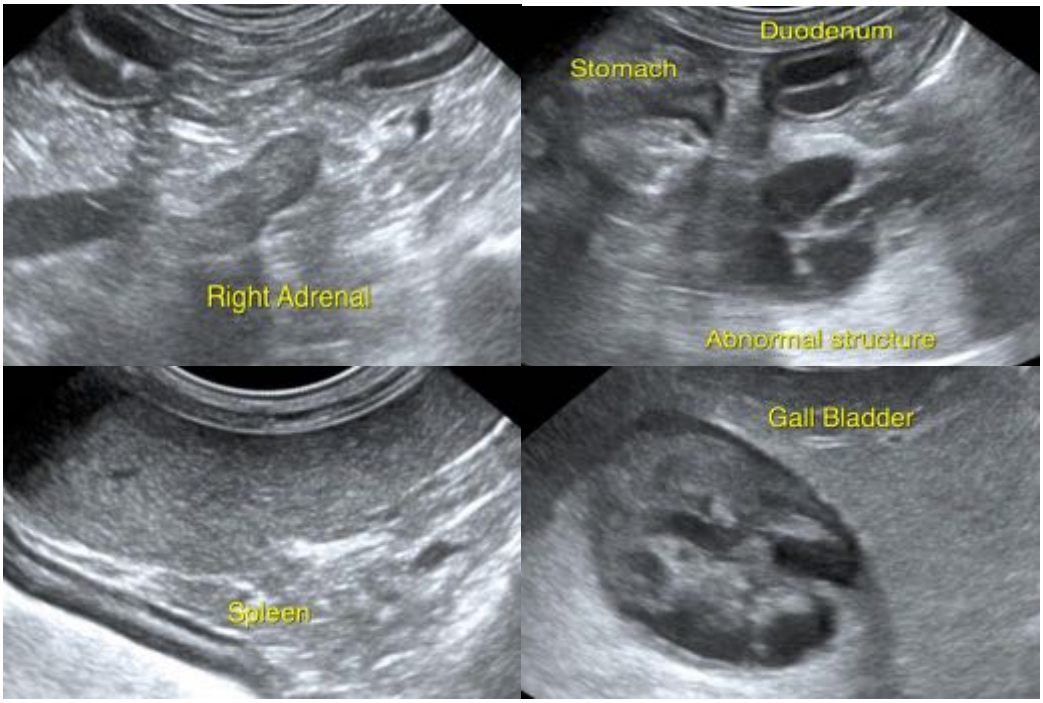

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Jessica Midence, DVM, DACVIM (SAIM)
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