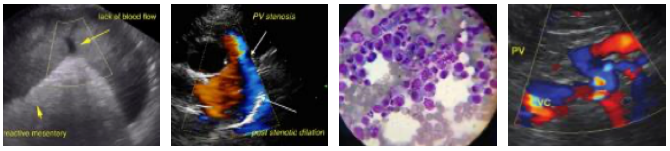
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Charlie Osborne

SPECIES
Canine

BREED
Cairn Terrier mix

SEX
Male, neutered

AGE
13 Yrs.

WEIGHT
17.6 lbs.

INTERPRETED BY
Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

IMAGING PERFORMED BY
Dr. Goodman

HOSPITAL NAME
Evandale-Blue Ash PH

REFERRING VET
Dr. Goodman

INVOICE
14929

DATE
5/9/23

PRESENTING CLINICAL SIGNS

History: Presented 4/10/23 for annual exam and preventative bloodwork. While using the ultrasound to obtain urine, Dr. Goodman noted several changes around the bladder and the abdomen (notes from exam below). Owner wanted to be conservative with treatments since he is older. Started him on Ursodiol 250mg (1/4 tab BID). Did a short course of Enrofloxacin and Metronidazole as well. Owner initially was unsure about starting treatments or pursuing ultrasound. They will be moving soon. Owner wanted to know exactly what was going on in his abdomen because it will help them determine next steps and QOL. He is still doing well at home, acting himself otherwise. He only wants to eat once a day now as opposed to BID. Prev diagnosis of hypothyroidism 6/2019 - Currently on Thyro-tabs 0.2mg (1 tab SID).
Abnormal PE/Chem/CBC/UA Results: quick peek on 4/10/2023: Scant amount of fluid found during cysto Scanned abdomen - spleen normal architecture, uniform Right liver lobe margin mixed echogenic mass present distal to the gall bladder Gallbladder - thickened material with strands - developing gall bladder mucocele

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is normal in thickness and the mucosal surface in the region of the apex is slightly irregular. The bladder is moderately distended. Luminal contents are anechoic. No cystic calculi are observed. The region of the trigone and the proximal urethra, visible to a depth of 2 cm, are normal.

The prostate is normal in size (0.57 cm in width) with smooth curvilinear peripheral contours. A small hyperechoic to mineralized focus is observed and appears to be within the parenchyma. The remaining parenchyma is homogeneous. The prostatic urethra is not overtly dilated.

The left kidney is normal in size (4.39 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. The cortex is isoechoic relative to the spleen. There is mild to moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. A few small cortical cysts are seen.

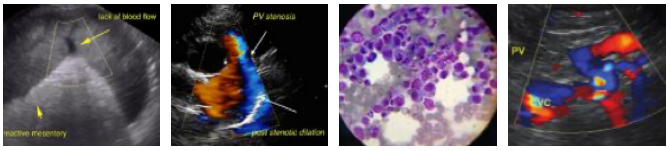
The right kidney is normal size (4.53 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. The cortex is isoechoic relative to the spleen. There is mild to moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis.

Adrenal Glands

The left adrenal gland is normal size (0.69 cm at cranial pole) (0.50 cm at caudal pole) with a slightly irregular shape. A 0.78 x 0.64 cm hyperechoic nodule is observed at the cranial pole. Glandular echogenicity and detail at the caudal pole are normal. The phrenicoabdominal vein and surrounding vasculature appear normal.

The right adrenal gland is normal size (0.58 cm at cranial pole) (0.50 cm at caudal pole); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen



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The spleen is normal in size (1.27 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. 1-2 small irregular myelolipomas are seen. Splenic vasculature is normal.

Liver

The liver is subjectively prominent in size with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen. An approximately 3.6 cm irregular hyperechoic to heterogeneous mass is observed on the right side, adjacent to the diaphragm. The remaining parenchyma is relatively homogeneous in appearance. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion. The gall bladder lumen is moderately distended. The wall is thin and smooth. A moderate to large amount of aggregated echogenic to mineralized partially dependent debris/sludge is observed within the lumen. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

Pancreas

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

Other

Brief visualization of the thorax reveals suspected ring down lesions.

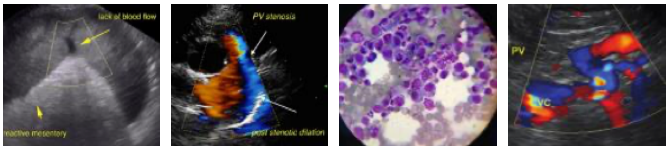
ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- Right hepatic mass. Differentials include neoplasia (i.e., adenoma, adenocarcinoma, round cell tumor) vs a benign process (i.e., regenerative nodule, inflammatory focus, granuloma, other). A neoplastic process is favored.
- Excessive gallbladder debris/sludge. This finding may be secondary to cholestasis, emerging mucocele or less likely, fasting.

Secondary Findings:

- Bilateral chronic age-related renal changes with dystrophic mineralization.
- The left adrenal nodule could be consistent with benign nodular hyperplasia or an emerging tumor.



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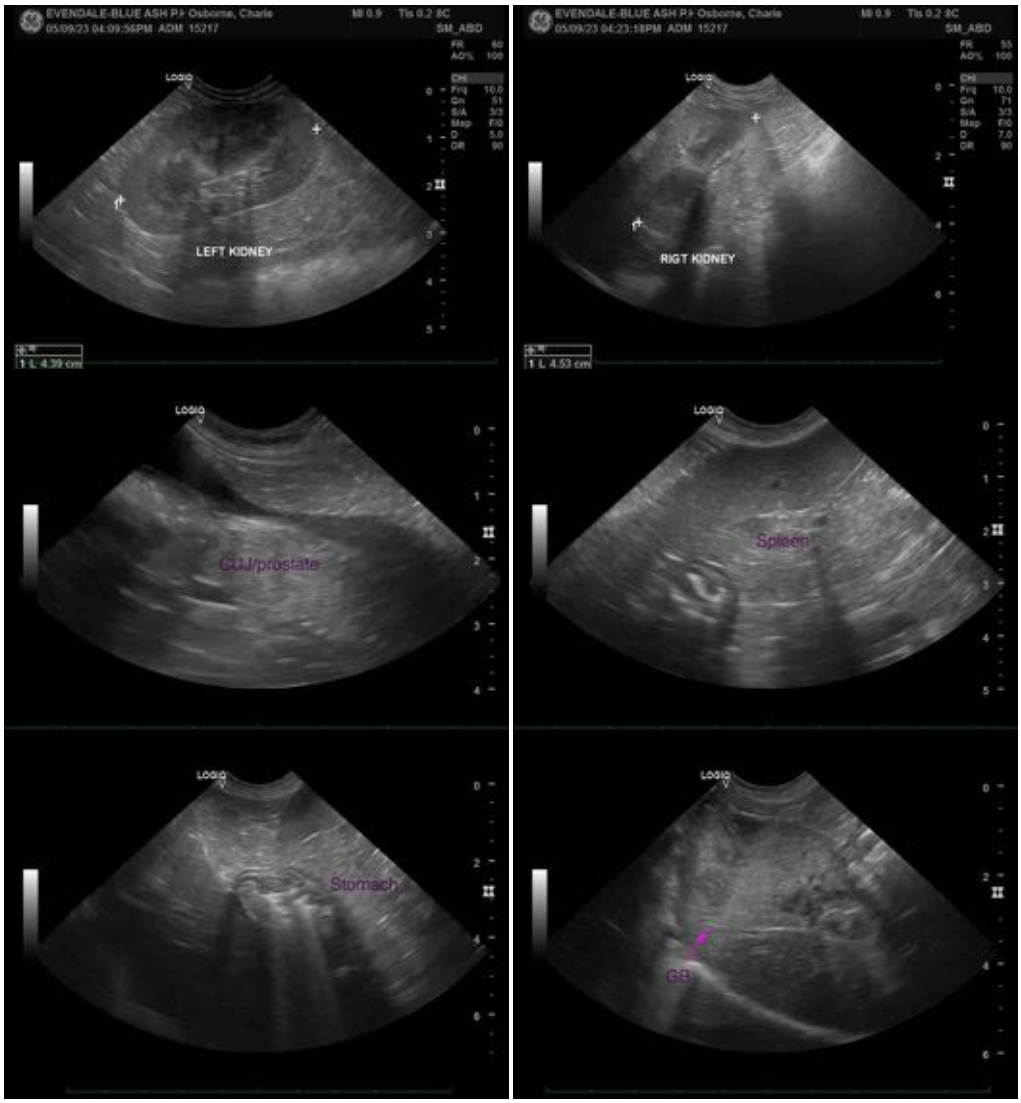
- Hyperechoic to mineralized focus within the prostatic parenchyma, the significance of which is unclear. It may be a benign incidental finding. However, mineralization in the prostatic parenchyma can be associated with neoplasia.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Given the possibility of ring down lesions in the thorax, three-view thoracic radiographs are recommended to assess for pulmonary parenchymal disease (i.e., metastasis).
- Regarding the hepatic mass, excisional biopsy with submission for histopathology can be considered. If surgery is pursued, evaluation of the gallbladder +/- cholecystectomy is recommended. However, if an aggressive approach is not pursued, symptomatic care should be considered along with serial sonographic monitoring (i.e., every 2-3 months) can be considered to assess for a growth of the hepatic lesion and progressive gallbladder pathology.
- Given the gallbladder changes, Ursodiol therapy is recommended.



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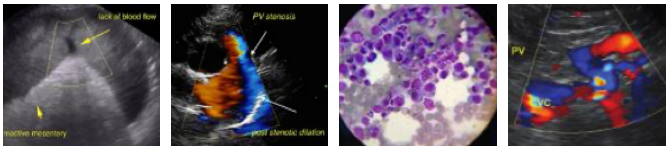

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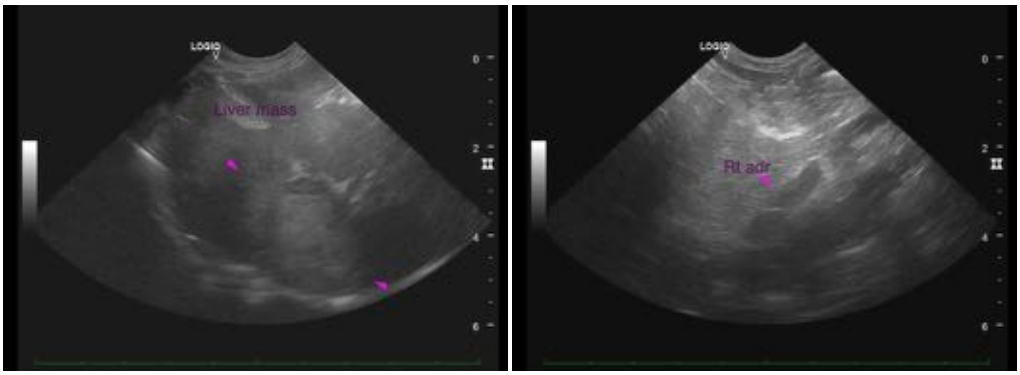

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
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