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Clinical Sonography & Telecytology
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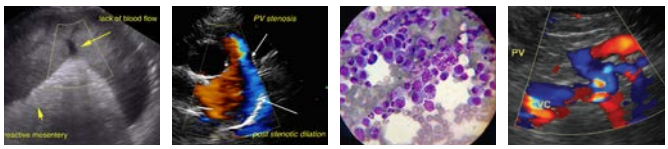

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1-800-838-4268 info@sonopath.com

PATIENT
Boots Hewell

SPECIES
Canine

BREED
Chihuahua

SEX
Neutered Male

AGE
16 Years

WEIGHT
9 Pounds

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

IMAGING PERFORMED BY
Dr. Reyes

HOSPITAL NAME
Mobile Vet Ultrasound

REFERRING VET
Dr. Beltran

INVOICE
44023

DATE
1/6/23

PRESENTING CLINICAL SIGNS

Pet presented for second opinion on heart murmur, periodontal disease and lethargy. Owner is considering dental cleaning based on severe periodontal disease, but wants to have chest radiographs done first. Whole body radiographs showed a mass effect on left mid abdomen, possible kidney

Abnormal PE/Chem/CBC/UA Results: NSF per previous vet but no records today

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. 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 cystic calculi.

The prostate is normal in size (1.0 cm) 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 (3.93 cm) with numerous small cortical cysts and pyelectasia at 0.28 cm. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal. There is a very large, multiloculated and complex cyst arising from the kidney. This cyst contains hypoechoic fluid and measures 5.51 cm x 5.46 cm.

The right kidney has a normal shape and size (3.66 cm) with pyelectasia at 3.31 cm and numerous small cortical cysts. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The region of left adrenal (Cranial to left renal artery) is unremarkable but the adrenal is not distinctly visualized. No evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.47 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 subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. There is a well demarcated hypoechoic area on the tip of a liver lobe. This region is associated with 2-3 small hypoechoic cystic structures. Neither the tissue nor the cystic areas appear to indicate significant blood flow on power doppler. This area measures approximately 2.17 cm x 2.62 cm and could be consistent with a mass effect, an infarcted area of liver, focal inflammation, etc.

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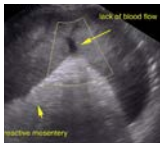
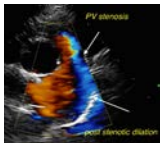
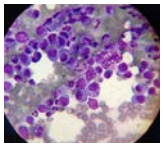
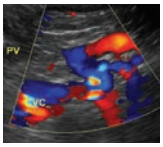

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The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

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.

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. Duodenum wall measures 0.42 cm. Jejunum wall measures 0.32 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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.

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.

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.

ULTRASONOGRAPHIC FINDINGS

- Decreased corticomedullary distinction in both kidneys with bilateral pyelectasia and small cortical cysts – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. Pyelectasia of the kidney(s)could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.

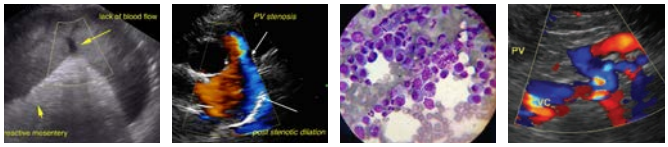
- Large, multiloculated complex cyst arising from the left kidney – This is likely a benign cystic structure, but an abscess or cystic neoplastic lesion cannot be ruled out.

- Well demarcated, hypoechoic region at the tip of a liver lobe with adjacent hypoechoic structures – The nature of this lesion is unclear. Consider such differential as an infarct, mass effect, area of inflammation, infection, etc.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The mass effect visualized on radiographs is likely the left renal cyst. There is minimal surrounding inflammation, and it is likely asymptomatic at this time. If you feel it is bothering the pet, a contrast CT scan could be performed to further evaluate, but I'm concerned that this patient's renal function could be greatly compromised by removing a kidney. Recommend a blood pressure evaluation, urinalysis and culture.

There is an atypical hypoechoic lesion on the liver. This lesion is well demarcated and comprises the tip of the liver lobe. There is minimal color flow associated with this area. Consider a fine needle aspirate of



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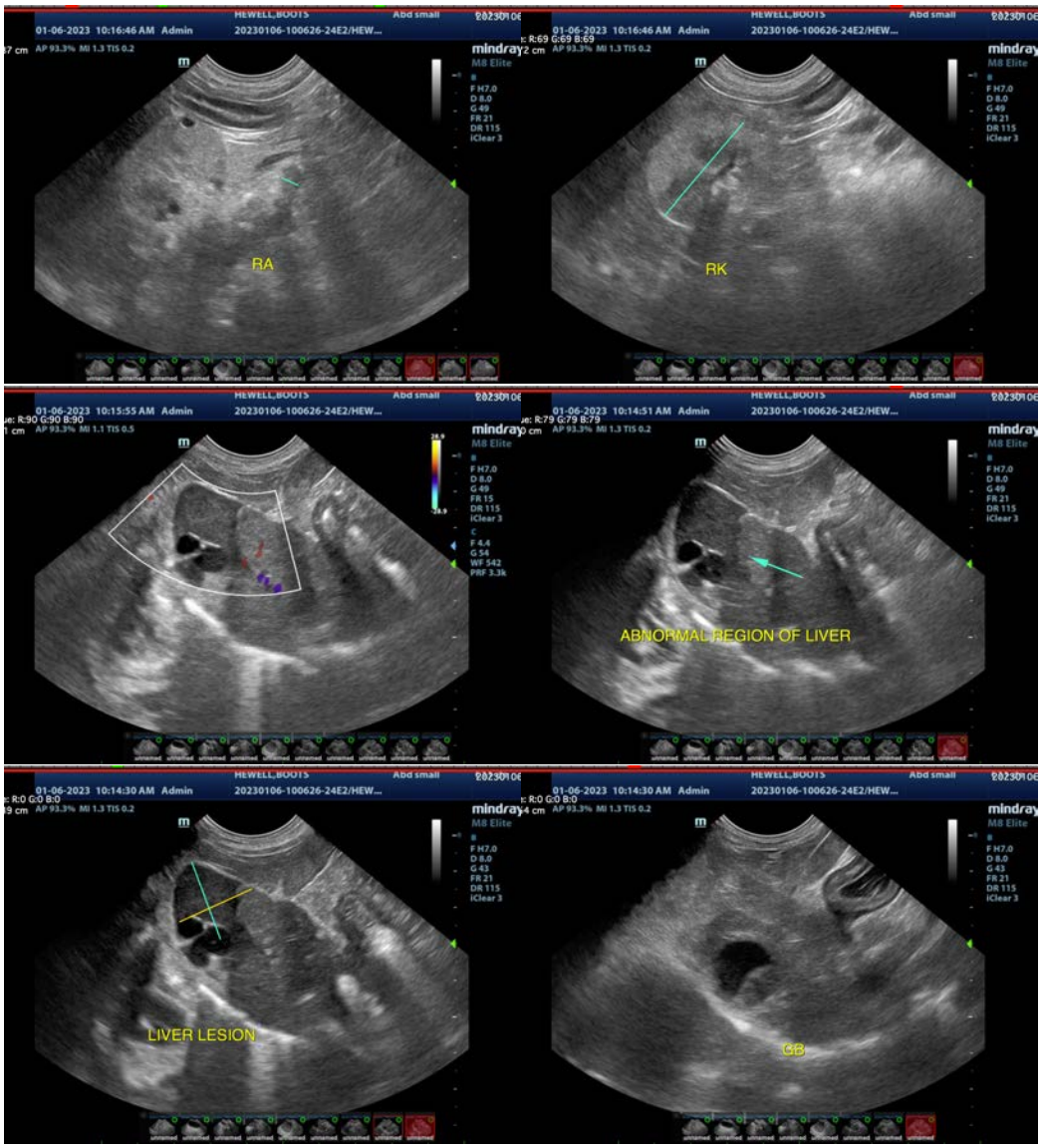
this area of the liver (provided coagulation parameters are normal). If a cytologic diagnosis cannot be obtained, then it is likely that a contrast CT scan would be necessary to investigate further, or you could consider reevaluation with ultrasound in the future.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.



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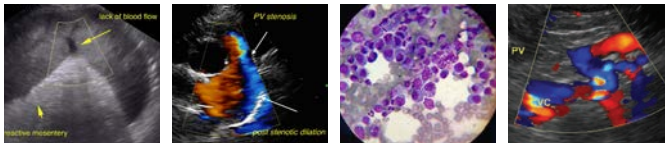

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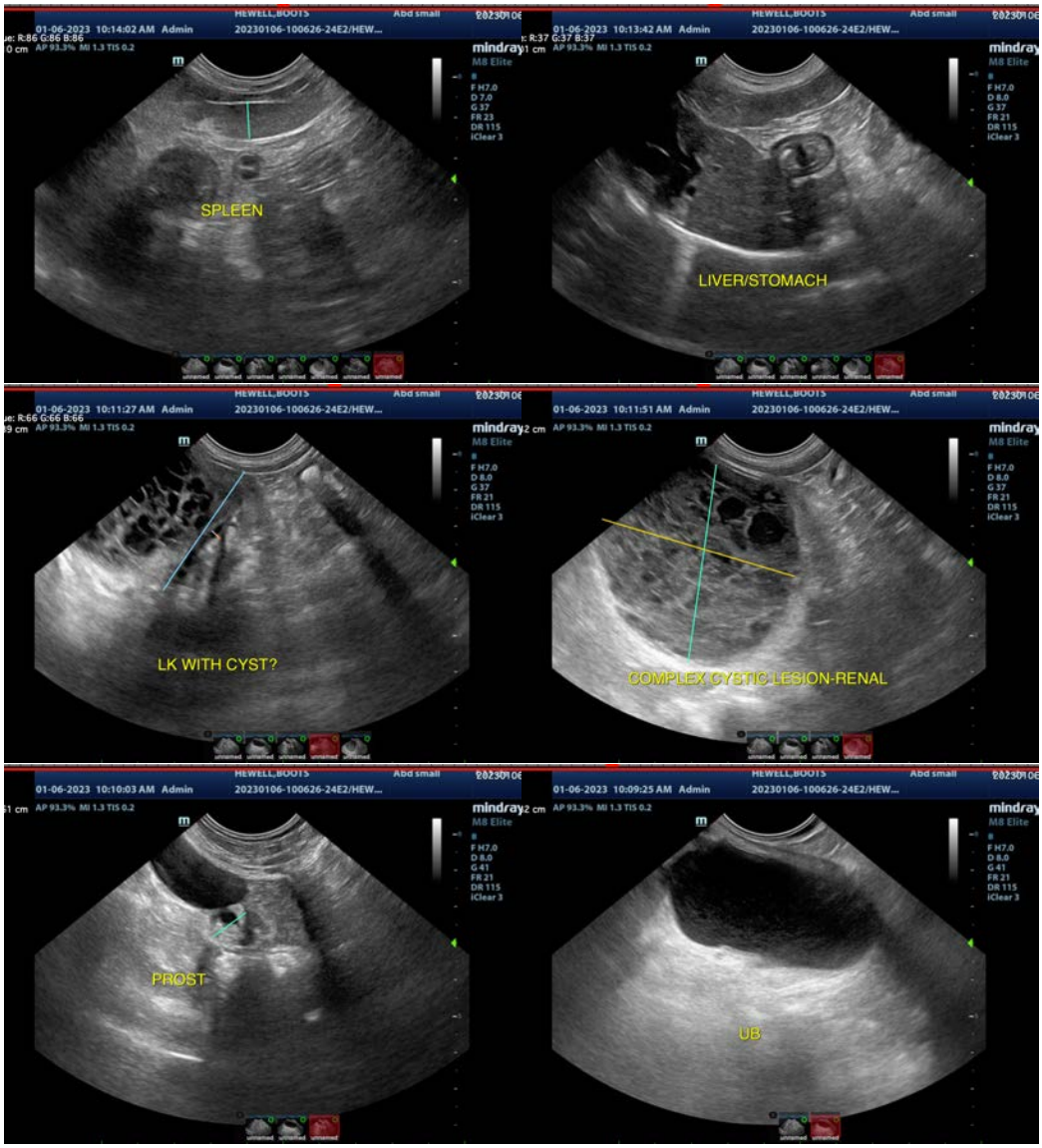

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

kathleen.sennello@sonopath.com