



PATIENT PRESENTING CLINICAL SIGNS

Shell Fox History: Acute onset of vomiting and lethargy. Last night ALP was in the 200s and ALT was in the mid-100s with normal tBili. Today tBili is 3.0, and ALP and ALT substantially higher.

SPECIES

Canine

BREED

Puggle

SEX

Spayed Female

AGE

13 years

WEIGHT

NP

INTERPRETED BY

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

IMAGING PERFORMED BY

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

HOSPITAL NAME

Pet Vet AH
Mt Pleasant

REFERRING VET

Dr. Allison

INVOICE

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DATE

7.28.23

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is mildly to moderately distended. The wall is mildly thickened (up to 0.51 cm). The mucosal surface in the region of the apex is irregular. A small amount of echogenic-to-mineralized debris and tiny calculi are observed within the lumen. The region of the trigone and the proximal urethra, visible to a depth of 2 cm, are normal.

The left kidney is normal in size (4.38 cm in length) with a slightly irregular shape. The cortex is isoechoic relative to the spleen. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. Mineralized foci are visualized. Mild pyelectasia is present (0.27 cm in the longitudinal plane). There is no evidence of infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney is normal in size (5.22 cm in length) with a slightly irregular shape, architecture and smooth peripheral margins. The cortex is isoechoic relative to the spleen. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. Several, small, nonobstructive foci of mineralization are visualized. Trace pyelectasia is present. There is a suspected cortical infarct at the lateral aspect. There is no evidence of hydronephrosis. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is enlarged (1.00 cm at cranial pole) (0.62 cm at caudal pole) with an irregular shape. A 1.07 x 0.89 cm hyperechoic nodule is observed at the caudal pole. The parenchyma at the cranial pole is slightly heterogeneous, with minor loss of detail. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is mildly enlarged (1.60 cm at cranial pole) (0.89 cm at caudal pole) with a slightly irregular shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

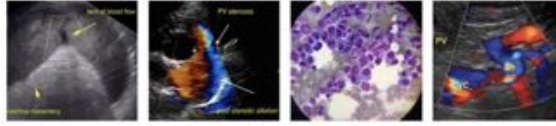
Spleen

The spleen is normal in size (1.19 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

Liver

The liver is normal to prominent in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to the spleen and subtly mottled in appearance. No distinct focal lesions are observed. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1: 1.

The gall bladder is severely distended. The wall is normal in thickness. There is questionable loss of normal wall integrity near the gallbladder neck. A large amount of aggregated, echogenic, suspended sludge is observed within the lumen and is suspected to extend into the cystic duct. The mesentery effacing the serosal surface of the gallbladder is hyperechoic and appears adhered. Trace fluid is observed adjacent to the gallbladder.



PATIENT *Gastrointestinal*

Shell Fox
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 is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The ileocecolic junction and colonic wall are normal. There is no evidence of an obstructive pattern.

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Pancreas

The pancreas is diffusely prominent in size with slightly irregular peripheral contours. The parenchyma is hypoechoic relative to surrounding omental fat. No focal lesions are observed. The pancreatic duct is not overtly dilated. The mesentery effacing the serosal surface is mildly hyperechoic.

Free Abdomen

The mesentery in the cranial abdomen is hyperechoic. Trace free fluid is observed. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

Other

A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

ULTRASONOGRAPHIC FINDINGS

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Primary Findings

- Gallbladder mucocele. There is suspected rupture or impending rupture with adjacent peritonitis.
- The pancreatic changes are suggestive mild pancreatitis.
- The hepatic parenchymal changes are nonspecific may be secondary inflammatory disease, age-related remodeling, microscopic regenerative nodular hyperplasia or other hepatopathy.
- Left adrenal nodule. Differentials include adenoma, adenocarcinoma, pheochromocytoma, inflammatory focus, other. Mild bilateral adrenomegaly.

Secondary Findings

- Bilateral chronic renal changes with nonobstructive nephrolithiasis, pyelectasia, and a suspected right cortical infarct.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- An emergency cholecystectomy with submission of the gallbladder for histopathology, +/- aerobic and anaerobic bile cultures, along with liver biopsies is recommended. If surgery is pursued, also consider a cystotomy with stone removal, analysis and culture, if the patient is stable. Prior to anesthesia, three-view thoracic radiographs and clotting times should be performed. Supportive measures (i.e., broad-spectrum antibiotics, pain medication and fluid therapy) should be initiated.



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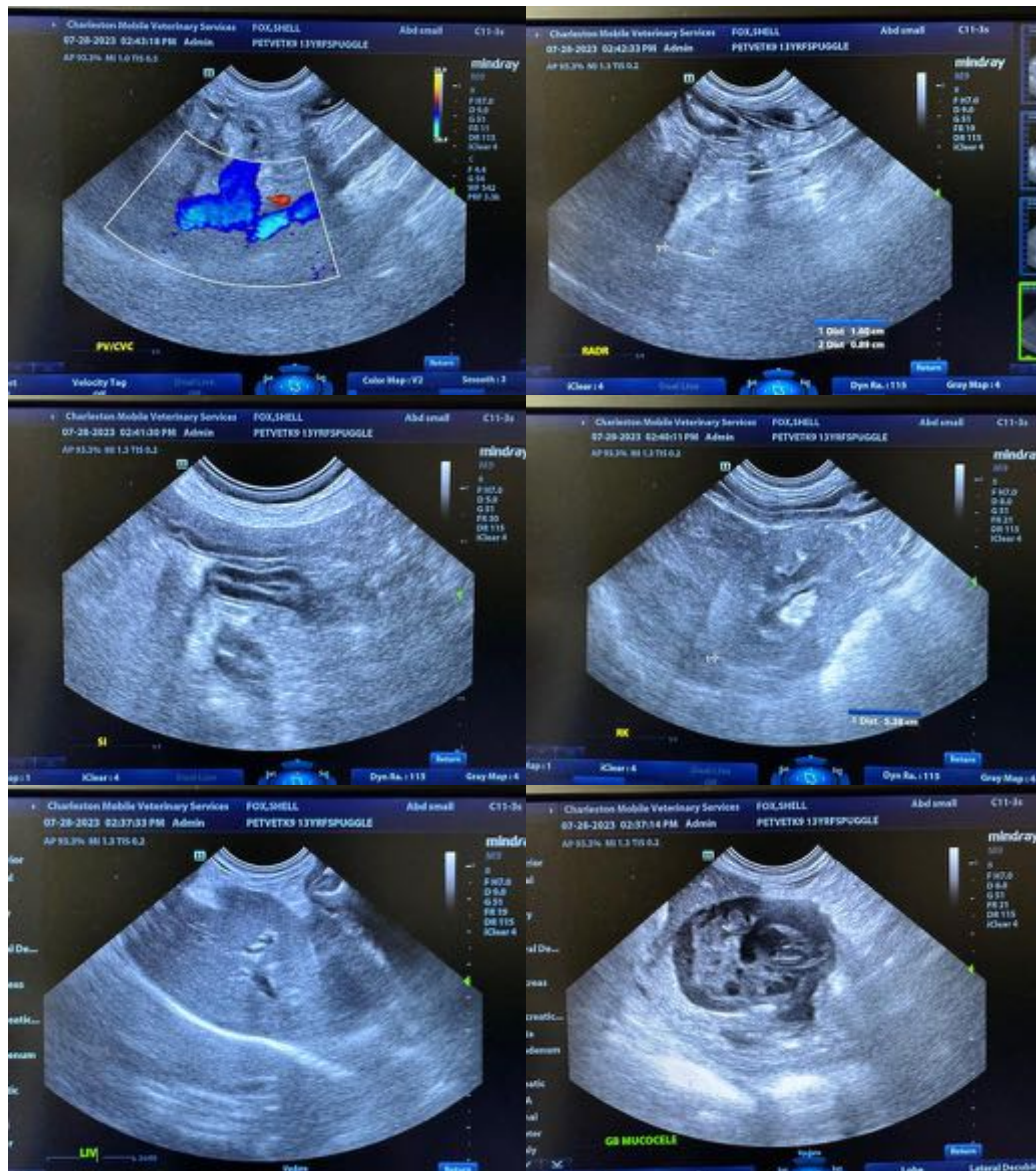
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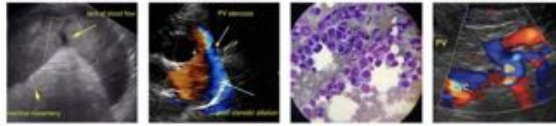
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- Regarding the left adrenal nodule, consider the following when the patient is stable:
 1. Baseline blood pressure measurement
 2. Further testing for a functional tumor (i.e., low-dose dexamethasone suppression test, urine/blood catecholamine levels) particularly if the patient is exhibiting appropriate clinical signs.





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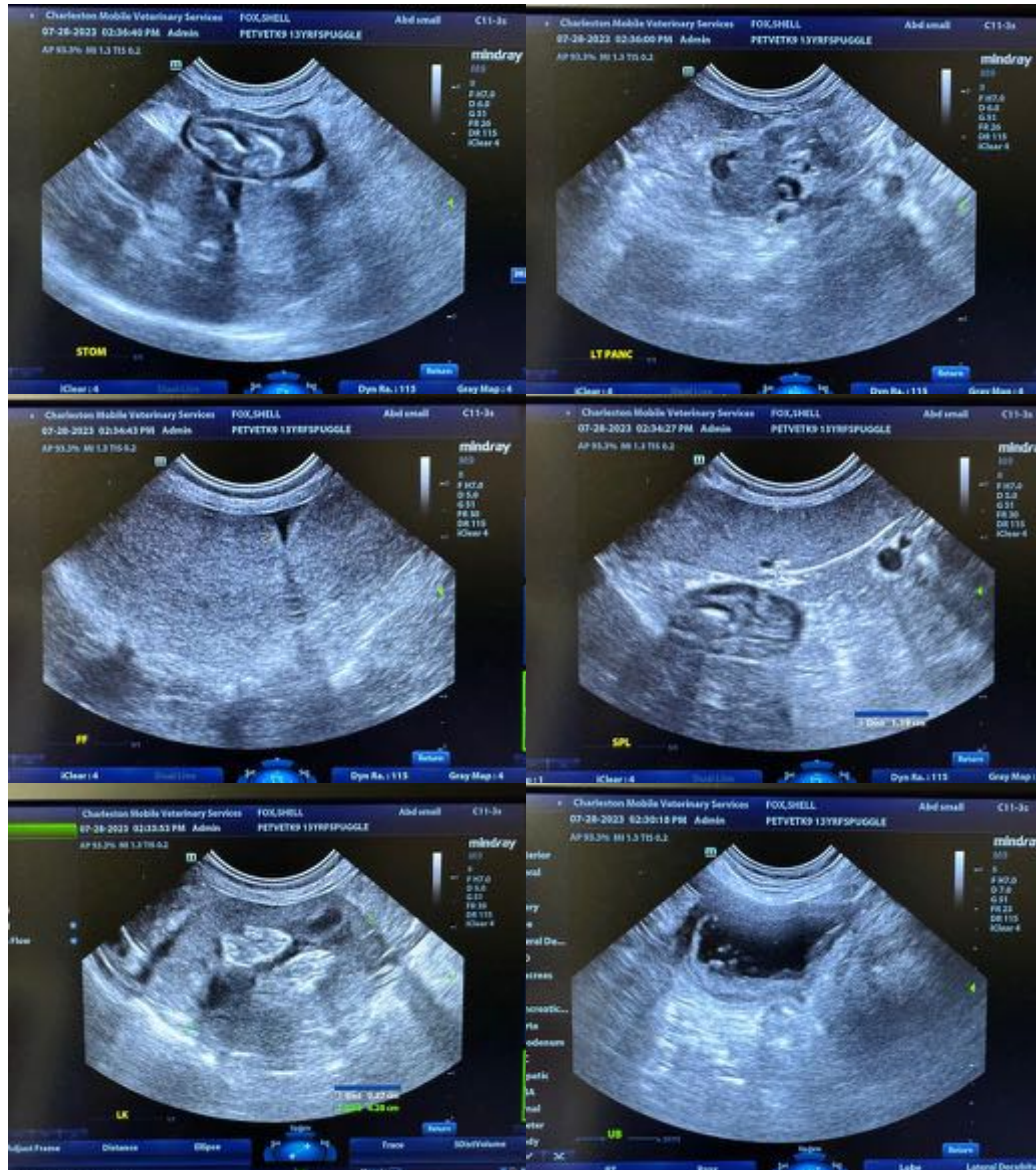
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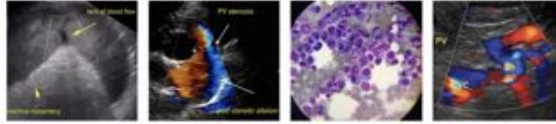
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be



PATIENT of any further assistance, please contact me.

Shell Fox **Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)**
info@SonoPath.com

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