



PATIENT PRESENTING CLINICAL SIGNS

Frodo Papagiannis History: Frodo is experiencing severe abdominal pain and shaking, anorexic and has mucousy diarrhea. Ursodial 125 mg SID Gabapentin 100 mg

SPECIES Abnormal PE/Chem/CBC/UA Results: Elevated ALT, ALK, T bilirubin. Rads - calcium type deposits seen on cranial abdomen, unsure if in stomach or gall bladder. Enlarged liver. DJD spine.

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

BREED *Urinary System*

Bichon Frise/Maltese The urinary bladder is mildly distended with mostly anechoic urine. The wall is thickened (up to 0.47 cm) and irregular in the region of the apex. No cystic calculi are observed. The region of the trigone and visible portion of the proximal urethra are normal.

SEX

Neutered Male The prostate is normal in size (1.18 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

AGE

14 years The left kidney is normal in size (5.00 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. A few small cortical cysts are seen. Mild pyelectasia is present (0.30 cm in the longitudinal plane). There is no evidence of infarcts or hydronephrosis. Renal vasculature is normal.

WEIGHT

9.4 kg The right kidney is normal in size (4.96 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

INTERPRETED BY

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Adrenal Glands

The left adrenal gland is normal in size (0.51 cm at cranial pole) (0.34 cm at caudal pole) with a normal 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.

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Crystal Hill

The right adrenal gland is in normal size (0.79 cm at cranial pole) (0.45 cm at caudal pole) (1.29 cm in length) with a normal 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.

HOSPITAL NAME

Snelgrove VS

Spleen

The spleen is normal in size (1.15 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. A few small myelolipomas are observed in the region of the hilus. Splenic vasculature is normal.

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McQueen

Liver

The liver is prominent in size with normal curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and subtly mottled in appearance. A 1.43 cm hypoechoic, slightly cavitated nodule is observed deep on the left side. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

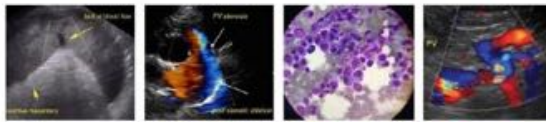
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The gall bladder is of normal contours and contains some dependent echogenic debris. The wall is normal in thickness. No choleliths are observed. The cystic and common bile ducts are normal/not seen.

DATE

2.15.23



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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. There is no evidence of an obstructive pattern.

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.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The cystic hepatic nodule could be consistent with a benign cystic regenerative nodule, inflammatory focus, or emerging tumor. The diffuse hepatic parenchymal changes are nonspecific and could be associated with inflammatory disease (i.e., chronic hepatitis, bacterial cholangiohepatitis), hepatotoxicosis (i.e., copper), regenerative nodular hyperplasia, infiltrative neoplasia (less likely), other hepatopathy. Correlation with the patient's liver values is recommended.

Secondary Findings

- The urinary bladder wall changes may be artifactual due to lack of full distention. Alternatively, cystitis may be present. Correlation with the patient's clinical history is recommended.
- Bilateral chronic age-related renal changes with dystrophic mineralization with left pyelectasia

*An obvious cause for the patient's clinical signs is not definitively identified in this study. Considerations include pyelonephritis, mild pancreatitis, non-abdominal disease (i.e., orthopedic or neurologic pain), other.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Regarding the severe abdominal pain, consider the following:
 - Urine culture and sensitivity to assess for occult pyelonephritis
 - cPLI to assess for mild pancreatitis
 - Orthopedic and neurologic examinations to assess for nonmetabolic causes of pain.
 - Whole-body radiographs to assess for bony lesions
- Regarding the elevated liver values, consider the following:
 - Pre-and postprandial serum bile acids (if the total bilirubin is not substantially elevated)
 - Leptospirosis testing (i.e., blood and urine PCR, serology)
 - Hepatic tissue sampling (i.e., fine-needle aspirate or biopsies) +/- aerobic and anaerobic bile cultures and hepatic copper quantitation (if biopsies are pursued)
 - Clotting times and thoracic radiographs should be performed prior to invasive procedures.



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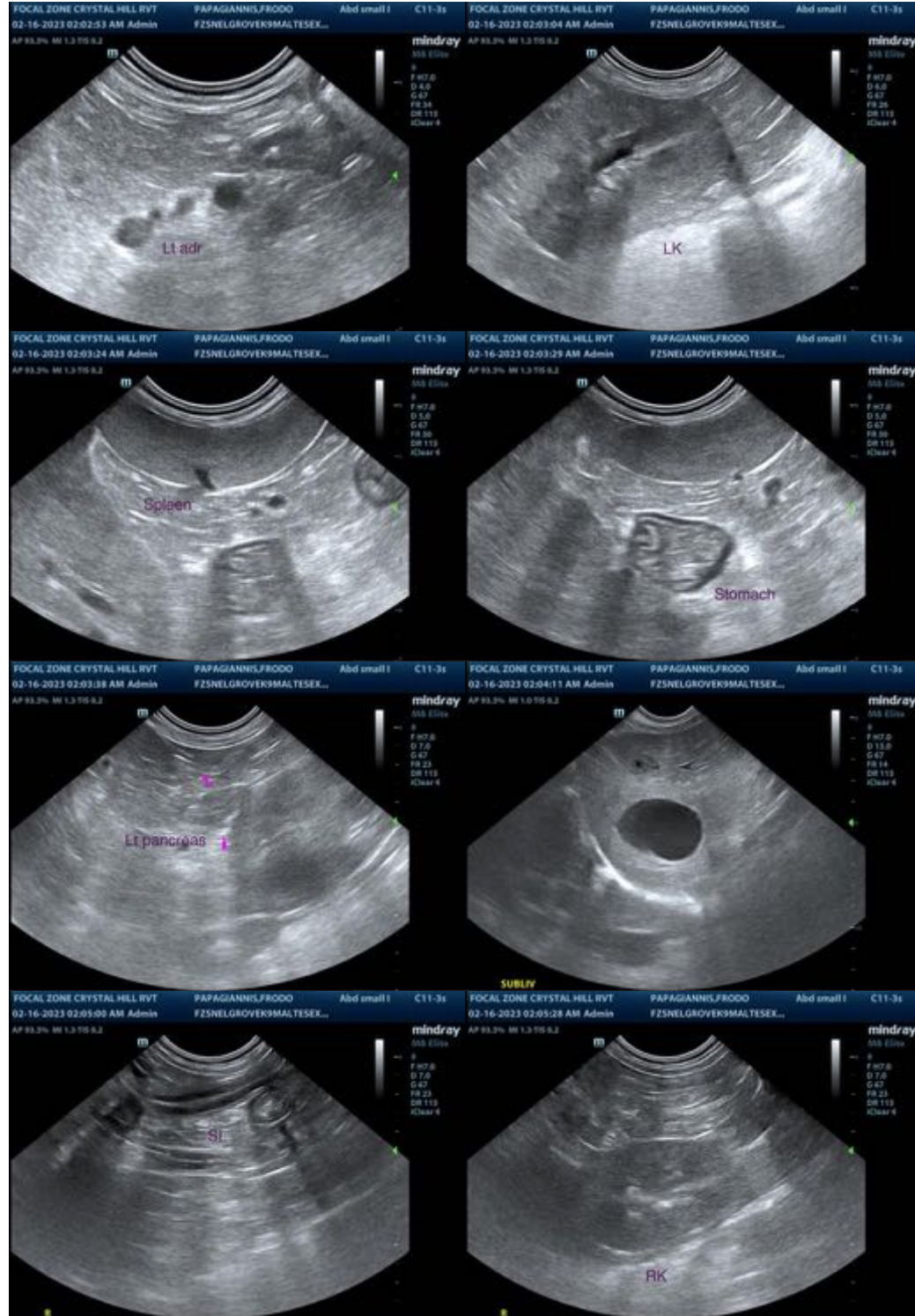
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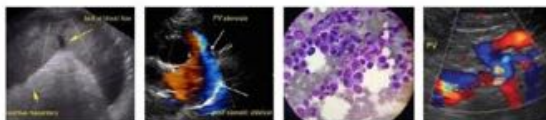
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.



PATIENT

Frodo Papagiannis

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.

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