SonoPath
Clinical Sonography & Telecytology
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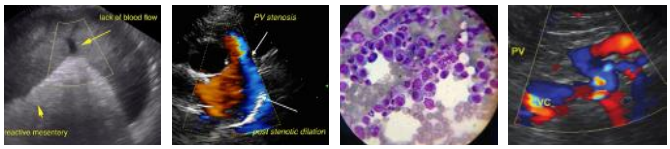


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Precious Francis

SPECIES
Feline

BREED
DLH

SEX
Spayed female

AGE
19 years

WEIGHT
6.9 kg

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

IMAGING PERFORMED BY
Dave Stasiuk

HOSPITAL NAME
Resolution Veterinary Ultrasound

REFERRING VET
Dr. Laurina DeBoldus

INVOICE
10426ag

DATE
04/19/2022

PRESENTING CLINICAL SIGNS

History: Hypokalemia. Possible adrenal mass. Hyperthyroid. Stage 2 CKD. Aldosterone pending.

Abnormal PE/Chem/CBC/UA Results:

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with mild primarily suspended echogenic debris present. 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 calculi. Echogenic debris of this type can be associated with small crystals, cellular debris and proteinaceous debris.

The left kidney has a normal shape and size. (3.39 cm) Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size. (3.69 cm) Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.47 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is large in size measuring 1.6 cm in diameter. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is hyperechoic and rounded creating a mass effect. This adrenal normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect measuring 1.58 cm x 1.12 cm. No evidence of any vascular irregularities were present.

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.

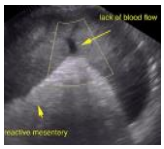
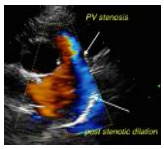
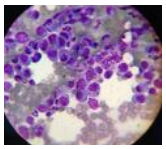
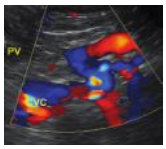
Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogeneous echotexture. The visible portions of the vasculature and biliary tract appear normal. There is an ill-defined hyperechoic lesion visualized in the right side of the liver measuring 0.69 cm x 0.61 cm. This area appears more heterogeneous than the left side of the liver.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.36cm 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.

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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. The duodenum measured as normal (between 0.13-0.38 cm in wall thickness) and the jejunum measured as normal (between 0.15-0.36 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 prominent and hypoechoic 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.

Other

There is a discrete cystic structure caudal medial to the ileocecal junction measuring 2.3 cm x 1.7 cm most consistent with an omental cyst. Additionally, near the spleen there are small cystic lesions within the omentum.

ULTRASONOGRAPHIC FINDINGS

- The echogenic debris in the bladder lumen could be consistent with cells, crystals, and/or mucus. Recommend urinalysis and culture
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- Mildly heterogenous liver with ill-defined hyperechoic nodule visualized. Hepatic changes are non-specific and could be consistent with inflammation/infection (cholangiohepatitis), infiltrative neoplasia, lipidosis or other hepatopathy. The lesions could represent benign or neoplastic change.
- Right adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.
- Suspect omental cyst-likely incidental.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Based on the history provided, I agree that aldosterone testing is a good idea due to the right adrenal mass. This could represent a benign or cancerous lesion secreting aldosterone or not secretory. Recommend BP evaluation, three view thoracic radiographs and likely surgical removal +/- preoperative CT to look for any evidence of metastasis or vascular invasion.

The liver is somewhat heterogenous and there is an ill-defined mass effect on the right side of the liver. These lesions could be evaluated and biopsied at the time of surgery or a FNA could be considered.

Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.

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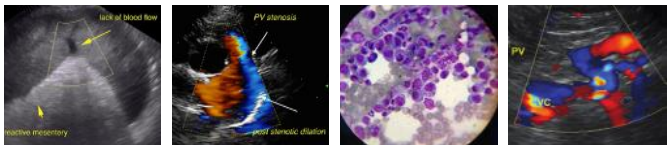

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Recommend a UA and C/S to further evaluate the echogenic debris in the urinary bladder.

There are mild changes observed in the pancreas, I suspect these are consistent with previous episodes of pancreatitis but if current active pancreatitis is suspected then consider a quantitative PLI level.

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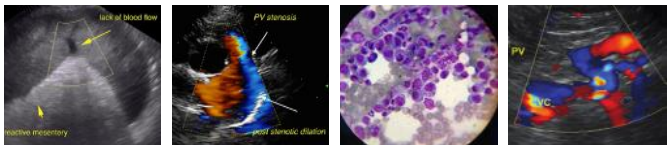

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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