

**DATE PRESENTING CLINICAL SIGNS**

3/3/23 2/28 not eating for 3 days, no vomiting or diarrhea noted per owner.

PATIENT

Sadie Gosnell

Current Medications: 2/28/23 Cerenia 0.75mL SQ, 150mL lactated ringers SQ. Sent home with 4 doses #1 QD of Cerenia 16mg.

Lab Results: See attached.

Radiographs: See attached.

SPECIES

Canine

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Andi Parkinson, RDMS.

BREED

Shih Tzu

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**SEX**

Spayed Female

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, or masses. There are two hyperechoic foci visualized in the dependent portion of the urinary bladder, one measures 0.27 cm and one measures 0.38 cm. The larger mineralization is not observed as mobile, so mineralization of the bladder wall cannot be ruled out. Most consistent with small bladder stones.

AGE

7/31/12

The left kidney has a normal shape and size (4.31 cm) with numerous small linear non-obstructive nephroliths varying in size from 0.20-0.50 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 pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

WEIGHT

15 lb 3 oz

The right kidney has a normal shape and size (4.45 cm) with numerous small linear non-obstructive nephroliths varying in size from 0.20-0.50 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 pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

INTERPRETED BY

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

Adrenal Glands**HOSPITAL NAME**

Chadwell AH

The left adrenal gland is normal in size measuring 0.72 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.

REFERRING VET

Dr. Oliveri

The right adrenal gland is normal in size measuring 0.54 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.

INVOICE

45710

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 heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a largely smooth mucosal surface, but there is a small lesion visualized associated with the gallbladder wall. This is a small, rounded tissue density structure with a hyperechoic wall, possibly consistent with a cystic lesion, atypical polyp, etc., measuring 0.38 cm x 0.39 cm. 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 0.39 cm. Jejunum wall measures 0.31 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 mildly prominent and mottled compared to the surrounding isoechoic 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.

PRIMARY FINDINGS

- Two mineralizations visualized in the urinary bladder – Correlate these findings with abdominal radiographs, urinalysis and culture. These likely represent very small stones, but mineralized bladder wall cannot be ruled out.
- Decreased corticomedullary distinction in both kidneys with numerous small non-obstructive nephroliths – The bilateral renal findings are consistent with age-related change. The hyperechoic mineralized foci observed at the corticomedullary junction of the left/right kidney are consistent with small, non-obstructive nephroliths.
- Mildly heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. In the absence of liver enzyme elevations, this could represent age related remodeling.
- Cystic structure visualized in the gallbladder – The nature of this lesion is unclear but is likely an incidental finding at this time. Recommend continued monitoring.

SECONDARY FINDINGS

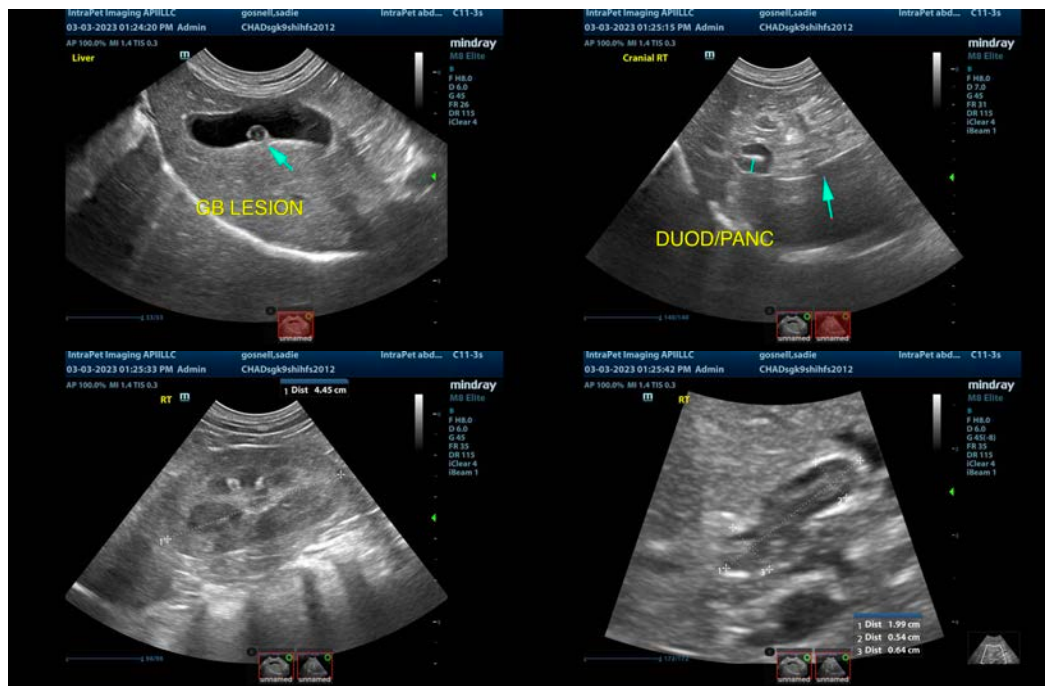
- Prominent, mottled pancreas – The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

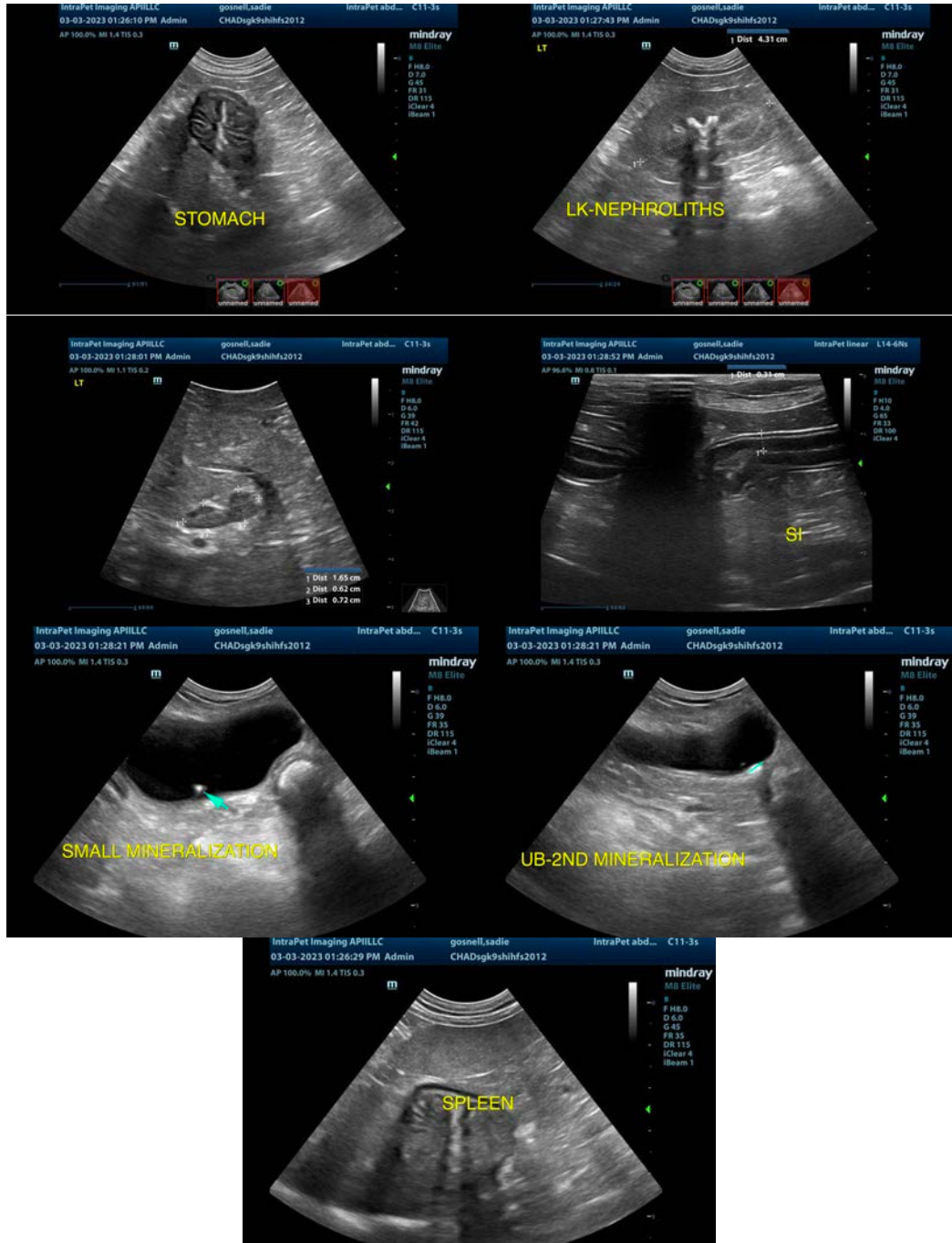
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

An obvious cause for the anorexia reported is not visualized on today's exam. Many of the changes described are likely within normal limits for an 11 year old Shih Tzu. There are two mineralizations in the urinary bladder wall. Recommend urinalysis, culture, and radiographs to try to identify these. They are small and could possibly pass. Continued monitoring is warranted.

No lesions were visualized associated with the gastrointestinal tract or the stomach. Unfortunately, you can still have underlying gastrointestinal disease without significant changes on ultrasound, as there are many causes for vomiting and anorexia that cannot be diagnosed by ultrasound alone. If underlying gastrointestinal disease is suspected, you could consider a GI panel to Texas A&M for a qualitative PLI, TLI, cobalamin and folate to further evaluate the pancreas and small intestine.

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





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.

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