



**PATIENT**

Sugar Yuan

**SPECIES**

Canine

**BREED**

Miniature Schnauzer

**SEX**

Spayed Female

**AGE**

14

**WEIGHT**

9 kg

**INTERPRETED BY**

Eric Lindquist, DMV

DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Stephanie Permenter

**HOSPITAL NAME**

Viking Vet Hospital

**REFERRING VET**

Dr. Stephanie Permenter

**INVOICE**

45539

**DATE**

2/27/23

**PRESENTING CLINICAL SIGNS**

Presented last night for food bloat. Has been decompressed multiple times via orogastric tube but continues bloating.

Abnormal PE/Chem/CBC/UA Results: Mild ALT and ALP increased, ALP >2000.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **urinary bladder** was overdistended with suspended debris. Structurally unremarkable. The pelvic urethra was imaged 1.0 cm beyond the cystourethral junction.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex. Slight pinpoint mineralizations noted. the left kidney measured 5.7 cm. Pyelectasia noted in both kidneys, 0.40 cm on the right. The right kidney measured 5.6 cm.

**Adrenal Glands**

\*\*See spleen regarding left adrenal gland.

The **right adrenal gland** measured 0.60 cm at the cranial pole and 0.60 cm at the caudal pole. Parenchyma was uniform, no evidence of pathology.

**Spleen**

The **spleen** was folded on itself caudally and displaced caudally owing to gastric overdistention. It appeared to be impinging upon the cranial pole of the left kidney and occupying an area close to the left adrenal gland. An approximately 3.0 cm x 2.0 cm tissue structure was noted in this region in one view. I could not discern an adrenal mass versus a splenic fold. Free fluid noted in the region. Minor heterogeneous parenchymal changes noted in the spleen elsewhere. Slight splenic mineralization noted. Trace amount of ascites noted adjacent to the splenic fold.

**Liver**

The **liver** was uniformly swollen with minor, excessive gallbladder debris and over distension with dependent and suspended bile without evidence of overt mucocele formation. However, excessive sludge was present. The gallbladder wall was echogenic and thickened, consistent with fibrosis/porcelain gallbladder. The liver presented coarse architecture with mildly increased portal markings and subtle, mixed echogenic changes. This is consistent with vacuolar hepatopathy and some level of remodeling and history of inflammatory component. There was no overt suspicion of neoplasia.

Portal vein to vena cava ratio was 1:1. Slight hepatic lymph node prominence noted at 1.5 cm x 0.50 cm.

**Gastrointestinal**

The **stomach** was overdistended with chyme and some shadowing material consistent with kibble. The pyloric antrum appeared to have a thickened wall up to 1.2-1.4 cm and appears to be deviated or rotated. The small intestine and colon were unremarkable.



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**Pancreas**

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

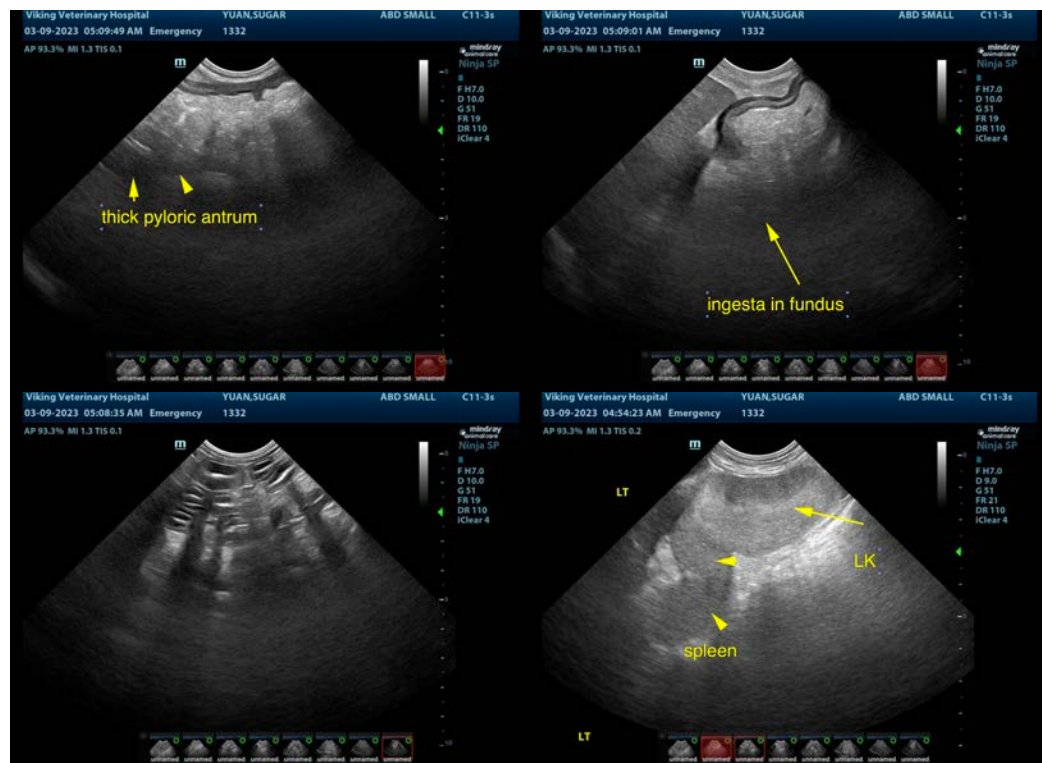
**ULTRASONOGRAPHIC FINDINGS**

- Bloating presentation with pyloric thickening and possible partial rotation
- Tissue density in the region of the left adrenal gland – This may be an oblique angle of the folded spleen.
- Displaced spleen
- Subjectively benign hepatopathy with porcelain gallbladder/gallbladder fibrosis
- Mild chronic renal changes with pyelectasia

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

No overt thrombus noted. I recommend exploratory surgery in this patient, mainly to evacuate the stomach, inspect the spleen for integrity, and the left adrenal region. Examination and palpation of the pyloric outflow with gastric biopsies also indicated. There is a mild potential for underlying pyloric neoplasia in this patient. The free fluid is concerning as well as the persistent bloat despite medical management. If the patient is stable, 12-16 hour NPO and recheck sonogram of the pyloric outflow SDEP 9-13 could also be considered as an option. If the patient is declining, then exploratory is essential.

*Radiographs: Severe bloat, hepatomegaly, excessive GI gas. Suspect partial volvulus.*





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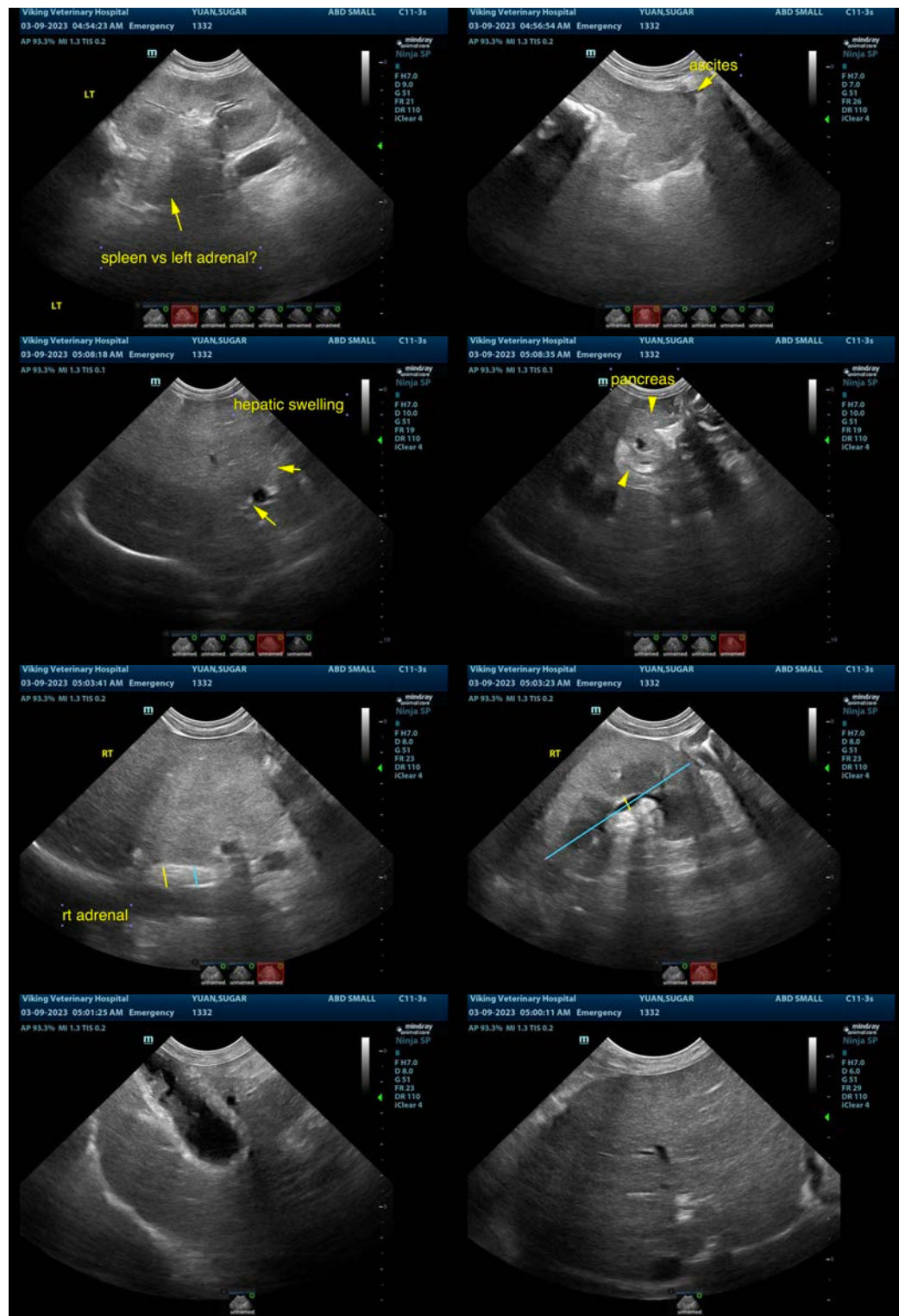
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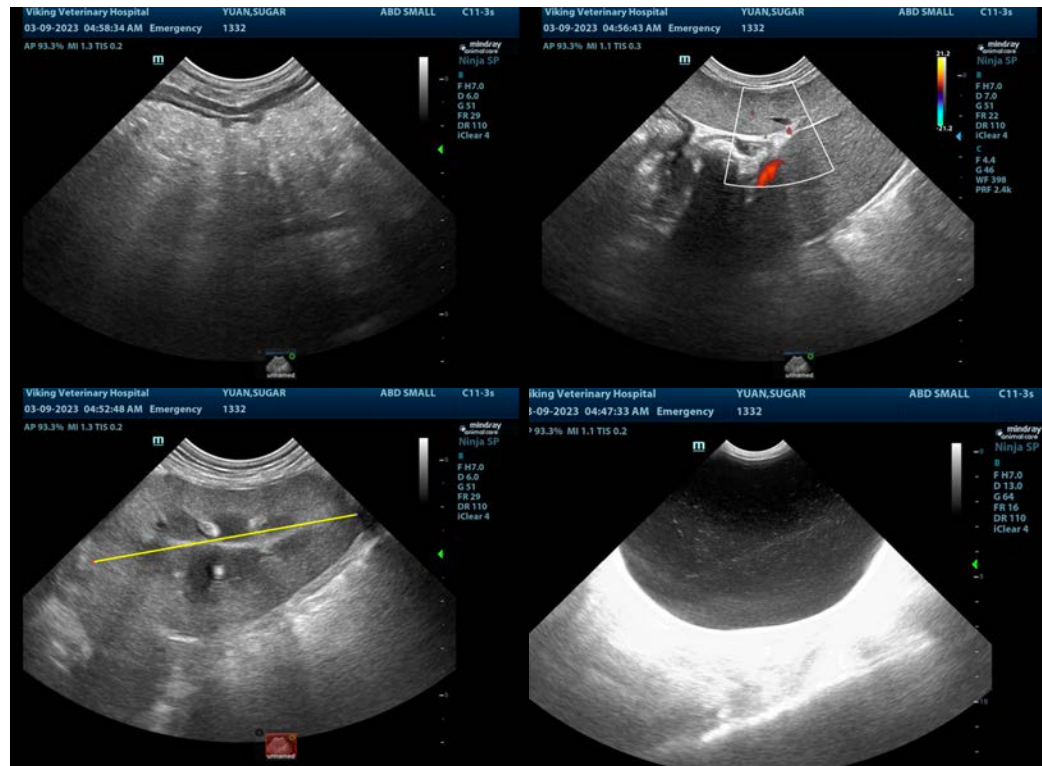
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com

[info@SonoPath.com](mailto:info@SonoPath.com)