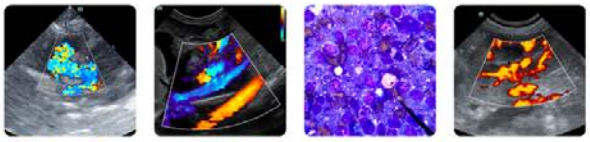


PATIENT

Toby Keith Goldman

SPECIES

Canine

BREED

Miniature Schnauzer

SEX

Neutered Male

AGE

10 Years

WEIGHT

23 lbs

INTERPRETED BY

Tam Mengine, DVM, DABVP (canine/feline practice)

IMAGING PERFORMED BY

Juli Sorenson

HOSPITAL NAME

Emergency Veterinarians of Idaho

REFERRING VET

Valley Vet

INVOICE

72788

DATE

2/826

PRESENTING CLINICAL SIGNS

Transferred for ultrasound - elevated liver enzymes.

Abnormal PE/Chem/CBC/UA Results: Leukopenia, ALT 130, ALP 374, Amylase 1656, Lipase 3126, Pancreatic Lipase 1144

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine, and no luminal sediment is present. The ureteral papillae, trigone and pelvic urethra (visible to 3.0 cm) are of normal appearance, and the ureters are not visible (normal). No masses, calculi or mucosal irregularities are noted.

The prostate is of appropriate size for patient age and neutering status, with a homogenous parenchyma and smooth capsule. The prostatic urethra is non-dilated with normal margins.

The kidneys are of normal size and shape and exhibit appropriate corticomedullary differentiation with a normal 1:3 cortex to medulla ratio. There is no evidence of nephrolithiasis, mineralization, pyelectasia, cystic change or hydronephrosis. The proximal ureter is not visible (normal). Left measures 4.2 cm. Right measures 5.0 cm.

Adrenal Glands

The adrenal glands are both identified in their normal locations. They are normal in size and shape with appropriate parenchymal echogenicity and normal phrenic vasculature. Left measures 3.4 mm at the cranial pole and 4.2 mm at the caudal pole. Right measures 4.1 mm at the cranial pole and 4.1 mm at the caudal pole.

Spleen

There are multiple hyperechoic masses within the splenic parenchyma with no visible deviation of the splenic capsule. There are also several hypoechoic nodules noted within the parenchyma, which do not exhibit capsular deviation, and all measure <1.0 cm in diameter. The splenic vasculature is normal with no evidence of congestion or thrombosis, and blood flow through the splenic hilus appears normal.

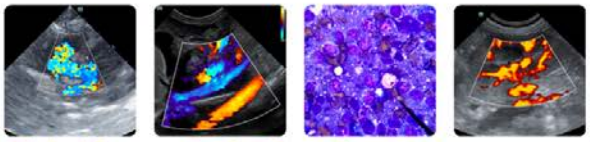
Liver

The liver is of appropriate size and shape, with sharp borders and a mildly coarse parenchymal echotexture that is hypoechoic to the spleen. The portal and hepatic vasculature are of normal size and appearance with no evidence of congestion or thrombosis.

The gallbladder is distended with sludge, some of which is showing early evidence of organization. The wall is normal with no evidence of regional inflammation or rupture. The cystic and common bile ducts are normal / not visible.

Gastrointestinal

The stomach is mildly distended with ingesta. The gastric wall is 2.88 mm with normal deviations due to rugal folds, and exhibits appropriate wall layering. The pylorus is of normal appearance.



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The visualized portions of the duodenum, jejunum, and ileum are of normal thickness with intact wall layering that exhibits the appropriate 1:3 muscularis to mucosa ratio. Intestinal motility appears normal.

The visible portions of the colon are of normal thickness (1.2 mm) with intact wall layering. The ileocecal junction is not seen.

Pancreas

The areas of the limbs and body of the pancreas are isoechoic to the surrounding mesenteric fat, with normal capsular appearance. There is no evidence of peripancreatic inflammation. The pancreatic duct appears normal.

Free Abdomen

There is no evidence of free fluid within the peritoneal cavity. The omentum and intra-abdominal fat are of appropriate echogenicity. Enlarged abdominal lymph nodes are not observed. The aortic trifurcation has normal blood flow with no evidence of thrombosis.

PRIMARY FINDINGS

- Gallbladder sludge showing early evidence of organization
- Hypoechoic splenic nodules

SECONDARY FINDINGS

- Hyperechoic splenic nodules, consistent with incidental myelolipomas

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Although the pancreas appears normal, sonographic evidence of pancreatitis can lag behind serum markers - thus, if the patient is symptomatic for pancreatitis, the elevated Pancreatic Lipase level would support that diagnosis, as would the breed. Gallbladder sludge is a normal finding in the dog, however there is evidence of focal organization / striation present, and the breed is one prone to mucocele formation. The liver parenchyma itself appears unremarkable, suggesting a benign reactive hepatopathy as a cause for the elevated ALT. The splenic hypoechoic nodules are a non-specific finding, and might be sen with nodular hyperplasia, extramedullary hematopoiesis, splenitis or less likely, neoplasia. Additional recommendations include:

- Screening for hyperlipidemia with a fasted triglyceride level is recommended, if not already performed
- Initiation of therapy with ursodiol
- Serial sonographic monitoring of both the gallbladder and the hypoechoic splenic nodules in 1 - 2 months. Sampling of splenic nodules could be performed, but may not be diagnostic.
- Reassessment of liver enzyme levels every 2-3 months - if the ALT continues to increase, then adding SAMe and silymarin would be recommended, and liver biopsies should be considered.
- Supportive care for pancreatitis is recommended if symptoms are present

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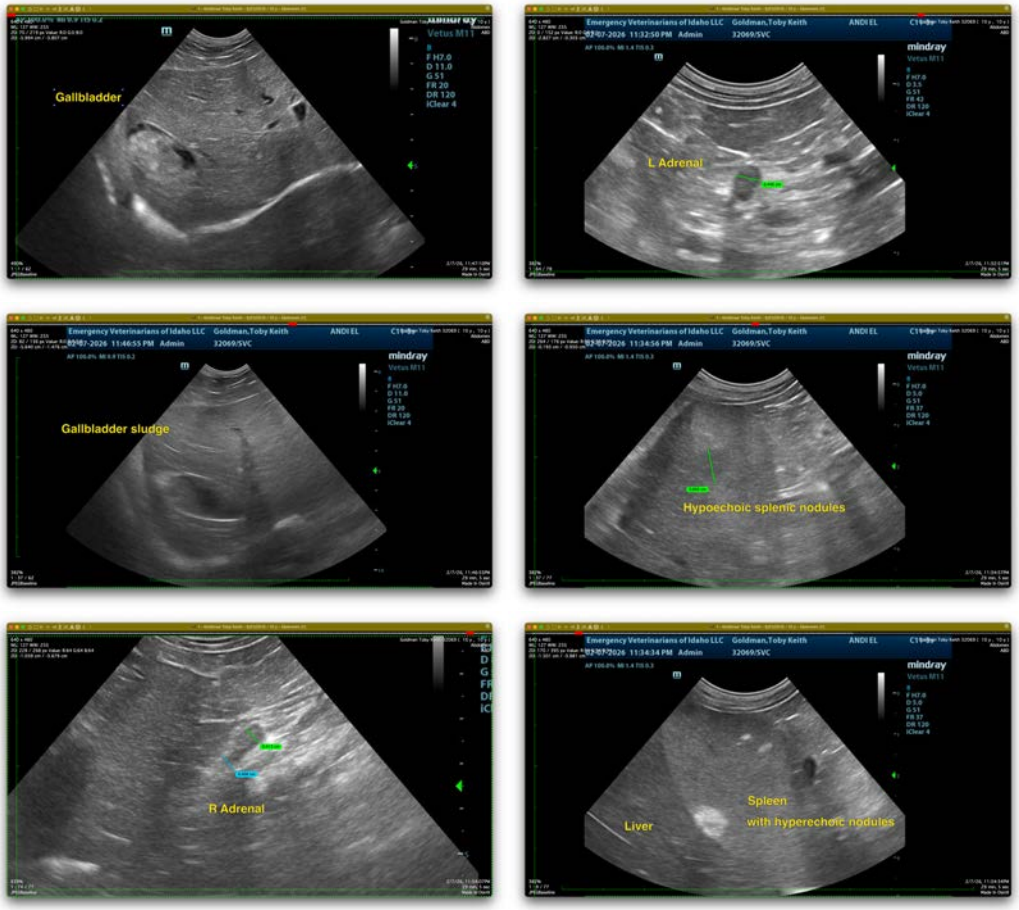

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Tam Mengine, DVM, DABVP (canine/feline practice)

info@SonoPath.com