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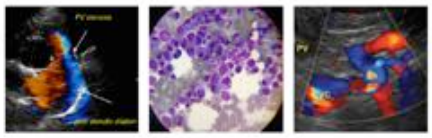
fredgromalak@gmail.com



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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PATIENT

Einstein Dalton
51880A

SPECIES

Feline

BREED

Domestic Shorthair

SEX

Neutered male

AGE

4 years

WEIGHT

7.27 kg

INTERPRETED BY

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY

Tom McNeill

HOSPITAL NAME

SVS Imaging CT

REFERRING VET

Madison Veterinary Specialists- Dr. Calhoun

INVOICE

31462

DATE

7/5/22

PRESENTING CLINICAL SIGNS

History: • This morning (7/4), owner noticed that Einstein was very lethargic/not himself • Eyes consistently half open as if he does not feel well • Owner found he had vomited 6 times- yellow bile • Owner does not usually see him eat or use the litterbox, unknown if it is normal • Drinking normally as far as owner knows- saw him drinking water yesterday Unknown if he could've eaten anything he's not supposed to
Abnormal PE/Chem/CBC/UA Results: Temp 104 on presentation (resolved), rest of physical exam NSF GLU-265 (74-159) BUN- 12 (16-36) TP- 9.1 (5.7-8.9) GLOB- 5.7 (2.8-5.1)
Patient was sedated with Butorphanol and dexmedetomidine.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is well distended with anechoic contents. The wall is smooth and regular. No abnormalities are noted with the trigone or proximal urethra, and there is no evidence of sediment, cystoliths, polyps or a mass.

Kidneys

The **left** kidney measures 4.20 cm (3.80-4.40 cm). The capsule is smooth. Its overall architecture, including the definition of the cortico-medullary junction, is preserved. There are no signs of nephroliths or pyelectasia. An accumulation of intrapelvic fat is noted. The surrounding mesentery is not hyperechoic.

The **right** kidney measures 4.51 cm (3.80-4.40 cm), mildly enlarged. The capsule is very mildly irregular (not significantly). Its overall architecture, including the definition of the cortico-medullary junction, is preserved. There are no signs of nephroliths or pyelectasia. An accumulation of intrapelvic fat is noted. The surrounding mesentery is not hyperechoic.

Aortic bifurcation/trifurcation

No abnormalities observed.

Adrenal Glands

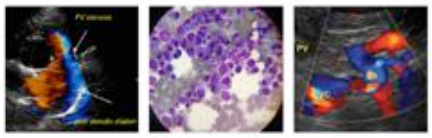
The **left** adrenal gland measures 0.53 cm at the cranial pole, 0.43 cm at the caudal pole and 1.17 cm in length. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

The **right** adrenal gland measures 0.55 cm at the cranial pole, 0.49 cm at the caudal pole and 1.16 cm in length. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

Although they are slightly enlarged for a cat, Einstein weighs 7.27 kg, therefore, they may be within normal limits for a cat of his stature.

Spleen

Mild splenomegaly (size 11.5 mm (normal = 10 mm). The spleen is within normal limits in echotexture, and echogenicity. The capsule is smooth. A hyperechoic nodule, measuring 0.23 cm x 0.27 cm, is



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present toward the tail. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

Liver

There are no obvious signs of hepatomegaly, however, the liver's borders appear "swollen" and rounded. The liver's echotexture is homogeneous and it is within normal limits in echogenicity. Focal lesions are not observed and no abnormalities are observed with the hepatic vessels.

The gallbladder wall is within normal limits in thickness and echogenicity. There is no evidence of echogenic material within the GB or edema surrounding it. The common bile duct measures 0.27 cm. The portions of the cystic and/or common bile ducts observed are not dilated or tortuous, i.e. there are no signs of an obstruction.

Gastrointestinal

The gastric wall is within normal limits in thickness and the wall layers are well defined. No obvious abnormalities are observed with its peristalsis.

The small intestinal wall thickness, including the duodenum (0.23 cm), is within normal limits and the definition of the wall layers is preserved. However, very mild fogging of the duodenal mucosa may be present when comparing its echogenicity to the jejunum. Some segments of jejunum show mild fogging and stippling. Fluid is present within the lumen.

The colonic wall is at the high end of the normal reference range (0.19 cm). Mural detail is considered normal, however the submucosa and muscularis layers are more prominent than usual.

Pancreas

No abnormalities are observed with the architecture, contours, or echotexture of the pancreas. However, subjectively, it is mildly hypoechoic with a hyperechoic capsule. The surrounding mesentery is not overtly hyperechoic, but mildly brighter than normal.

Other

A hypoechoic nodule, 0.33 cm x 0.34 cm, is visualized in the mesentery, in the region of the left limb of the pancreas. The mesentery surrounding the nodule is moderately hyperechoic. It is not vascularized. This nodule may be a small reactive lymph node or granuloma.

Lymph nodes (LNs)

A *hepatic* lymph node is mildly enlarged, measuring 0.36 cm in diameter x 2.15 cm in length, the surrounding mesentery is mildly to moderately hyperechoic. Its echogenicity is mildly hyperechoic.

Mesenteric LN: No abnormalities

Abdominal effusion

A scant amount of anechoic effusion is visualized in the left cranial abdomen.

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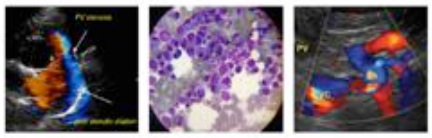

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ULTRASONOGRAPHIC FINDINGS

- **Gastrointestinal tract**: Very subtle signs are observed with the small intestines and colon, some of which are subjective. However, given Einstein's non-specific clinical signs, enterocolitis cannot be excluded. Underlying inflammatory bowel disease is possible.
- **Liver**: Cholangitis/cholangiohepatitis cannot be excluded.
- **Pancreas**: An overt pancreatitis is not present, however, a subtle, smoldering pancreatitis cannot be excluded.
- **Hypoechoic nodule** amongst the mesentery (region of the left limb of the pancreas). Differential diagnoses include a small reactive lymph node or granuloma.
- **Lymph nodes** (LNs): Mild reactive hyperplasia of the *hepatic* lymph node is suspected.
- **Abdominal effusion**: The scant amount of anechoic effusion (left cranial abdomen) may be due vasculitis, increased permeability of bowel loops, etc.
- **Spleen**: Mild splenomegaly most likely due to sedation. Other possibilities include reactive hyperplasia or splenitis. The hyperechoic nodule is most likely due to mineralization and/or deposition of fat
- **Adrenal glands**: Likely within normal limits for a cat of Einstein stature.
- **Kidneys**: The right kidney is slightly larger than the normal reference range, however, there are no abnormalities noted with its architecture, etc.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The following are suggested

FeLV/FIV

Arterial blood pressure

Fundic exam (if goes outdoors or if fungal infection possible)

A urinalysis to complete minimum data base and ensure pyelonephritis not "brewing" (enlarged right kidney)

Analgesia for visceral pain, such as buprenorphine (0.005-0.01 mg/kg sublingually every 8-12 hours) for a minimum of 10-14 days. Continue for 3-4 weeks, and possibly longer, if an improvement is noted. The dose and frequency may be weaned to the minimum effective dose and then administered as needed.

+/- gabapentin

Supportive care (maropitant, mirtazapine, IV fluids vs. SQ fluids, etc.)

Once eating and feeling better, deworm depending on risk of exposure, including other pets in house that go outdoors.

If still no improvement: cholangitis/cholangiohepatitis cannot be excluded, including a secondary ascending bacterial infection. Although indiscriminate use of antibiotics is not normally recommended,

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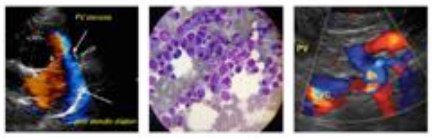

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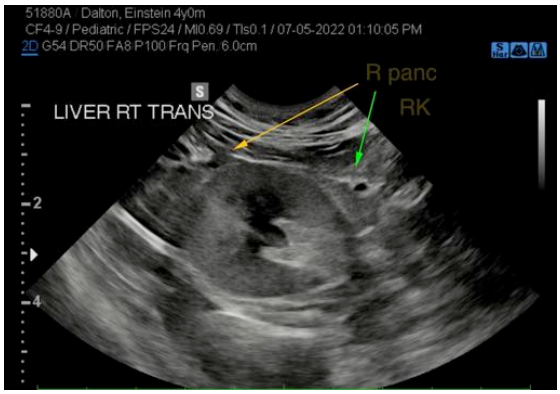
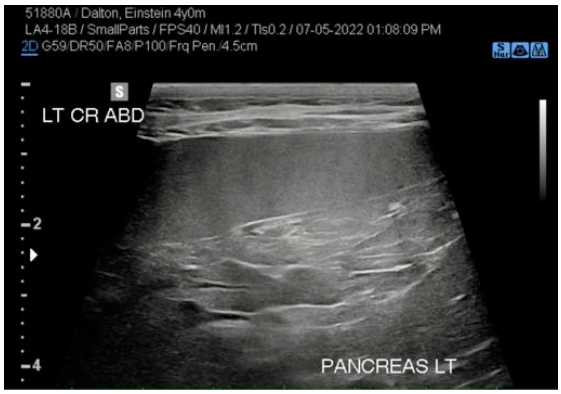
one could start treatment with a broad-spectrum antibiotic if an improvement is not observed with the above therapies.

Consider Spec fPL, cobalamin, and folate, to assess for hypocobalaminemia and dysbiosis depending on Einstein's response to the suggested treatments above.





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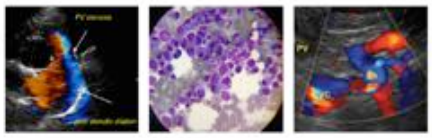

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

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