

PATIENT PRESENTING CLINICAL SIGNS

Ellie Goudis Ellie was scheduled for routine spay. Pre-surgical BW showed elevated ALT (434) and AST (84). She is randomly tilting towards right side. Concerned for liver shunt/microvascular dysplasia. 12/8/21: bile acids pre-prandial 23.7; post-prandial 125.9

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE URINARY BLADDER & LIVER

Urinary Bladder

BREED

Shi Poo

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths, calculi, or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

SEX

Liver / Gallbladder

Female Intact

The liver exhibited potential for subtle subnormal size. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The visualized portal vein exhibited subjective normal size compared to the caudal vena cava. The portal vein measured approximately 0.46 cm width. The caudal vena cava measured approximately 0.5 cm width. Likewise, the caudal vena cava to aorta ratio was essentially 1:1.

AGE

7 Months

The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

WEIGHT

7.2 lbs

Free Abdomen

No peritoneal effusion was present.

INTERPRETED BY

ULTRASONOGRAPHIC FINDINGS

R. McKenzie Daniel, DVM,
DABVP (Canine and
Feline)

- Overtly normal liver, potential for subtle subnormal liver size.
- Sonographically unremarkable urinary bladder - no sediment or calculi.

IMAGING PERFORMED BY

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Pamela Harrigan, RDCS

Overt evidence of a portosystemic shunt was not definitively noted in the study. However, given the post-prandial bile acid level greater than 100, the possibility of a smaller non-visualized portosystemic shunt cannot be excluded. Likewise, additional considerations may include primary hepatic parenchymal disease such as low grade inflammatory hepatopathy or portal vein hypoplasia / microvascular dysplasia.

HOSPITAL NAME

Airport Animal
Hospital

Given the potential neurological abnormalities, gold standard CT with contrast for further assessment is strongly recommended. Potential for hepatic core surgical biopsies may also be indicated.

REFERRING VET

Asha Gudluru

In the meantime, the following protocol may be considered empirically.

Hepatic Support for Bile Acid Elevation +/- Hepatic Encephalopathy

INVOICE

48967

Royal Canin Hepatic Support diet or Hills L/D, Metronidazole (7.5 mg/kg PO bid) over the next 14 days, **Lactulose** (Oral: 3.1-3.7 g/5 ml lactulose in a syrup base) long term to target 2-3 soft stools/day, with a **high-quality protein supplement** of minor amount of **yogurt** or **cheddar cheese**. Monitor bile acids, with attention paid to dropping albumin, BUN or cholesterol. SAME and nutraceuticals as needed. **Ursodiol** (10-15 mg/kg p.o. q24h) can be considered as hepatoprotectant and to enhance bile flow. **Zinc** serum level keep between 200–500 ug/dl. If deficient then Tx zinc acetate 1-3 mg/kg/day. Gastrointestinal protectants are recommended if the patient is anorexic.

DATE

12-12-21



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REFERRING VET

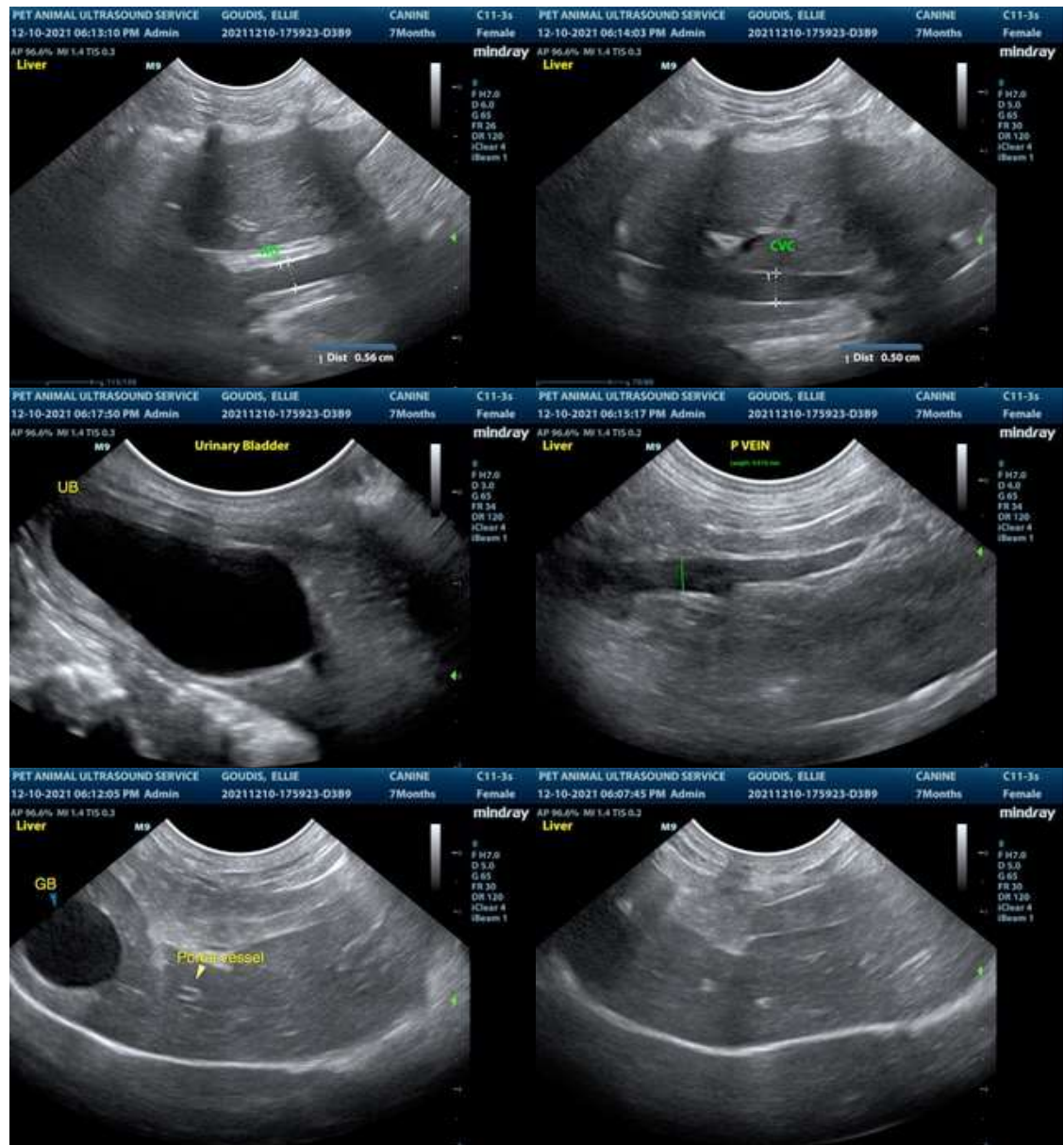
Asha Gudluru

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The information and recommendations provided are based on the images presented by the referring veterinarian. 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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
 info@SonoPath.com