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Clinical Sonography & Telecytology
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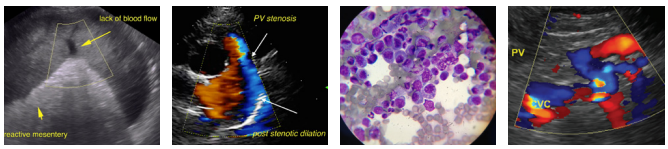


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Pumba Samuels

SPECIES
Canine

BREED
Mixed

SEX
Neutered Male

AGE
7 Years

WEIGHT
80 Pounds

INTERPRETED BY
Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY
Dr. Travis Cerf

HOSPITAL NAME
Veterinary Center of Hardyston

REFERRING VET
Dr. Travis Cerf

INVOICE
36529

DATE
3/28/22

PRESENTING CLINICAL SIGNS

Other Dr. thinks poss mass

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is well filled. The wall is smooth and regular. No abnormalities are present with the trigone or proximal urethra, and there is no evidence of cystoliths, polyps or a mass. A trivial to small amount of free-floating sediment is present, most likely composed of mucus, crystalline material and exfoliated cells. The mild amount of debris is likely clinically insignificant given the lack of inflammatory changes to the bladder wall.

Accurate measurements of the left and right kidneys are not possible due to gas in the surrounding intestines. The cortices are mildly thicker than normal and are hyperechoic to the liver. A mild loss of the normal definition of the corticomedullary junction is observed bilaterally. Mineralizations of the diverticulae and pelvis are present, without signs of nephroliths or pyelectasia. Accumulation of intrapelvic fat is also noted. The mesentery surrounding both kidneys is not hyperechoic.

The prostate is homogenous and measures 1,1 cm, which is within normal limits for a neutered male.

Adrenal Glands

Bilateral adrenomegaly is noted.

The left adrenal gland measures 0.75 cm at the caudal pole, 0.75 cm at the cranial pole, and 2.92 cm in length. Subcapsular hyperechogenicity is present dorsally at the caudal pole. This may be due to fat, mild fibrosis or ischemia. Blood flow is excellent.

The right adrenal gland measures 0.75 cm at the cranial pole, 0.81 cm at the caudal pole, and 1.84 cm in length. No abnormalities are observed with the gland's echogenicity or echotexture.

Both adrenal glands are "plump". Adrenal hyperplasia secondary to stress (chronic illness) and hyperadrenocorticism (HAC) are differential diagnoses. An ACTH stimulation test or low dose dexamethasone suppression test is recommended if the patient is demonstrating signs of HAC. Note, excessive panting may be the only clinical sign of HAC.

Spleen

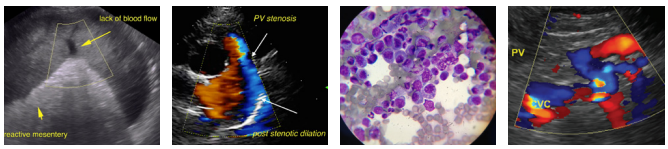
The spleen is within normal limits in size, architecture, echotexture, and echogenicity. The capsule is smooth. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

Liver

Subjectively, moderate to marked hepatomegaly is present with mildly rounded borders. The liver's echotexture is homogeneous and is within normal limits in echogenicity. No abnormalities are observed with the hepatic vessels. The mesentery surrounding the liver is hyperechoic, which may be due to deposition of fat, however, mild inflammation must be considered.

The gall bladder wall appears to be within normal limits in thickness and echogenicity. There is no evidence of echogenic material (sludge) within the GB or edema surrounding it. The cystic and common bile ducts are not dilated or tortuous.

Gastrointestinal



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The gastric wall and pylorus are normal in thickness. There is no loss of definition of the normal architecture of the wall layers. No obvious abnormalities are observed with its peristalsis. The mesentery surrounding the stomach is hyperechoic, which may be due to deposition of fat. However, inflammation cannot be excluded.

Duodenal measurements are within normal limits. Subjectively, the serosa is more prominent to mildly thickened, but no abnormalities are noted with the definition of the wall layers. Fogging of the mucosa is present, which is also more prominent than usual. The duodenum is also mildly dilated with a small amount of fluid, gas, and ingesta. Peristalsis appears mildly exaggerated. Several loops of jejunum also have a mildly prominent mucosa and submucosa. A large amount of gas is present within the transverse colon, but there are no obvious signs of a foreign body or neoplasia.

Pancreas

No overt abnormalities are observed with regard to the left pancreas' echogenicity or echotexture. There is no evidence of hyperechogenicity of the surrounding mesenteric fat.

A proper evaluation of the right limb of the pancreas is not possible due to the large amount of gas in the surrounding gastrointestinal tract.

Other

A lymph node in the region ventral to the spleen is observed. It is mildly hypoechoic and mildly enlarged at 0.74 cm in diameter x 0.83 cm in length. The mesentery surrounding it is mildly hyperechoic.

A very mildly enlarged, mildly hypoechoic jejunal lymph node is noted, measuring 0.62 cm x 1.24 cm. It is a "plump", but not severely enlarged, possibly due to reactive hyperplasia.

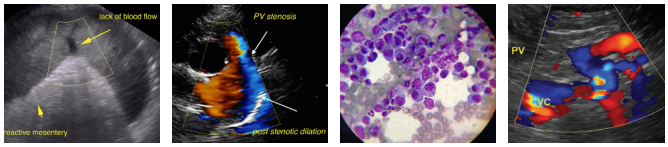
Abdominal effusion is not visualized.

ULTRASONOGRAPHIC FINDINGS

- Bilateral adrenomegaly, which may be due to a pituitary dependent adenoma or bilateral adrenal hyperplasia, for example, secondary to chronic illness (stress).
- Moderate to marked hepatomegaly with preservation of the architecture, echotexture and echogenicity. Obvious neoplasia is not observed. Causes of hepatomegaly must be considered, for example, hepatitis, due to infectious agents, immune-mediated, exposure to a toxin or medication, etc.
- The renal changes may be due to glomerulonephritis associated with hyperadrenocorticism. However, pyelonephritis cannot be excluded despite the absence of sonographic signs. Age related changes are also present.
- The mild dilation of the duodenum and a few loops of bowel with fluid, ingesta and gas is very mild, however, subtle changes of the mucosa and surrounding mesentery are present and two jejunal lymph nodes are mildly prominent to enlarged. These signs are non-specific, but maybe suggestive of inflammation and reactive hyperplasia. Inflammation due to a previous foreign body or underlying inflammatory bowel disease cannot be excluded. There are no obvious signs of a neoplasm or foreign body.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Bilateral adrenomegaly and hepatomegaly increase the suspicion of a pituitary dependent adenoma. Therefore, further diagnostics for hyperadrenocorticism, including a low-dose dexamethasone



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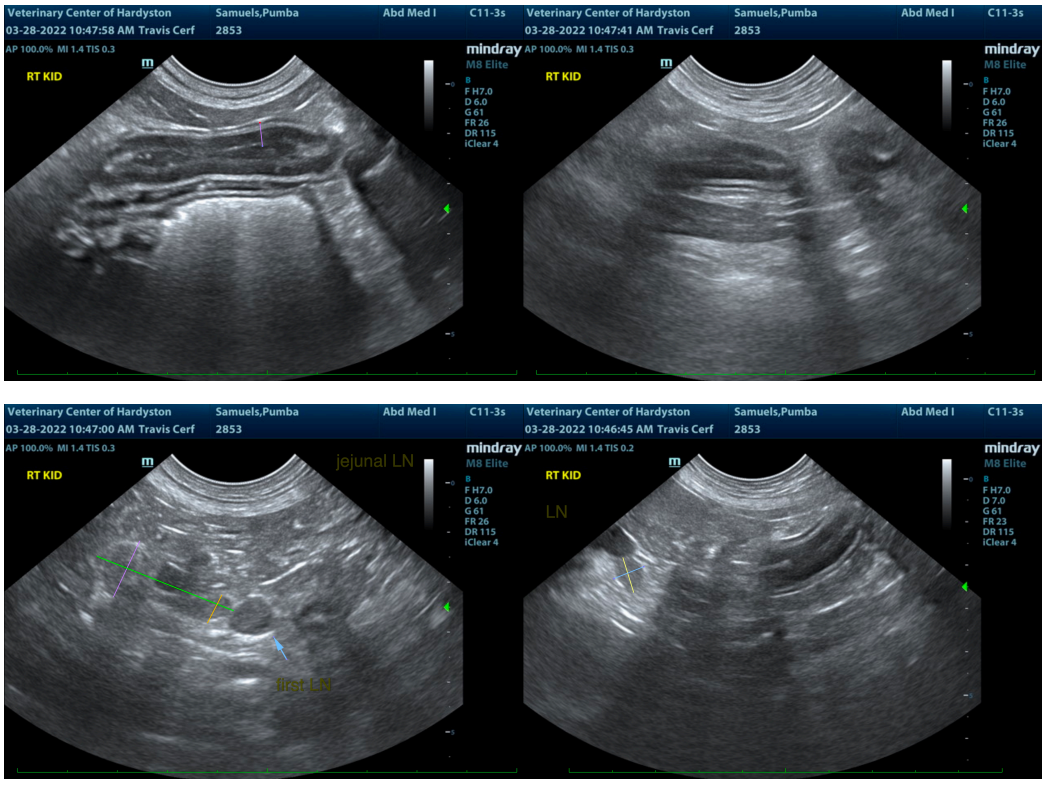
suppression test or an ACTH stimulation test, is recommended.

Although the hepatomegaly may be a result of vacuolar hepatopathy due to hyperadrenocorticism, other diseases, such as hepatitis cannot be excluded. In addition, if glomerulonephritis is present, one would have to exclude infectious diseases, such as leptospirosis as well as tick borne diseases. A fine needle aspirate or Tru-cut tissue biopsy may be considered in the future depending on Pumba's clinical signs.

The renal changes may in part be due to age related degeneration, however glomerulonephritis (GN) cannot be excluded. Causes of GN include leptospirosis, tick borne diseases and heartworm disease, and the appropriate tests are suggested to exclude an underlying cause. As mentioned above, fine needle aspirates or a Tru-cut tissue biopsy may be considered depending on Pumba's clinical signs. An arterial blood pressure is recommended to rule out hypertension.

A urinalysis, +/- culture and sensitivity, is/are recommended to exclude a urinary tract infection and pyelonephritis, particularly if hyperadrenocorticism is present. A UPC is recommended if hyperadrenocorticism is confirmed.



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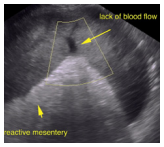

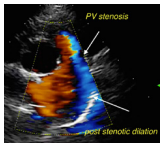

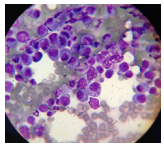
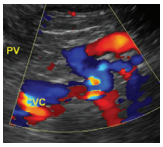

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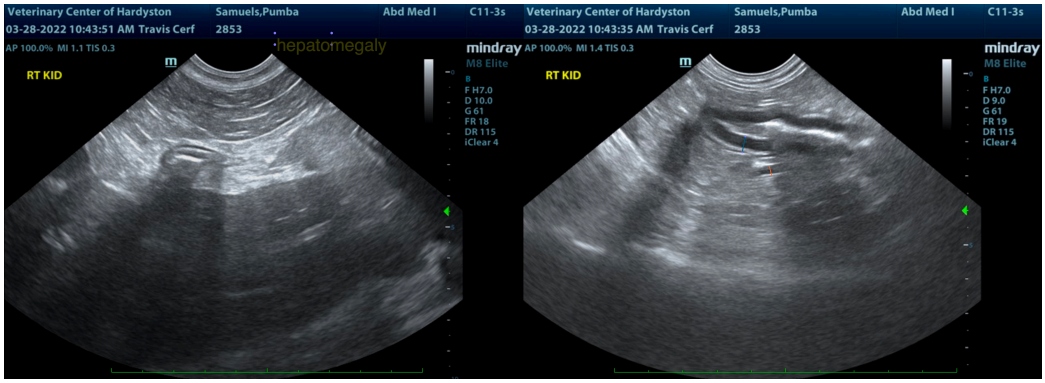

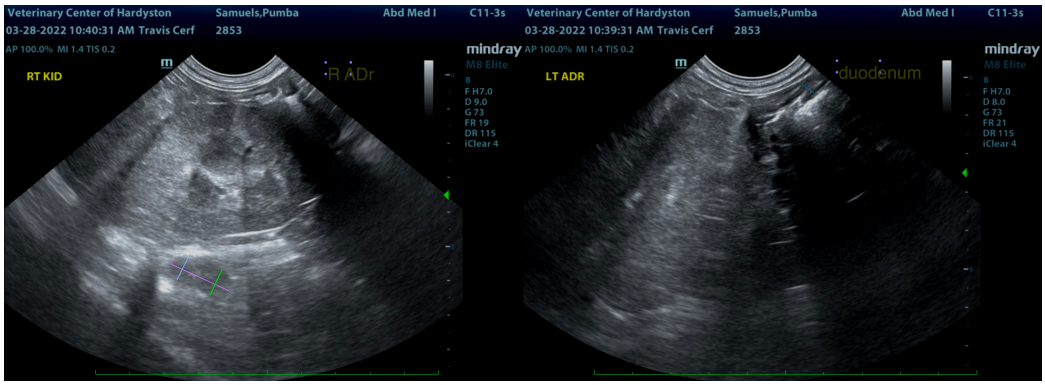

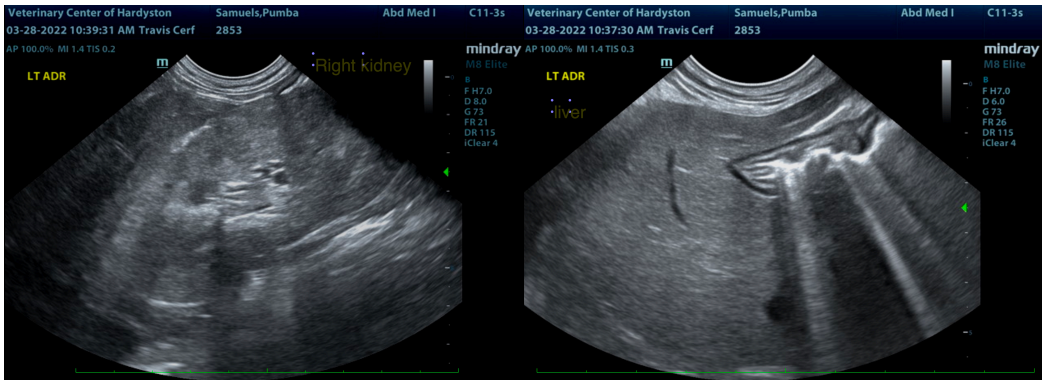

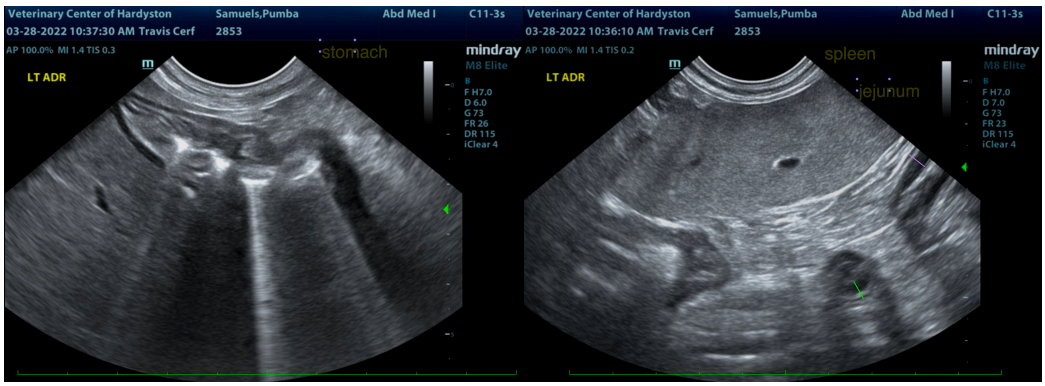

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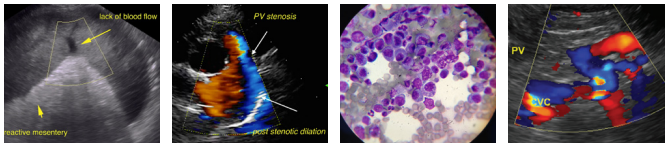

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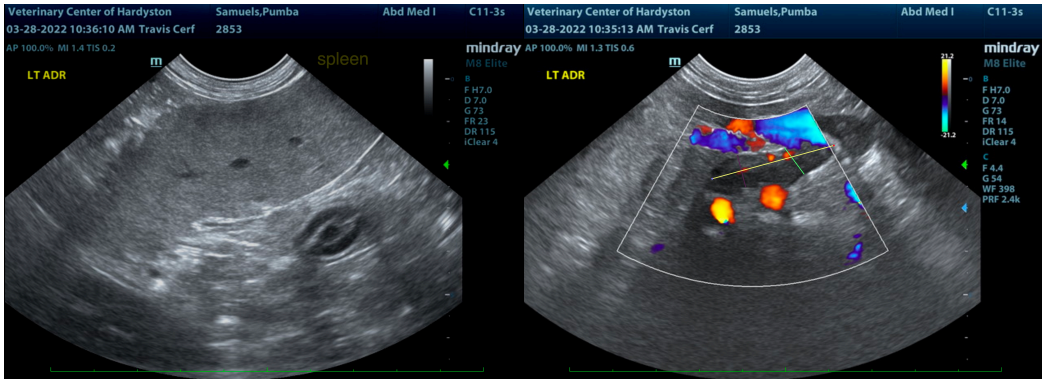

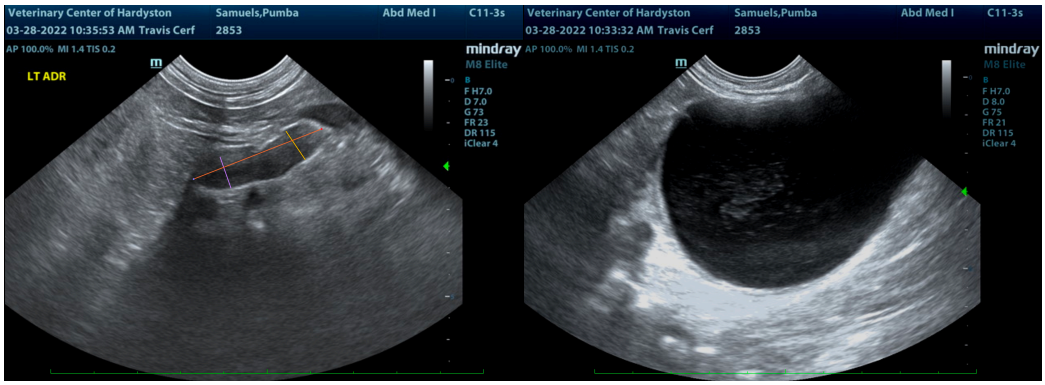

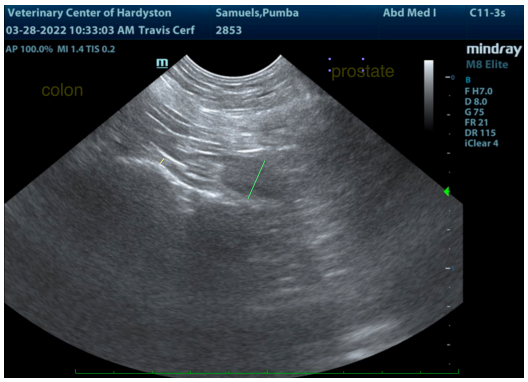

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

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