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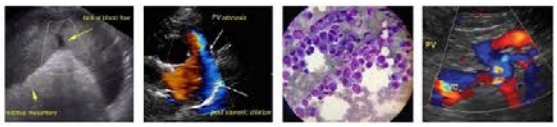

THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 info@thefocalzone.com

PATIENT

Remi Gazendam

SPECIES

Canine

BREED

Bernese Mtn. Dog

SEX

Intact Male

AGE

5 Years

WEIGHT

40 kg

INTERPRETED BY

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

IMAGING PERFORMED BY

Kelly Reschny

HOSPITAL NAME

Yates Vet Hospital

REFERRING VET

Dr. Krizmanich

INVOICE

25945

DATE

9/29/21

PRESENTING CLINICAL SIGNS

Peripheral lymph nodes: Normal in shape and size. Abdominal palpation: non-painful. No masses, fluid wave or organomegaly appreciated. Integument: no external parasites. Otherwise normal. Musculoskeletal: no lameness. underweight with moderate weight loss. BCS 3/9 Rectal exam: not performed currently on metronidazole, proviable
Abnormal PE/Chem/CBC/UA Results: please see attached labs, fecal pending.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with echogenic urine. The Bladder wall appears mildly diffusely thickened at 0.43 cm. The mucosal surface appears smooth and regular with no focal lesions. The area of the trigone, ureteral papillae and proximal urethra (to a depth of 2cm) appear normal with no mucosal irregularities, masses or cystic calculi.

The prostate is very large, measuring 6.5 cm x 5.76 cm. It is slightly irregular and hyperechoic in echotexture. There are two cystic regions measuring 1.8 cm and 1.6 cm. The prostatic urethra appears normal with no evidence of irregularity, invasion of mass effect or calculi.

The right kidney has a normal shape and size (6.97 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The left kidney has a normal shape and size (7.31 cm.) with mild pyelectasia at 0.3 cm. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.55 cm. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.77 cm. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The spleen is subjectively normal in size with no focal parenchymal abnormalities. The blood flow through the hilus and splenic parenchyma appears normal.

Liver

The liver is large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

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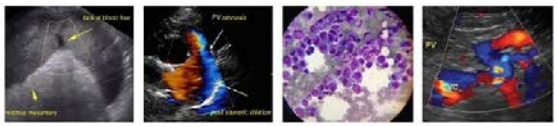

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Gastrointestinal

The stomach is dilated with fluid and irregular shadowing material most consistent with normal ingesta and gas. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layering is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a uniform diameter with minimal fluid distension. Wall appears subjectively, mildly increased. Bowel loops follow a typical curvilinear path with largely distinct wall layering, although in some areas this distinction is decreased, and the wall layering appears fuzzy. Jejunum wall measures 0.64, 0.58, 0.45 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized and appear very dilated and distended with liquid fecal material. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

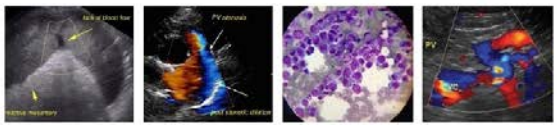
Free Abdomen

There is a moderate/large amount of anechoic free fluid. No lymphadenomegaly. The omentum is generally of increased echogenicity.

Both testicles were visualized and appear within normal limits.

PRIMARY FINDINGS

- Large amount of echogenic debris within the urinary bladder with a subjectively thickened wall – The bladder mucosal changes could be consistent with cystitis or artifactual due to lack of adequate luminal distension. Bladder neoplasia cannot be ruled out but is considered unlikely in this patient. The echogenic debris in the bladder lumen could be consistent with cells, crystals, and/or mucus.
- Large, irregular prostate with two cystic structures – could be consistent with severe benign prostatic hypertrophy or prostatitis. Additionally, the fluid pockets could be cysts or abscesses.
- Decreased corticomedullary distinction in both kidneys with left-sided mild pyelectasia – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. Pyelectasia of the left kidney could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.
- Large, heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.
- Stomach dilated with ingesta – correlate with feeding history. If patient was adequately fasted, consider such differentials as delayed gastric emptying or partial gastric obstruction (none observed).



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- Thickened small intestine with some loss of layering detail – The bowel wall thickening could be consistent with inflammation, edema, or infiltrative neoplasia. Some of the thickening observed can be seen due to edema and free fluid in the abdomen.

- Moderate to large amount of anechoic free fluid – I suspect this is due to the hypoalbuminemia, consider other causes as well.

SECONDARY FINDINGS

- Mild gallbladder debris – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

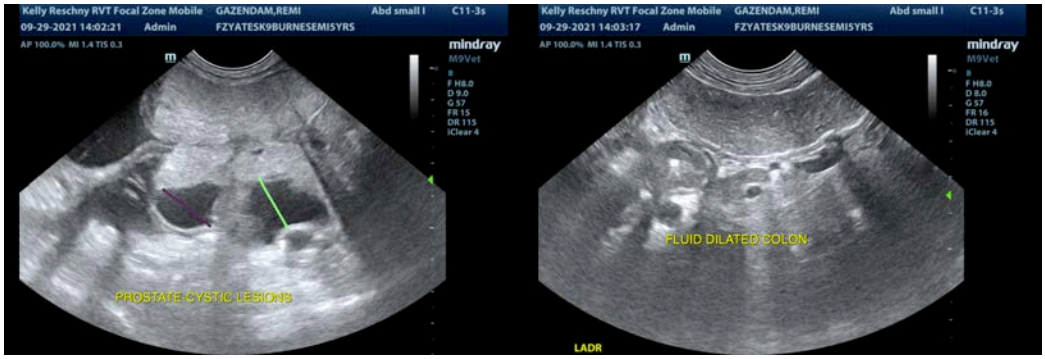
- Dilated fluid-filled large intestine – suspicious for impending diarrhea.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The urine appears very echogenic, and the prostate is very enlarged in this patient. Recommend urinalysis and culture and neutering once stable. You could also consider sampling fluid filled structures to differentiate between an abscess or cystic structure, as sometimes these do not resolve with neutering and need to be drained, and sometimes even instilled with antibiotics (typically Baytril). This could be a cause for hypoalbuminemia if the patient is septic, but I'm concerned that there may be more than one problem going on here. Additionally, the kidneys have poor detail and the left kidney is mildly dilated, which could be consistent with pyelonephritis. Recommend blood pressure evaluation and testing for Leptospirosis, and if there is a quiet sediment, consider a urine protein/creatinine ratio.

Next step in diagnostic would probably entail trying to determine the source of the low albumin levels. Recommend a urine protein/creatinine ratio if urine sediment is quiet, a liver function test, and a GI panel with a TLI, PLI, cobalamin and folate level (Texas A&M University) to look for evidence of underlying GI disease. These diagnostics would be an attempt to differentiate hepatic disease, protein losing nephropathy, and a protein losing enteropathy. My suspicion would be a protein losing enteropathy, but significant renal changes are present as well.

Recommend sampling of the abdominal fluid to ensure that it is a pure transudate and there is not something different going on than is expected. Recommend testing for Addison's disease and 3-view thoracic radiographs. In the meantime, cautious rehydration (possibly with the use of colloids, etc.) and supportive care should be implemented until more information can be obtained a direction for treatment determined. Further lyme testing is a good idea, as lyme nephritis can cause significant protein loss.



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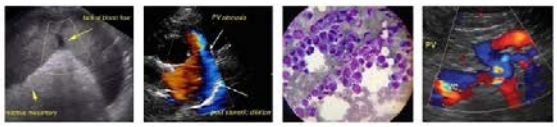

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)
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