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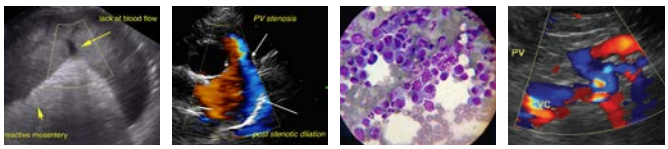

PATIENT

Rosie Hubbard

SPECIES

Canine

BREED

German Shepherd

SEX

Spayed Female

AGE

8 Years

WEIGHT

52 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Judy Schroeder

HOSPITAL NAME

Animal Health Associates

REFERRING VET

Dr. Judy Schroeder

INVOICE

41109

DATE

9/7/22

PRESENTING CLINICAL SIGNS

History of chronic renal disease since adopted as a rescue in 2018. Azotemia and pancreatic lipase have been gradually increasing over time, but in past 3 months marked worsening, patient has lost weight. Patient has recently stopped eating all together. One recent episode of vomiting. Blood testing from 3 months ago showed BUN/CT/Phosp/PSL approximately half of current values.

Abnormal PE/Chem/CBC/UA Results: 9/6 labs Albumin 2.6 g/dl BUN 129 mg/dl Creatinine 13.2 mg/dl Phosphorus 13.9 mg/dl Calcium 13.4 mg/dl Amylase 2056 U/l PSL 458 U/l Hematocrit 20%, non regenerative USG 1.011, 1+ proteinuria, 1+ hemolyzed blood, inactive sediment

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall is diffusely mildly thickened (0.52 cm), and the mucosa is mildly irregular. The trigone, ureteral papillae, and visible urethra (to a depth of 2cm) appear normal with no evidence of severe mucosal irregularities, masses or cystic calculi. Findings are most consistent with bacterial cystitis or lack of urine distension. Recommend urinalysis and culture.

The left kidney is very irregular and hyperechoic with severely reduced corticomedullary distinction, measuring 5.42 cm. Pyelectasia noted at 0.45 cm. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is borderline small and irregular with severely decreased corticomedullary distinction, and pyelectasia at 0.20 cm. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.56 cm at the caudal pole. 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 0.65 cm at the caudal pole. 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 is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. 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. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

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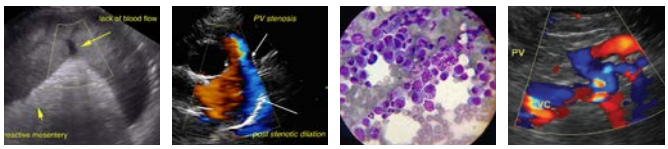

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Gastrointestinal

The stomach is moderately 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 relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measures 0.51 cm. Jejunum wall measures 0.29 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 with formed fecal material and gas shadowing distally. 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

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

Other

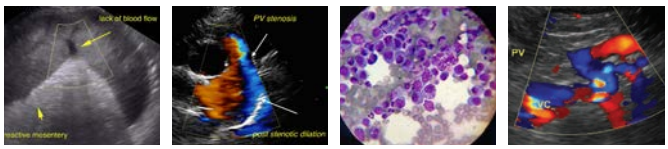
A brief view of the heart was submitted. No significant pericardial effusion was seen.

ULTRASONOGRAPHIC FINDINGS

- Subjectively thickened urinary bladder wall – The bladder wall 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.
- Severely irregular, hyperechoic kidneys with loss of corticomedullary distinction and pyelectasia – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. Pyelectasia of the kidney(s)could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.
- Moderate gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The renal changes observed are significant and most consistent with chronic progressive renal disease. The hope is that this could be an acute on chronic episode, and with support symptoms could improve. Consider looking for any issues that could aggravate this situation, such as infection (recommend urinalysis and culture), hypertension (recommend blood pressure evaluation), etc. Additionally, recommend a urine protein to creatinine ratio to determine if the low albumin levels are due to proteinuria or if there could be concurrent GI or liver disease present. If there is not significant



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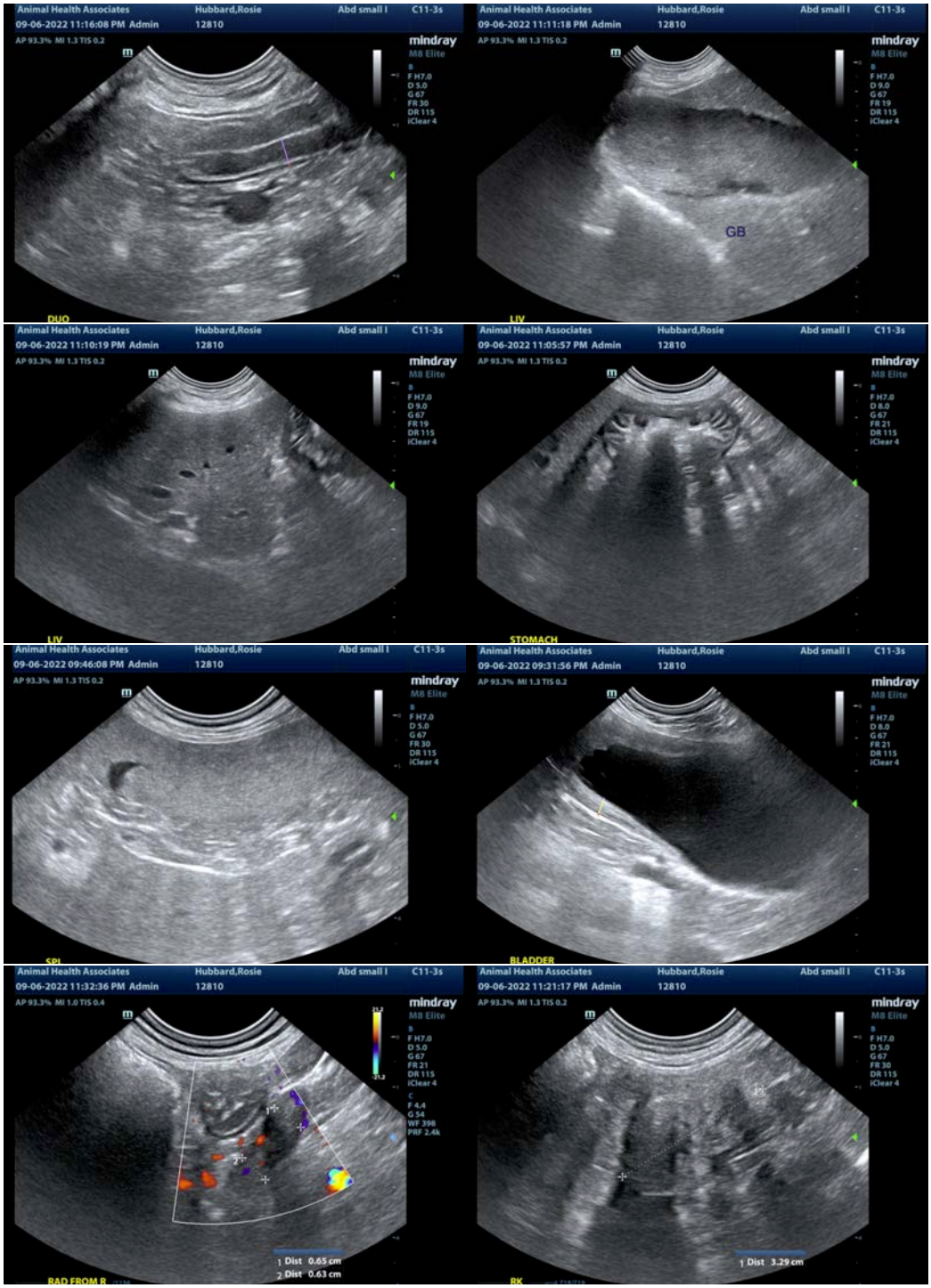
proteinuria, consider workup for underlying gastrointestinal disease (no significant lesions were visualized on today's exam), or liver disease (no hepatic changes visualized).



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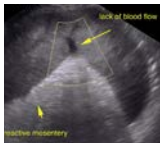
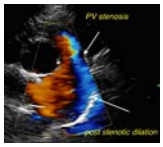
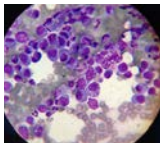
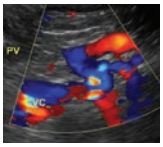

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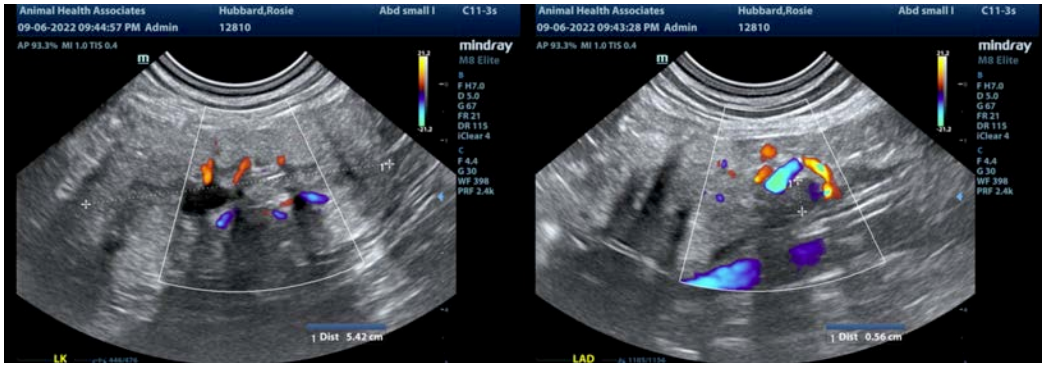

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

kathleen.sennello@sonopath.com