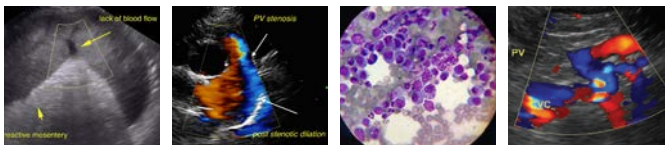
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Mady Walker

SPECIES
Canine

BREED
Maltese

SEX
Neutered Male

AGE
10 Years

WEIGHT
18

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

IMAGING PERFORMED BY
JK

HOSPITAL NAME
Hamburg Vet Clinic

REFERRING VET
Dr. Martens

INVOICE
45766

DATE
3/8/23

PRESENTING CLINICAL SIGNS

Elevated liver value, protein and blood in urine.
Abnormal PE/Chem/CBC/UA Results: ALT 170, UA protein 3+, Blood 3+. UA culture pending

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall appears focally thickened and irregular in the ventral apical region with polypoid like projections and irregularities. Two of these polypoid lesions measure 0.65 cm x 0.52 cm and 0.71 cm x 0.48 cm. Additionally, there is hyperechoic shadowing material in the dependent portion of the urinary bladder, most consistent with a pile of small calculi or a large stone. The area of the trigone, ureteral papillae and proximal urethra appear relatively free of any mass lesions or calculi at this time.

The left kidney has a normal shape and size (4.29 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.37 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal 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 0.46 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 region of the right adrenal (between right cranial kidney and vena cava) is unremarkable, but the adrenal is not distinctly visualized. No evidence of a mass effect is visualized.

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.

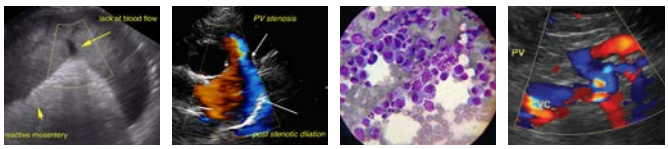
Liver

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.

Gastrointestinal

The stomach contains minimal luminal contents. 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 layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.



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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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) 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 area of 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.

ULTRASONOGRAPHIC FINDINGS

- Irregular polypoid like masses visualized in the urinary bladder – These could be inflammatory polyps secondary to the stone and possible infection, or they could be consistent with neoplastic lesion (TCC).
- Focal area of mineralization in the dependent portion of the urinary bladder – Findings are consistent with either an accumulation of stones or a larger stone. Correlate with abdominal radiographs to better determine the size and number of stones present.
- 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

There is a stone or multiple stones visualized in the urinary bladder. Correlate these findings with abdominal radiographs, urinalysis and culture. I suspect a cystotomy may be necessary unless there is a significant infection and medical dissolution is attempted. Additionally, there is a mass effect in the urinary bladder. This could represent inflammatory polyps secondary to infection and the stones or could be a neoplastic lesion.

If a severe infection is present, you could consider reevaluation of the urinary bladder with ultrasound 2-3 weeks into treatment, or if a more aggressive approach is desired, a cystotomy with biopsies of the bladder lesions would be possible (taking care not to seed the abdomen with abnormal cells). Additionally, a traumatic catheterization could be considered or a BRAF test, but both can be unreliable in the face of significant inflammation, so control of any infection present would be necessary prior to considering these procedures. In a female dog, cystoscopy would also be an option. If the stone is small enough, cystoscopic removal may be an option.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.

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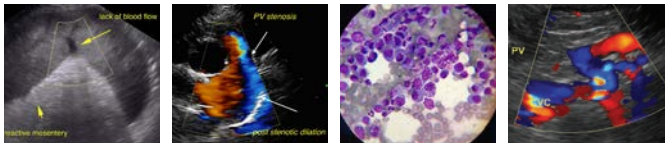

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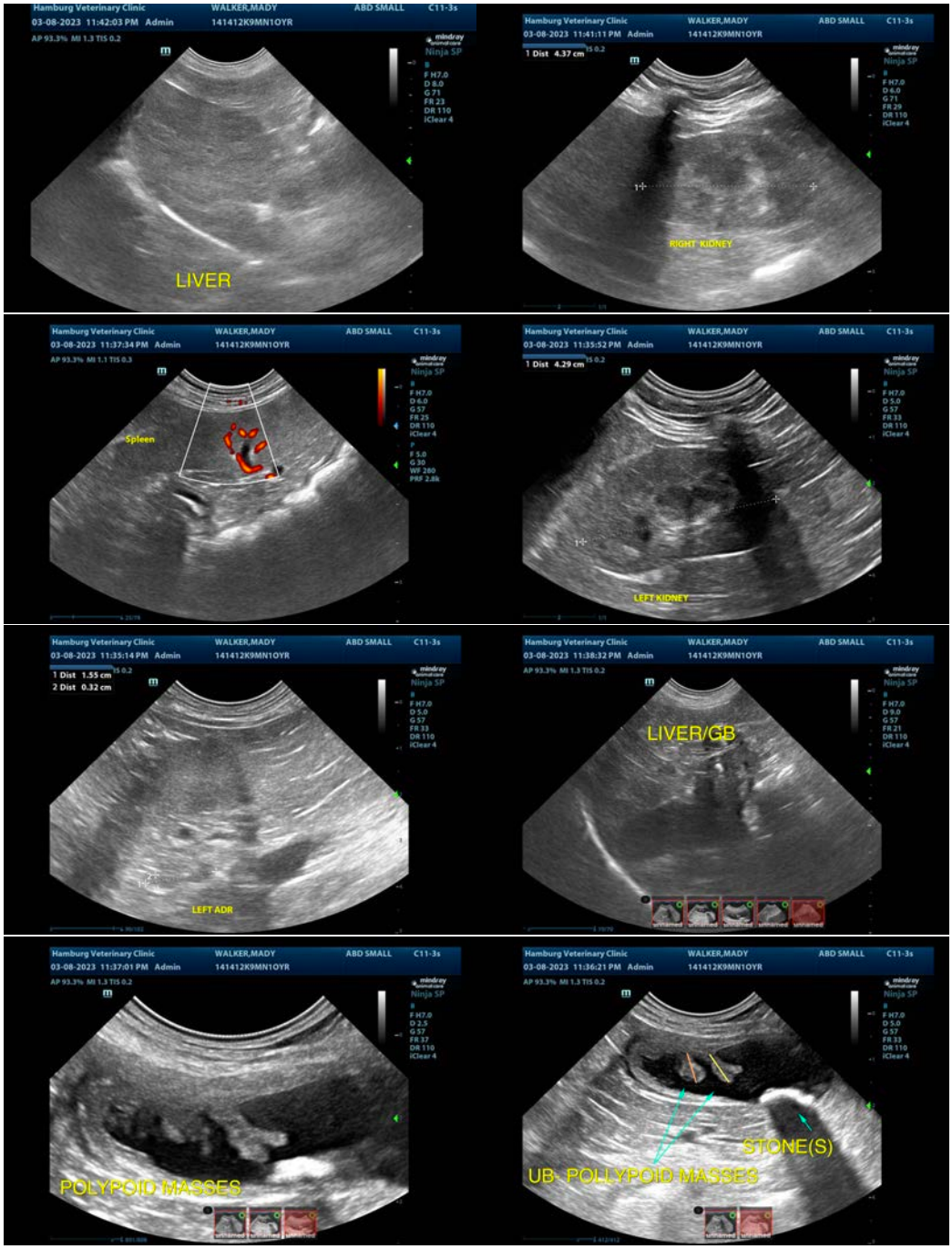

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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