SonoPath
Clinical Sonography & Telecytology
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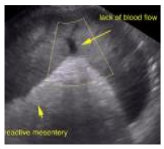
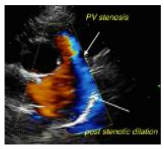
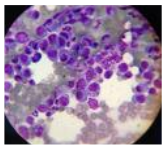
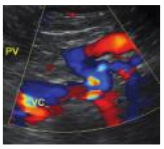





SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Tia Nicholson

SPECIES

Canine

BREED

Chihuahua

SEX

Spayed Female

AGE

12 Years 1 Month

WEIGHT

3.95 kg

INTERPRETED BY

Dr Brittany Sinclair, BVSc(hons), DACVECC

IMAGING PERFORMED BY

Dr. Brian Barnes

HOSPITAL NAME

Westview VH

REFERRING VET

Dr. Brian Barnes

INVOICE

23434

DATE

7/18/23

PRESENTING CLINICAL SIGNS

History: 1) Heart murmur, DMVD Stage B1, last echo Sept 2022 2) gr 4 lux pat on the right, gr3 left 3) dental disease 4) overweight 6) chronic (sm bowel?) diarrhea

Abnormal PE/Chem/CBC/UA Results: Nervous , Last bloods Sept 2022 CBC wnl besides retic elevated 143 (10-110) pct elevated .54 (0.14-0.46(CHEM wnl besides mild hyperalbuminemia 40 (22-39) TT4 wnl

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and visible pelvic urethra were of normal thickness. The ureters were not visible which is normal. There was normal wall layering with no masses, uroliths or abnormal thickening visualized. Urine was anechoic. No evidence of inflammatory or neoplastic changes were noted.

The kidneys have a smooth capsule and with mild hazing of corticomedullary definition. Hyperechoic shadowing in renal pelvis with no dilation consistent with non-obstructive nephrolithiasis. The right kidney measured 3.84 cm. The left kidney measured 4.08 cm.

Adrenal Glands

Both adrenal glands were visualized and recognized. Both were subjectively prominent and hypoechoic with no specific masses or nodules seen. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 1.73 cm in length x 0.63 cm at the cranial pole and 0.55 cm at the caudal pole. The right adrenal gland measured 1.46 cm in the length x 0.61 at the cranial pole and 0.55 cm at the caudal pole.

Spleen

The spleen was normal with a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma and smooth capsule, with normal splenic vasculature with no signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarct changes were noted.

Liver

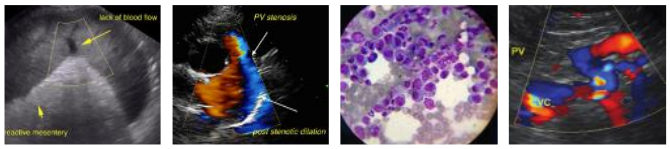
The liver is subjectively enlarged in size with slight rounding of lobes and homogenous hyperechoic parenchyma with no specific nodules or masses. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed.

The gall bladder is moderately distended with anechoic fluid, with hyperechoic non-shadowing debris present. There is no surrounding free fluid or signs of active inflammation.

Gastrointestinal

The stomach contains minimal luminal contents. It appears of normal thickness of with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate. 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



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maintaining the typical 1:3 muscularis:mucosa layer ratio. There were no focal lesions consistent with obstruction or a mass effect observed.

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 base and limbs of the pancreas were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour and parenchyma were normal. No overt evidence of active inflammatory or neoplastic disease was noted.

Lymph Nodes

No clinically significant lymphadenopathy or abnormalities noted.

Free Abdomen

No masses or free fluid.

ULTRASONOGRAPHIC FINDINGS

- Hepatomegaly, hyperechoic parenchyma
- Gall bladder debris
- Prominent adrenal glands
- Degenerative renal changes with nephrolithiasis
- Normal GI tract

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is no ultrasonographically evident cause of reported GI signs in this abdominal study. Pancreas and GI tract are within normal limits. Consideration for dietary indiscretion, food sensitivity/allergy or mild inflammatory bowel disease is reasonable. While not sonographically evident, pancreatitis cannot be completely ruled out. A diet trial with hydrolyzed protein or select protein diet could be considered if food sensitivity is suspected clinically. If signs are persistent or recurrent, additional diagnostics to be considered include GI panel (TLI/PLI/cobalamin/folate), baseline cortisol +/- ACTH stimulation test, fecal pathogen panel, thyroid testing, bile acid profile, and thoracic radiographs to rule out occult neoplasia, as a potential cause. Ultimately GI biopsy may be required for more definitive diagnosis if the patient is not responsive to medical treatment. Cardiac disease can cause secondary GI signs.

Hepatic parenchymal changes are a common finding in the face of endocrinopathies, infectious or inflammatory hepatitis (bacterial, viral, auto-immune other), and neoplasia among other things. A current chemistry panel is recommended and if elevated liver enzymes are present, fine needle aspirate is recommended to further define. Ultimately liver biopsy may be required for more definitive diagnosis.

Gall bladder debris is likely an incidental finding and is often subclinical and often does not warrant specific treatment or further investigation. Correlate clinical significance with bloodwork findings and clinical signs. Serial imaging for monitoring could be considered especially if liver enzymes subsequently become elevated. If otherwise clinically indicated, investigation for endocrinopathy such as hyperadrenocorticism or hypothyroidism could be considered as an underlying cause predisposing to gall bladder debris accumulation.

Adrenomegaly is bilateral and may represent stressful illness or hormonal stimulation as is seen with pituitary dependent hyperadrenocorticism. If corresponding clinical signs are present, testing for hyperadrenocorticism should be considered (ACTH stimulation test vs LDDST).

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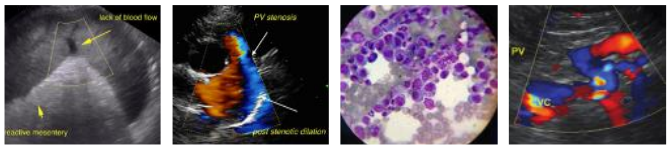

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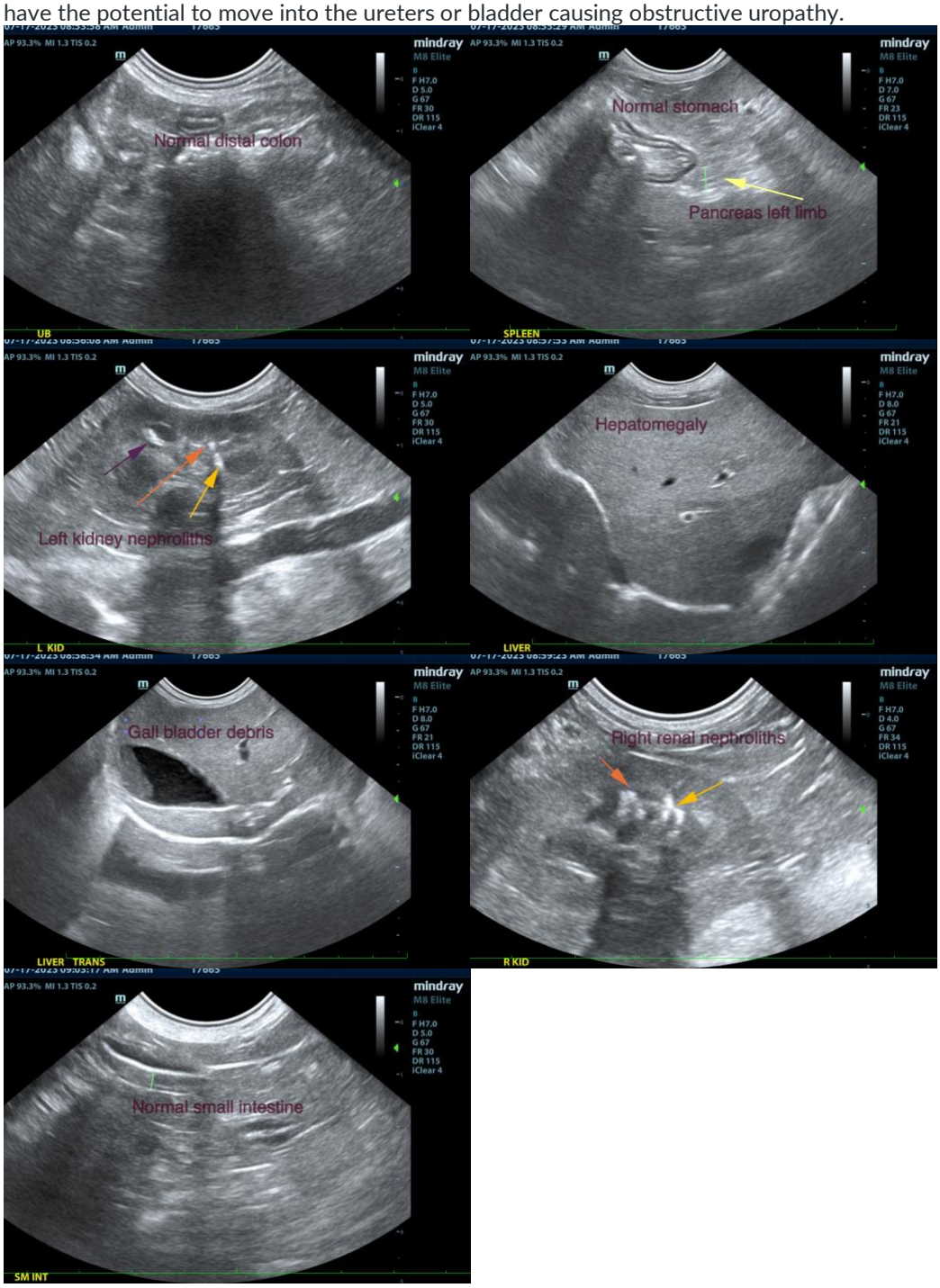
Renal changes are likely age-related degenerative changes. Correlate clinical significance with blood work/urinalysis findings and clinical signs. Nephroliths may act as a nidus of infection and predispose to urinary tract infections. They can also cause sterile inflammation leading to renal hematuria. They have the potential to move into the ureters or bladder causing obstructive uropathy.



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.

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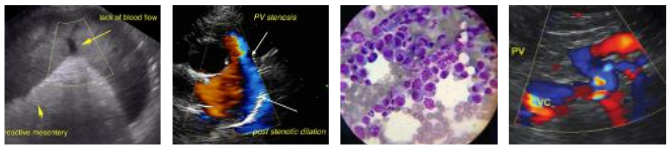

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Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

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