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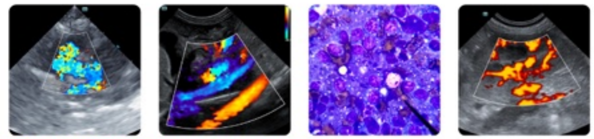


Clinical Sonography & Telecytology
Educational Teleconsultation Services™

PATIENT

Chip Mescolotto

SPECIES

Canine

BREED

Yorkie Mix

SEX

Neutered male

AGE

10 years

WEIGHT

16.1 lbs

INTERPRETED BY

Dr. Alicia Angosto Guerrero

IMAGING PERFORMED BY

Melissa Rosen

HOSPITAL NAME

South Bellmore Veterinary Group

REFERRING VET

Dr. Rosen

INVOICE

69086

DATE

11/26/25

PRESENTING CLINICAL SIGNS

History: recent hematuria, had bladder stones removed feb 2025 eating royal canin urinary SO mod cal calcium ox stones hx emerging GB mucocele, not currently on any medication, was previously on ursodiol eating/drinking and acting normal will include recent bloodwork and urine
Abnormal PE/Chem/CBC/UA Results: cystatin b very elevated but unsure of clinical significance

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder contains abundant mineral sediment forming small, clustered calculi. They do not appear individually large (approximately 2–3 mm), but because they are aggregated, accurate assessment of size is difficult. The bladder wall, particularly at the cranial pole, is thickened and regular, measuring approximately 5 mm dorsally and ventrally. No bladder wall masses are observed. Normal appearance of the proximal urethra and vesicoureteral junction, with no visible urethral calculi.

Left kidney: Normal in shape and size: 3.86 × 2.27 cm, with cortical thickness of 0.34 cm in the sagittal plane. Right kidney: Normal in shape and size: 4.25 × 2.18 cm, with cortical thickness of 0.40 cm in the sagittal plane. Both kidneys: The cortex is isoechogenic compared to the liver parenchyma. The corticomedullary ratio is normal and corticomedullary definition is preserved. There is no evidence of pyelectasia, nephroliths, or hydronephrosis. However, a small amount of mineral content is observed within the renal calyces; these are not yet true calculi but indicate increased mineral excretion within the collecting system.

Adrenal Glands

The left adrenal gland measures 0.48 cm at the cranial pole and 0.49 cm at the caudal pole. The right adrenal gland could not be visualized in any of the provided video clips.

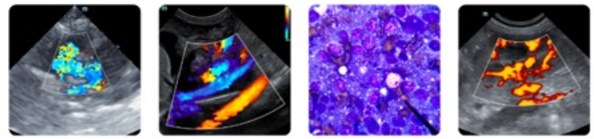
Spleen

Splenic thickness is 1.74 cm. The parenchyma demonstrates normal echogenicity and a fine, homogeneous echotexture with a 0.62×0.68 cm hyperechoic nodule. The splenic capsule is smooth and regular. Normal color Doppler.

Liver

The liver is subjectively normal in size, with sharp margins and a regular contour. The parenchyma is uniform and isoechoic compared to the falciform fat, with normal echotexture. No hepatic lymphadenopathy is observed.

The gallbladder lumen is markedly distended. The organized sediment accompanied by a striated pattern is highly suspicious for an advanced gallbladder mucocele. No sonographic evidence of gallbladder rupture or pericholecystic effusion is present at this time.



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Gastrointestinal

The stomach is distended with partially digested food and fluid, with mural thickness of 2.40 mm and preserved wall layering.

Duodenum: 2.49 mm. Jejunum: 2.35 mm. Ileum: 1.651 mm. Normal wall layering. No signs of inflammation, ileus, or foreign material are identified.

Colon: 1.07 mm, with formed feces in the descending segment.

Pancreas

The right limb, body, and left limb appear normal. The pancreatic parenchyma is isoechoic to the adjacent omental fat. No signs of active inflammation or neoplastic disease are evident.

Peritoneal Cavity

No abdominal effusion or peritonitis is observed. Cranial mesenteric lymph nodes are not visualized, but the surrounding regions appear unremarkable. The iliac trifurcation is normal.

ULTRASONOGRAPHIC FINDINGS

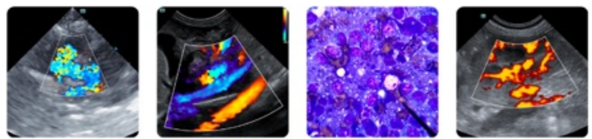
- Markedly abnormal gallbladder content with extensive, immobile, organized echogenic material forming a striated/stellate pattern.
- Abundant cystolithiasis with aggregated small mineral calculi.
- Diffuse thickening of the cranial bladder wall.
- Mild mineral sediment within the renal calyces.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The ultrasound findings reveal cystolithiasis, with numerous small mineral aggregates within the urinary bladder. Although individual calculi appear to measure approximately 2–3 mm, their clustered configuration makes precise size determination challenging. The cranial bladder wall is diffusely and symmetrically thickened without focal masses, suggesting a combination of chronic mucosal irritation, cystitis, or mineral-associated inflammation rather than neoplastic disease.

Both kidneys are normal in size, shape, and corticomedullary definition, with no pyelectasia or nephrolithiasis. However, the presence of fine mineral content within the renal calyces indicates increased mineral excretion and early mineral deposition at the level of the collecting system, which may correlate with ongoing lower urinary tract stone disease or systemic mineral imbalance.

The gallbladder is markedly distended and contains immobile, highly organized echogenic material forming a characteristic striated/stellate pattern, findings that are highly suspicious for an advanced gallbladder mucocele. At this time, there is no evidence of gallbladder rupture or pericholecystic effusion, and the gallbladder wall does not appear overtly thickened or edematous.



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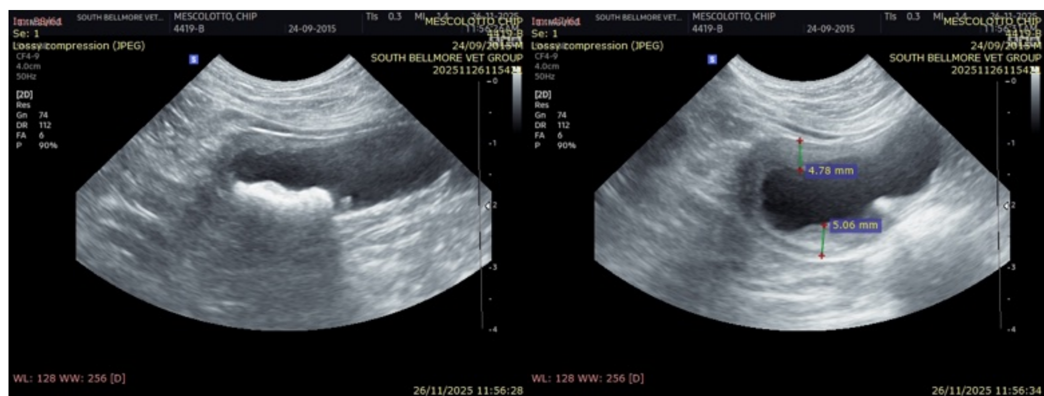
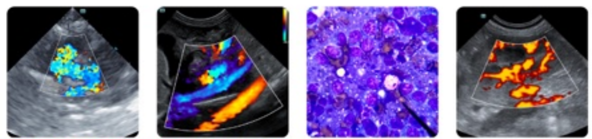
Recommendations:

- The recurrent calcium oxalate urolithiasis in this patient is most likely related to an individual metabolic predisposition, idiopathic hypercalciuria, or possibly early/subclinical hyperadrenocorticism. Further evaluation may include a urine calcium-to-creatinine ratio, endocrine testing for Cushing's disease, review of dietary factors (treats/supplements), and continued monitoring of renal markers given the presence of calyceal mineral sediment and elevated Cystatin B.
- Given the current estimated stone size (2–3 mm), voiding urohydropropulsion is an appropriate first-line retrieval option. If stones are larger than expected, immobile, or cannot be cleared non-surgically, elective cystotomy is recommended.
- Regarding the use of ursodiol: In this specific stage, the available literature suggests that ursodiol may not be beneficial and could theoretically increase intraluminal pressure, as it promotes bile flow in a gallbladder that is no longer able to empty effectively. For this reason, most recent recommendations advise against using ursodiol once an advanced mucocele is present. At this point, elective surgical consultation is considered the safest and most effective approach, even when liver enzymes and bilirubin remain within normal limits, as mucoceles can deteriorate abruptly. Close monitoring for any emerging clinical signs and re-evaluation of liver parameters is also advised.
- As both mucoceles and calcium oxalate stones can occur secondary to hyperadrenocorticism, consider further imaging or hormonal testing, particularly given the non-visualization of the right adrenal gland.





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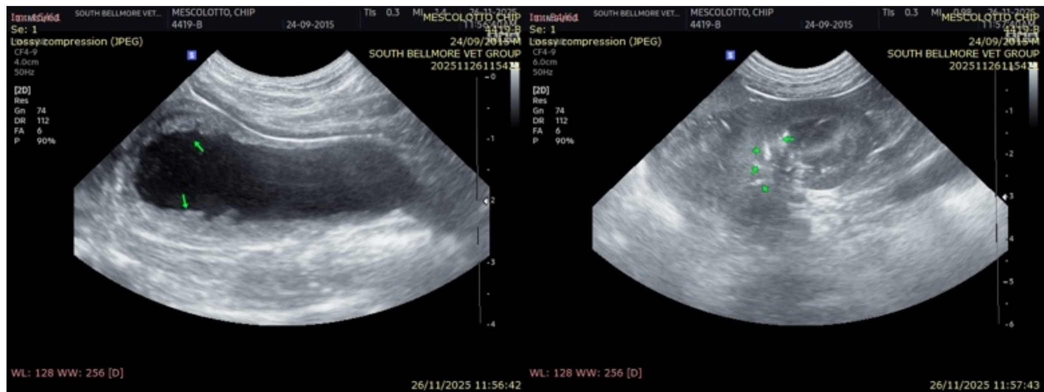

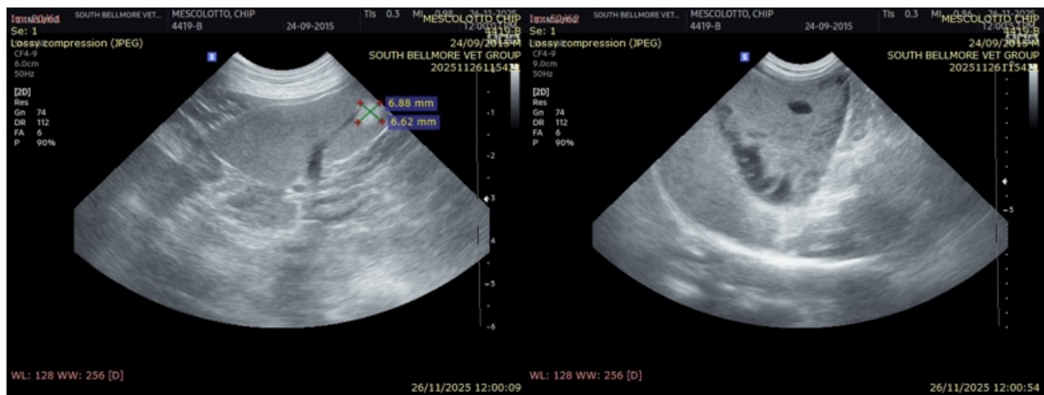

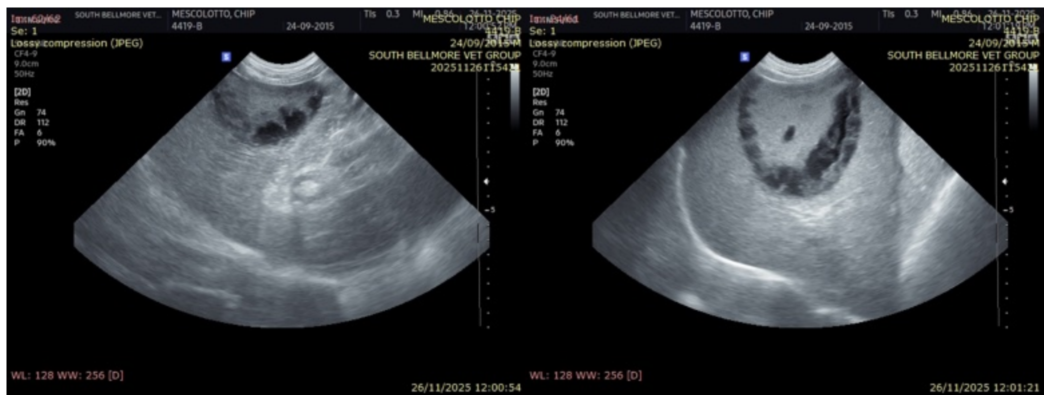

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Alicia Angosto Guerrero, DMV, PgDip, MSc.

MV Esp Ultrasound in Domestic and Wild Animals

info@SonoPath.com