



PATIENT

PRESENTING CLINICAL SIGNS

Bella Esposito

History: P presented 3/23 for persistent UTI symptoms. Suspicious UB on scan for cysto. R/O Cystourilithais vs neoplasia . Meds: Clavamox 375mg q12h x 14 d.

SPECIES

Abnormal PE/Chem/CBC/UA Results: U/A-turbid, USG 1.015; PH 7.5; +2 Protein; +3 Blood; wbc >50; Rbc 21-50; Rods 26-50/hpf; Microalbuminuria 27.5

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

BREED

Urinary System

Beagle Mix

The **urinary bladder** revealed calculi, nonobstructive at the time of the sonogram. The largest calculus measured 2.4 cm. A smaller calculus measured 1.0 cm. Polypoid changes were noted in the apex of the urinary bladder. Some apical polyps were noted, as well as ventral wall polyps. Urinary debris was noted. Removal of the cranial ventral 3rd of the urinary bladder is recommended. The pelvic urethra was imaged 3.0 cm beyond the cystourethral junction. The urethra appeared to have solid tone.

SEX

Spayed Female

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities.

AGE

7 Years

WEIGHT

Adrenal Glands

67.4 Pounds

The **left adrenal gland** revealed two separate hyperechoic nodules, measuring 0.62 cm and 0.58 cm. These are likely lipogranulomas, however, should be monitored. The left adrenal gland measured 2.46 cm x 0.77 cm at the cranial pole and 0.48 cm at the caudal pole.

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

The **right adrenal gland** was nodular, measuring 3.31 cm x 1.64 cm at the cranial pole and 0.65 cm at the caudal pole. The nodule measured 2.0 cm x 1.3 cm.

Spleen

IMAGING PERFORMED BY

Shari Reffi, CVT

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted. A hypoechoic nodule was noted in the spleen, measuring 1.18 cm at the caudal pole.

HOSPITAL NAME

Andover AH

Liver

REFERRING VET

Dr. Bihlear

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

INVOICE

21824

Gastrointestinal

DATE

4/3/23

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine



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demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

Pancreas

SPECIES

Canine

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

BREED

Beagle Mix

ULTRASONOGRAPHIC FINDINGS

SEX

Spayed Female

- Bladder calculi with polypoid bladder wall changes, likely polypoid hyperplasia, possibility of carcinoma.
- Focal splenic nodule
- Nodular adrenal glands, likely adenomas

AGE

7 Years

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

WEIGHT

67.4 Pounds

Proactive splenectomy may be a solid option given the necessity for cystotomy/partial cystectomy. Blood pressure measurements are warranted to ensure underlying hypertension is not related to either adrenal gland. Right adrenalectomy could be considered yet likely adenoma. If hypertension is an issue, then urine catecholamine is indicated +/- right adrenalectomy. The left adrenal gland appears benign. The cause of underlying UTI is likely owing to bladder calculi, apical bladder wall changes may also be playing a role. Right adrenal gland differentials include myelolipoma, adenoma, adenocarcinoma, pheochromocytoma (less likely). The left adrenal gland differentials are likely adenoma or myelolipomas. Splenic nodule differentials include hyperplasia, round cell neoplasia, emerging hemangiosarcoma and abscessation.

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Chronic UTI Protocol

IMAGING PERFORMED BY

Shari Reffi, CVT

I recommend **Enrofloxacin** (5-10 mg/kg SID PO) (In patients > 1 year of age) in late pm after urination to maximize urinary concentrations overnight. This assumes that culture supports this use. Repeat **culture** at 3-4 weeks and continue treatment at least 7-10 days post negative urinary sediment and negative culture. *Note: Negative culture does not necessarily mean lack of UTI.* Other favorite antibiotics for chronic UTI include third generation Cefa (Ceftiafur or similar s.i.d. injectable) or Clavamox. If suspicion of occult urinary incontinence is present then **phenylpropanolamine (PPA)** (1-2 mg/kg BID) can be employed long term to enhance urethral tone.

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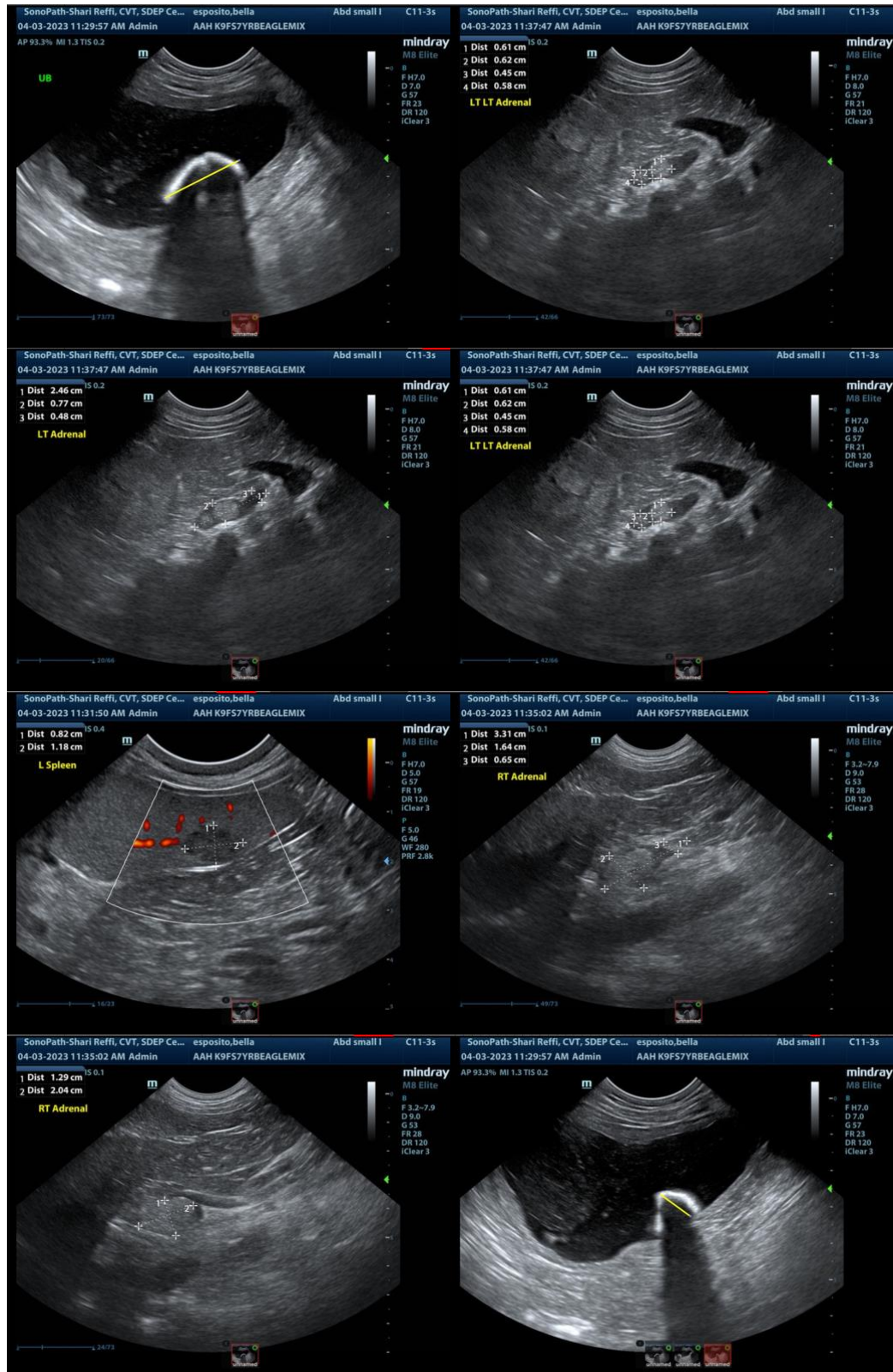
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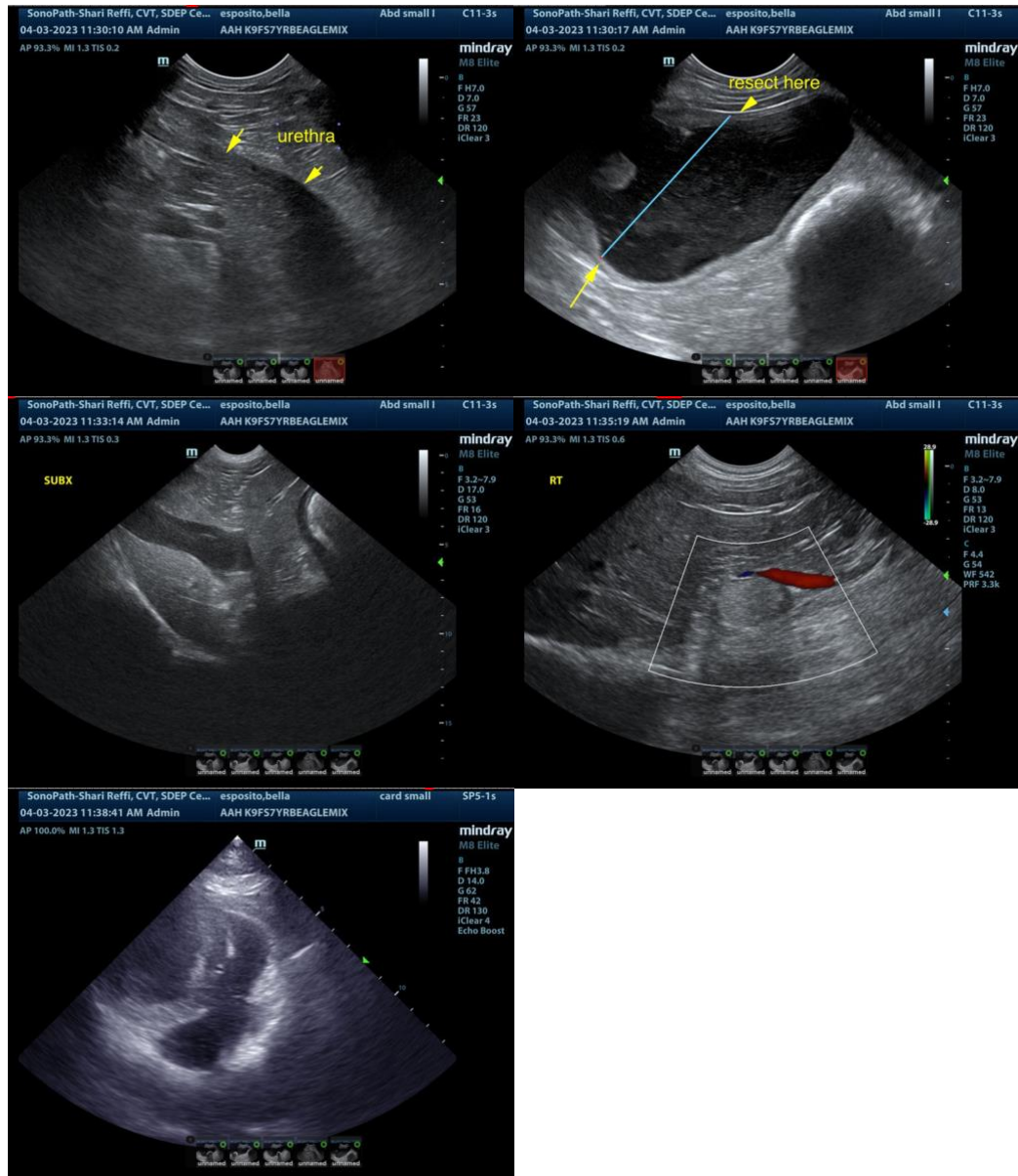
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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