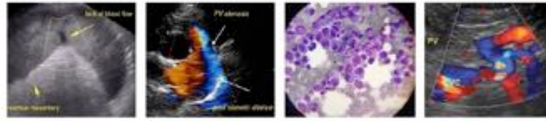


PATIENT

Brody Gibb

SPECIES

Canine

BREED

Jack Russell Cross

SEX

Neutered male

AGE

11 years

WEIGHT

16.2 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Kelly Reshny, RVT

HOSPITAL NAME

Snelgrove VS

REFERRING VET

Dr. Ioannou

INVOICE

97756

DATE

3/24/22

PRESENTING CLINICAL SIGNS

History: Very quiet and lethargic tense on palpation of abdomen, urinated a small of bloody urine he is constantly urinating - trial of desmopressin did not help lost 4 lbs in 2 weeks
Abnormal PE/Chem/CBC/UA Results: Urine SG 1.013 pH 6.0. WBC 6/HPF, RBC 18/HPF Blood - LYM 0.68 (1.05-5.10), Ca 3.08 (1.98-3.00)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** revealed multiple calculi and excessive wall thickness. Wall thickness measured 0.9 cm. Polypoid changes were noted in the bladder. A minor amount of urine was present at the time of the sonogram. This is most consistent with chronic cystitis pattern. Urethral sand was noted.

The prostate and prostatic urethra revealed mineralization.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for this age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. Slight mineralization was noted in both kidneys. The left kidney measured 5.9 cm. The right kidney measured 6.34 cm.

Adrenal Glands

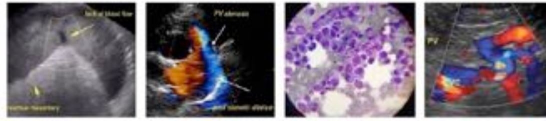
The **adrenal glands** appeared slightly enlarged and swollen. No evidence of focal capsular expansion or invasion into the phrenic veins was noted. No overt suspicion of neoplasia was noted. This is considered likely a hyperplastic change associated with stress or adrenal endocrinopathy (PDH). If isosthenuria is persistently present and the patient morphologically suggests Cushing's disease then ACTH testing would be indicated. The right adrenal gland measured 1.77 x 0.24 cm at the cranial pole and 0.9 cm at the caudal pole. The left adrenal gland measured 2.41 x 1.06 cm at the caudal pole and 0.73 cm at the cranial pole.

Spleen

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 was noted.

Liver

The **liver** was uniformly swollen with minor, excessive gallbladder debris and over distension with dependent and suspended bile without evidence of overt mucocele formation. However, excessive sludge was present. The liver presented coarse architecture with mildly increased portal markings and subtle, mixed echogenic changes. This is consistent with vacuolar hepatopathy and some level of remodeling and history of inflammatory component. There was no overt suspicion of neoplasia.



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Gastrointestinal

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

Pancreas

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.

ULTRASONOGRAPHIC FINDINGS

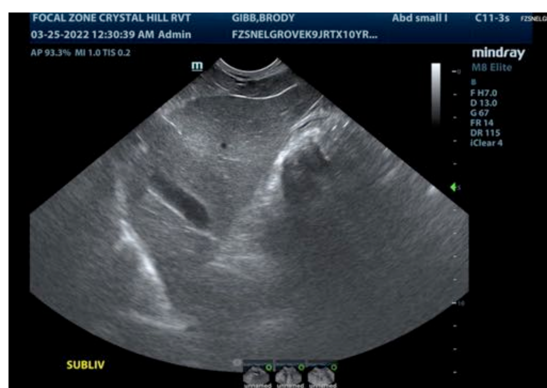
Mineralized prostate and urethral sand with polypoid bladder changes.

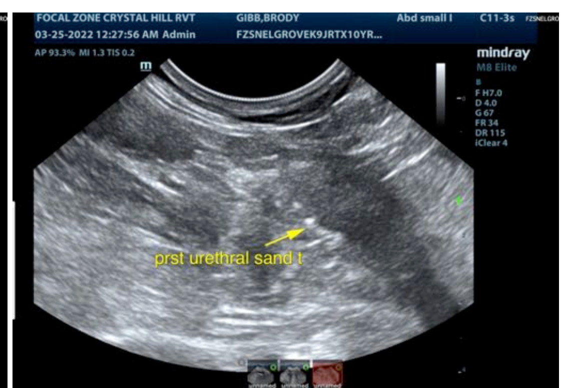
Bilateral adrenal hypertrophy.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

I am concerned for possible concurrent carcinoma in the prostate and bladder. There is mineralization in both the prostatic urethra as well as the prostate. The prostatic parenchymal mineralization may be dystrophic owing to chronic inflammation. However, carcinoma is also possible. One option is traumatic catheterization of the urethra, prostate and bladder region prior to surgical intervention for cystotomy, stone analysis and culture. Otherwise, direct cystotomy could be considered with bladder wall biopsies or intraoperative traumatic catheterization of the prostate or ultrasound-guided FN of the prostate. However, there is a minor potential for trailing with this technique. The prognosis is guarded depending upon cytology results. Eventual surgical intervention with normal and retrograde flushing would be necessary in this patient.

Even though lower urinary tract issues are present and likely causing the PU/PD, concurrent PDH may be an issue as well. However, I recommend investigating further cytology or histopathology of the lower urinary tract as well as liberating the calculi and treating for any infection. Eventual work-up for PDH is warranted if isosthenuria is persistent. Three view chest radiographs are recommended to assess for any pulmonary metastatic lesions.





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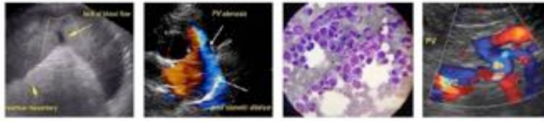

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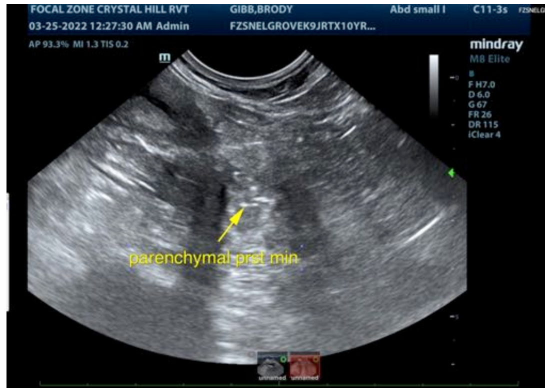

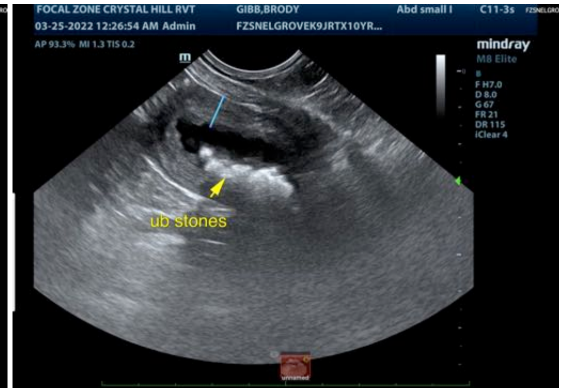

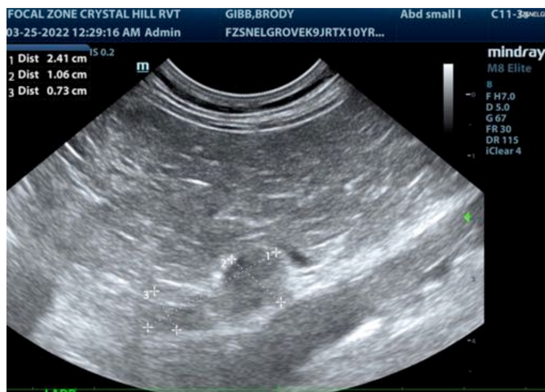

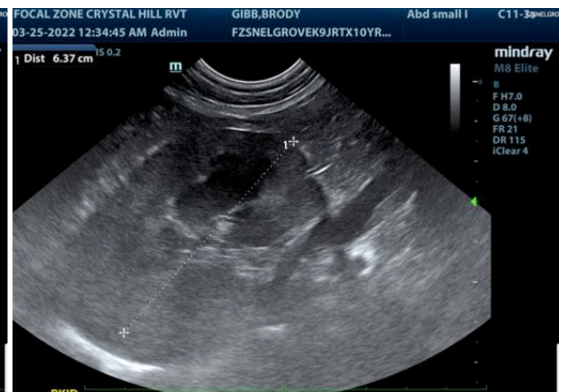

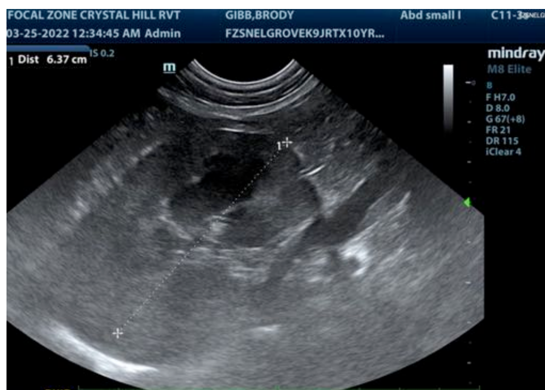

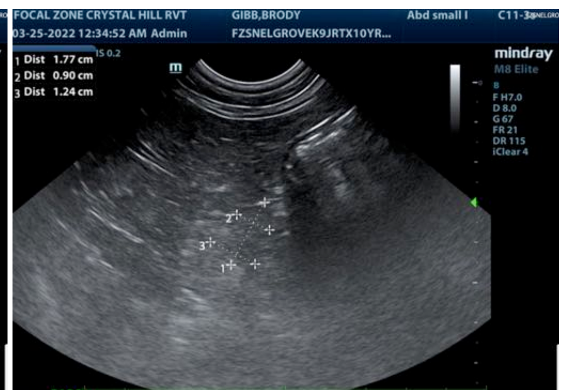

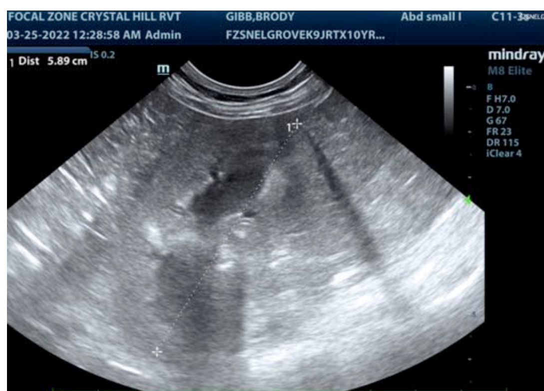

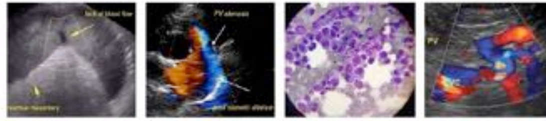

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com
Eric.Lindquist@SonoPath.com