



PATIENT

Bronn Doherty

PRESENTING CLINICAL SIGNS

History: History of perianal carcinoma. Current meds: Palladia.

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The bladder wall is diffusely thickened and mildly irregular at 0.4 cm in width. Additionally there are some focal, hyperechoic, shadowing areas that are suspicious for gas shadow in the urinary bladder. This is possibly consistent with emphysematous cystitis. The area of the trigone and proximal urethra (to a depth of 2cm) appear normal with no masses or calculi.

BREED

Pug Mix

SEX

Neutered male

The prostate is borderline enlarged in size and measured 1.23 cm in height when measured in the sagittal view. It is uniform in shape and echotexture. Distal to the prostate at the junction with the post prostatic urethra is a mineralization that measures 0.17 x 0.21 cm. This is either consistent with prostatic mineralization or a small stone within the distal prostatic urethra.

AGE

11 years

The left kidney has a normal shape and size (4.46 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

WEIGHT

20.4 lbs

The right kidney has a normal shape and size (4.27 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

INTERPRETED BY

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

Adrenal Glands

The left adrenal gland is large with the cranial pole measuring 0.31 cm, the caudal pole measured 1.1 cm and the length was 1.86 cm. It is observed in its normal position cranial to the left renal artery. It is somewhat irregular in shape and there is a hyperechoic nodule in the caudal pole measuring 1.0 x 1.18 cm. This appearance is consistent with a caudal adrenal nodule.

IMAGING PERFORMED BY

Kelly Vazquez, CVT

The right adrenal gland is normal in size measuring 0.58 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

HOSPITAL NAME

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Spleen

REFERRING VET

Dr. Elshafie

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.

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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

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normal. No focal nodules or cystic lesions are observed. The gallbladder lumen is moderately distended. The wall of the gallbladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

SPECIES

Canine

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.

BREED

Pug Mix

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.)

SEX

Neutered male

Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

AGE

11 years

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.

WEIGHT

20.4 lbs

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.

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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.

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Other

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The left and right anal glands are imaged. They both appear intact. The left anal gland measures 1.19 x 0.53 cm. The right anal gland measures 1.2 x 0.84 cm.

REFERRING VET

Dr. Elshafie

ULTRASONOGRAPHIC FINDINGS

PRIMARY FINDINGS:

Diffuse bladder wall thickening with suspected gas shadow. This lesion is suggestive of emphysematous cystitis. I recommend confirmation with abdominal radiographs, urinalysis and culture as occasionally mineralization etc, can mimic this.

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Hyperechoic nodule in the caudal pole of the left adrenal gland. Left adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.

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Prominent prostate with mineralization in the post prostatic urethra. If the patient was neutered after puberty this could be normal. If neutered at a very young age this could be consistent with an abnormal prostate and there could be concern for prostatic neoplasia. Additionally there is mineralization present which could be consistent with a post prostatic stone or mineralization of the prostate.

SPECIES

Canine

Decreased corticomedullary distinction in both kidneys. Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.

BREED

Pug Mix

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Ultrasound findings are most consistent with emphysematous cystitis. This will need to be confirmed based on abdominal radiographs as sometimes other structures can mimic this appearance on ultrasound. I recommend urinalysis and culture.

SEX

Neutered male

Additionally the prostate is prominent. Correlate this finding with the history of the patient's age at neutering as this can make a big difference. There was some mineralization in the post prostatic urethra junction which could either be mineralization prostatic tissue or a small stone either in the lumen or embedded in the urethra. Correlate this appearance with radiographs. If the patient was neutered before puberty than this could be abnormal and you can consider a prostatic aspirate. If not you can consider continued monitoring or passing urinary catheter to see if there is any evidence of blockage or if you are able to retropulse the mineralization back into the urinary bladder.

AGE

11 years

WEIGHT

20.4 lbs

There is a nodule visualized within the left adrenal gland. This nodule is relatively small and minimally deforms the caudal pole of the adrenal gland. There is no overt evidence of vascular invasion. These nodules can be benign or malignant and can secrete hormones or be non-active. Options moving forward include:

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- If signs of Cushing's are present, consider adrenal function testing. I prefer an ACTH stimulation test combined with an adrenal panel to the University of Tennessee's endocrine lab to look for atypical adrenal hormones as well as cortisol. (other testing can suffice)
- If adrenal dependent Cushing's is suspected and supported by adrenal function testing consider medical therapy with Lysodren or Trilostane or consider surgical removal (recommend referral to a board certified veterinary surgeon and possible pre op CT)
- Recommend blood pressure evaluation-if hypertensive consider testing catecholamine levels for a possible pheochromocytoma
- If no symptoms of Cushing's are present, consider either referral for surgery or continued monitoring with ultrasound (in 3-4 months).
- Many of these nodules can be benign and incidental in nature, unfortunately that is difficult to determine with a single ultrasound.

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Both anal glands appear normal and there is no overt evidence of metastasis in the liver or spleen. Theoretically the left adrenal nodule could represent metastasis, but I think this is unlikely. Consult with your veterinary oncologist regarding the next interval for ultrasonographic reevaluation.

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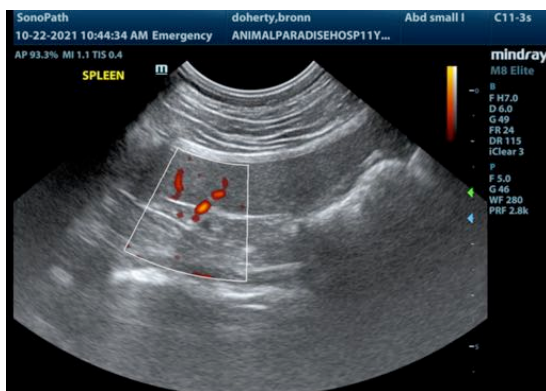
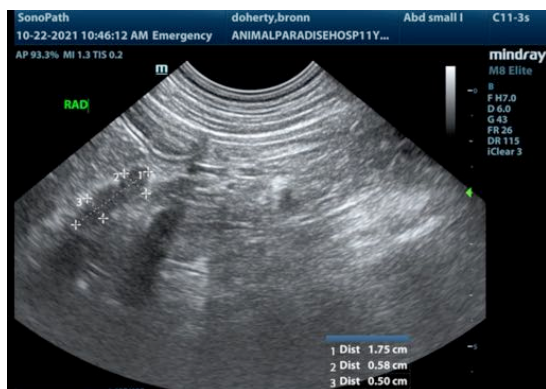
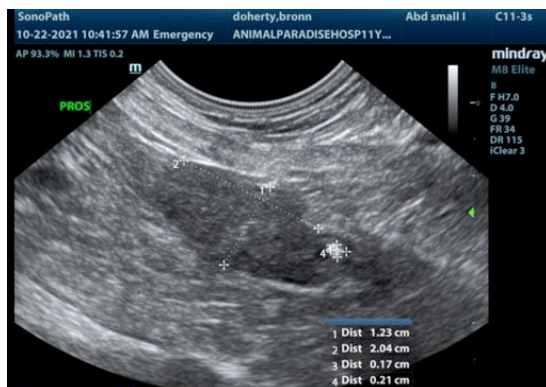
Dr. Elshafie

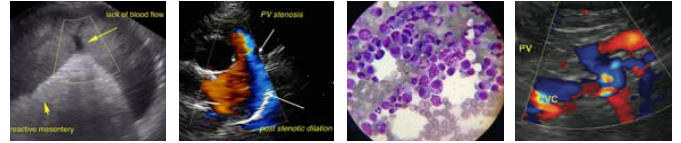
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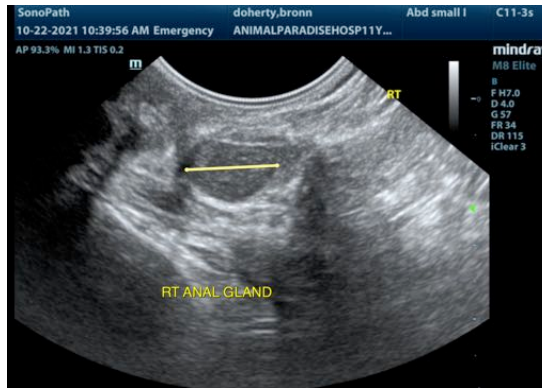
Neutered male

AGE

11 years

WEIGHT

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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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

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