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Clinical Sonography & Telecytology
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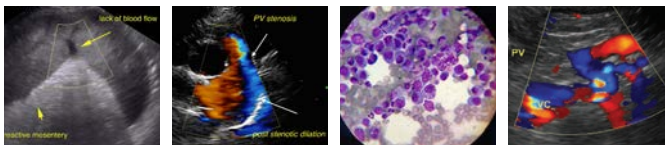

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1-800-838-4268 info@sonopath.com

PATIENT
Moe Spencer

SPECIES
Feline

BREED
Mix

SEX
Neutered Male

AGE
12 Years

WEIGHT
4.44 kg

INTERPRETED BY
Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY
Dr. Kari Lemanski

HOSPITAL NAME
Animal Emergency Hospital Deland

REFERRING VET
Dr. Kari Lemanski

INVOICE
45793

DATE
3/9/23

PRESENTING CLINICAL SIGNS

Mo is a 12 YO MC DSH who presented for rapidly declining. P was hospitalized for partial urinary obstruction on 2/27/23 and has been doing well since then. Today p became very lethargic and not wanting to move. P was found under the couch and when he started to come out he meowed very loud then urinated everywhere. Conclusion 1. Diffuse bronchointerstitial pattern – Differentials include feline asthma, heartworm disease, infectious bronchitis, fungal or parasitic disease and less likely neoplasia. 2. Excessive small intestinal gas – This may represent aerophagia, however infectious or inflammatory enteritis and pancreatitis are also considered. 3. Suspect right nephrolithiasis Recommendations A heartworm test and airway sampling could be considered for further evaluation of the pulmonary parenchyma. An abdominal ultrasound could be considered to further assess the abdominal viscera. Read By: Scott Secrest DVM, MS, DACVR

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with a large amount of echogenic non-shadowing debris, which could be partially incidental suspended lipid in a cat, likely combined with exfoliated cells, mucous, crystals, and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Kidneys are normal in size with increased cortical echogenicity. Normal smooth peripheral margination and shape are maintained. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia or infarcts observed. Infiltrative disease (infectious, neoplastic, etc.) or nephritis cannot be ruled out but is considered less likely. A hyperechoic band parallel to the corticomedullary border is present. The left kidney measured 4.2 cm. The right kidney measures 4.2 cm. A small non-obstructive nephrolith is noted in the right kidney.

Adrenal Glands

The area of the adrenal glands is examined without evident adrenal gland pathology.

Spleen

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

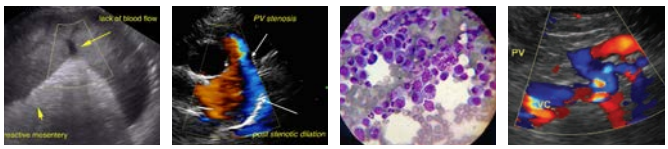
Liver

The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

Gastrointestinal

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.



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The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

ULTRASONOGRAPHIC FINDINGS

- Large amount of urinary bladder debris without visible evidence of obstruction
- **Bilateral medullary rim sign -** This finding is of unknown clinical significance and can be a normal variant, often idiopathic. Medullary rim sign can be present with renal disease including FIP, lymphoma, hypercalcemic nephropathy, Leptospirosis, tubular disease, other and should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc. This is a common incidental finding in patients with diabetes mellitus.
- Non-obstructive nephrolith in the right kidney

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is not an ultrasonographically obvious visible cause for this patient's acute change in behavior and inappropriate urination. An acute painful incident could have occurred, perhaps even passing of a small cystoliths, mucus plug, or other, which now there is no visible evidence of. Recommendations include a general metabolic health screen including CBC/Chem panel, electrolytes, a urinalysis and, if indicated based on urinalysis results, urine culture. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.

If respiratory signs are present, given the x-ray report, further evaluation of lower airway disease is also recommended. Finally, if an underlying cause is not found, and patient's clinical signs persist, further orthopedic and neurologic evaluation for other sources of pain may be indicated.

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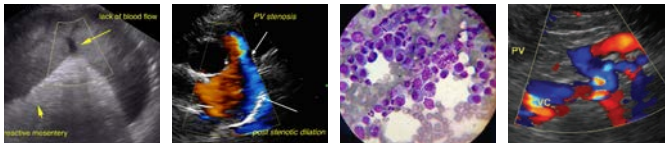

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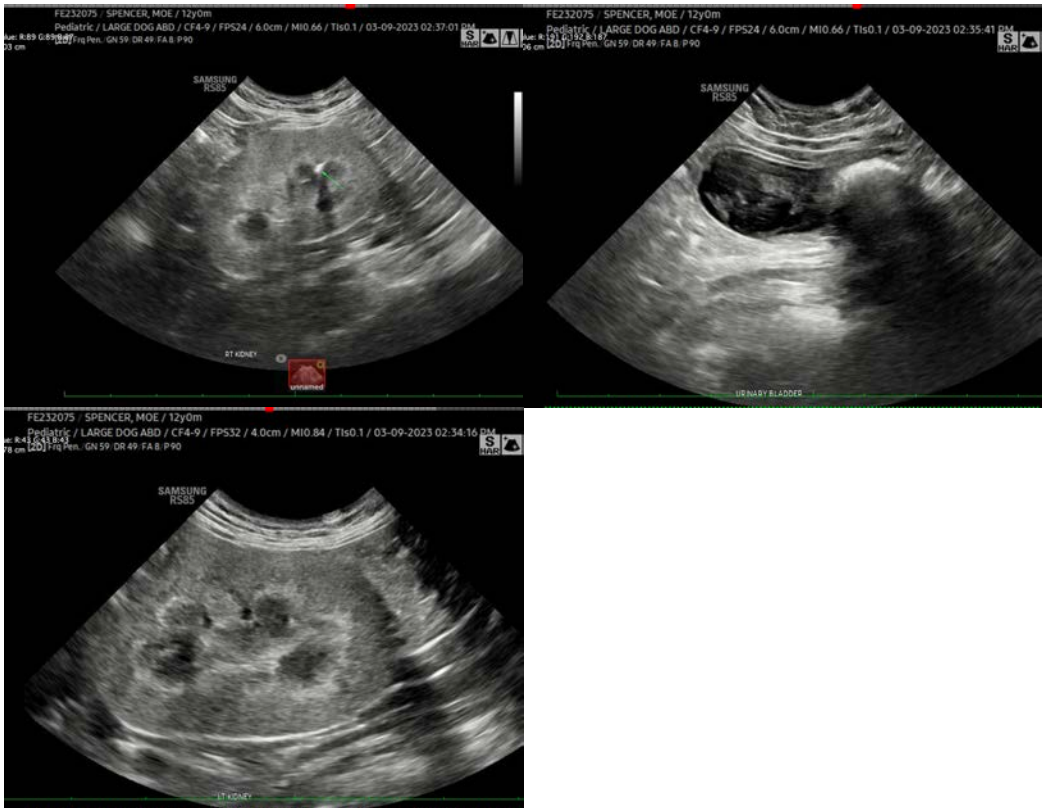

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Beth Johnson, DVM, DACVIM
Beth.Johnson@sonopath.com