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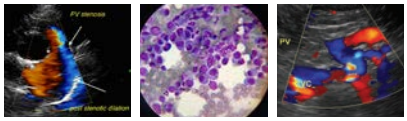

SonoPath

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DATE

6/29/23

PATIENT

Dill Warner

SPECIES

Canine

BREED

Bassett

SEX

Neutered Male

AGE

4/23/20

WEIGHT

69 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Alexander AH

REFERRING VET

Dr. Alexander

INVOICE

43603

PRESENTING CLINICAL SIGNS

Went to E-clinic after vomiting several times night of 6/9 then progressively more lethargic until presentation recumbent and unresponsive on 6/10. Diagnosed as Addisonian and fluid resuscitated, given DOCP injxn and started on Prednisolone. Initially patient was improved but still not normal energy/activity and hesitant to go up and down stairs and just laying around with decreased appetite. Recheck here on 6/26/23 had pt QAR but bloodwork shows normal electrolytes but HCT 33% and Hgb 10.7 and >neuts and monos.

Current Medications: 6/11 73mg DOCP injxn, 6/11- Prednisolone 20mg 1 SID x5 days, then ½ SID.
Lab Results: See attached.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Andi Parkinson, BS, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with mild primarily suspended echogenic debris and some dependent shadowing/sandy debris present. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or calculi. Echogenic debris of this type can be associated with small crystals, sandy debris or small calculi. Correlate findings with abdominal radiographs, urinalysis and culture.

The visualized areas of prostate and surrounding tissue appear normal. Unfortunately, the prostate is not fully visualized likely due to its intrapelvic location. Correlate with rectal exam findings.

The left kidney has a normal shape and size (7.58 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (7.49 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is borderline small/flat, measuring 0.46 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is small/flat, measuring 0.32 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.

Spleen

The spleen is irregular and mottled. There is a somewhat “lumpy”/scalloped appearance to the hypoechoic mottled area of the spleen, and towards the tail of the spleen is an abrupt change in the parenchymal structure, most consistent with an avascular/thrombosed area of spleen. Color flow in this area does not pick up any evidence of vascularity. Findings are most consistent with a thrombosed caudal spleen (1/2 to 1/3 of the spleen).

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 normal. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

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.

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

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.

Pancreas
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.

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 slightly increased around the spleen.

Other
The right auricle and pericardium were visualized and were unremarkable. No obvious pathology is visualized. If cardiac function evaluation is desired a full echocardiogram is warranted.

There is a large volume of mildly echogenic fluid visualized in the thorax with no overt mass lesions visualized.

ULTRASONOGRAPHIC FINDINGS

- Dependent sandy debris/small stones in the urinary bladder – Recommend urinalysis and culture.
- Small/flat adrenal glands – Findings are most consistent with hypoadrenocorticism.
- Thrombosed/avascular caudal aspect of the spleen – Findings are most consistent with an infarcted spleen.
- Moderate to large volume of pleural effusion.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

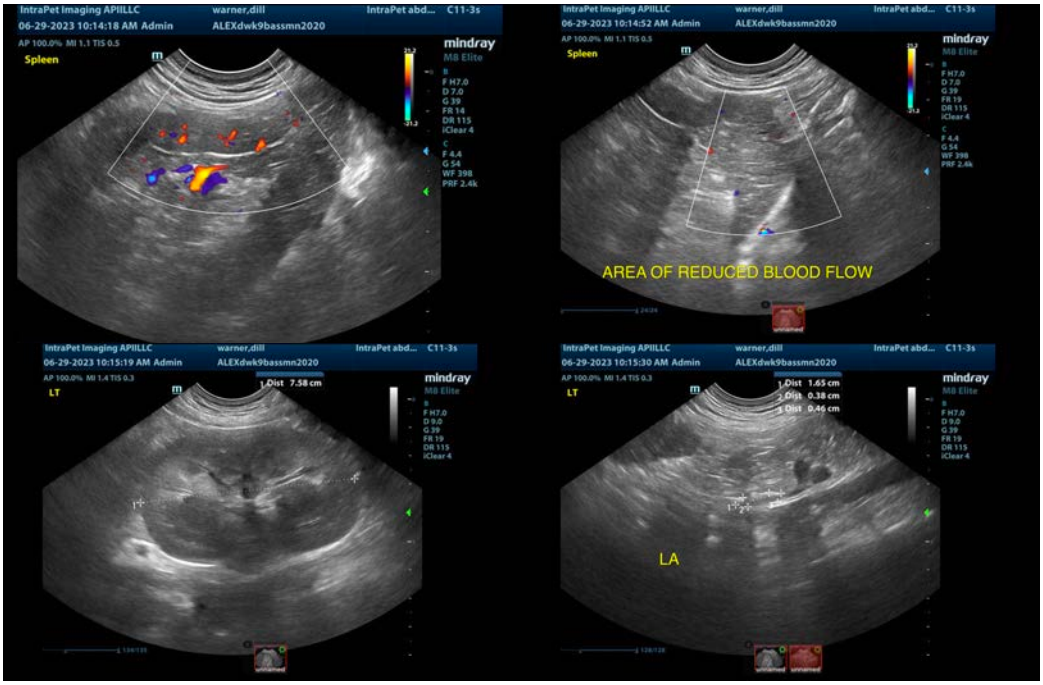
This is a complicated case. This patient had a severe suspected hypotensive event approximately 3 weeks ago most consistent with an Addisonian crisis and was started on appropriate therapy (including corticosteroids). On today's exam, the caudal aspect of the spleen appears avascular and infarcted. This is an atypical presentation for a splenic infarct. Typical causes to consider would include underlying neoplasia, systemic inflammatory response syndrome, DIC, pancreatitis, autoimmune disease, steroid use, etc. Additionally, things such as sepsis could contribute. To complicate things, this patient has pleural effusion, which is concerning for the possibility of additional clots or vasculitis, etc.

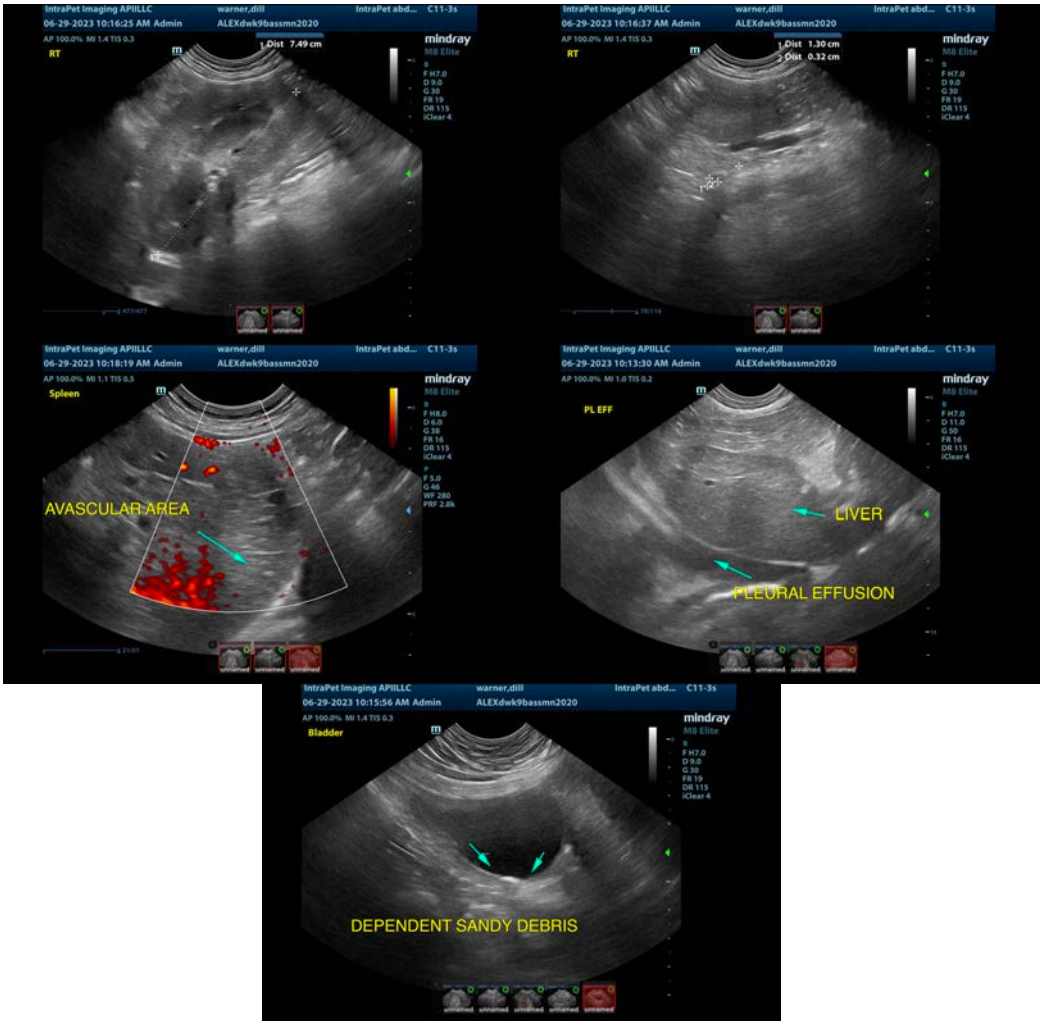
If at all possible, I would consider a contrast CT scan of the thorax and abdomen, looking for other areas of infarction, any mass lesions, etc. Additionally, I would have a fluid analysis and cytology done on the collected sample of pleural effusion. My concern is that the caudal aspect of the spleen may not be viable, and if necrosis starts to set in, this will become a problem, so the spleen may need to be surgically resected, but if there is bicavitary disease, etc., this should be identified prior to considering surgery.

Additionally, it is questionable if antiplatelet should be considered (Clopidogrel). If this is done, then ideally this medication should be discontinued 5 days prior to any surgical procedures. I would also consider evaluation of a urine protein to creatinine ratio, looking for evidence of proteinuria that could contribute to a hypocoagulable state.

This could all be a sequela to the Addisonian crisis, but it would be a very atypical presentation. Additionally, consider that the "crisis event" could have been some other illness combined with a relative cortisol insufficiency, but the appearance of the adrenals on today's exam are supportive of suspected Addison's.

If possible, consider referral to a veterinary internist to try and globally assess the dog and try and determine if surgical intervention is safe/warranted, etc.





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.

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