**PATIENT**

Misfit Kellar

SPECIES

Canine

BREED

Corgi Mix

SEX

Neutered Male

AGE

10 years

WEIGHT

-

INTERPRETED BYBeth Johnson, DVM
DACVIM**IMAGING
PERFORMED BY**

Amy Mayhew LVT

HOSPITAL NAME

SVS Imaging Michigan

REFERRING VET

Union Lake VH

INVOICE

31568

DATE

7/11/22

PRESENTING CLINICAL SIGNS

Hx facial paralysis, on prednisone 1 year ago with alt/alp elevations detected at that time. Has not been on steroids for several months, yet elevations have progressed (alt 197, alp 814). Denamarin started 7/7/22. Otherwise acting normal, e/d well. All other bloodwork normal.

Abnormal PE/Chem/CBC/UA Results: Hx facial paralysis, on prednisone 1 year ago with alt/alp elevations detected at that time. Has not been on steroids for several months, yet elevations have progressed (alt 197, alp 814). Denamarin started 7/7/22. Otherwise acting normal, e/d well. All other bloodwork normal.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The prostate is normal for a neutered dog.

Left kidney is normal is size (5.42 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Right kidney is normal is size (4.95 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Adrenal Glands

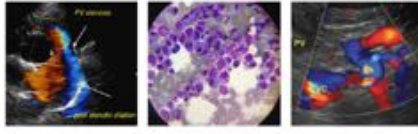
Adrenal glands are plump/swollen in size. Normal shape and contour are maintained without evidence of capsular invasion. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. Hyperechoic adrenal gland nodules were noted bilaterally. The left adrenal gland measured 1.62 cm at the cranial pole and 0.67 cm at the caudal pole. The right adrenal gland measured 1.14 cm thick.

Spleen

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

Liver is subjectively normal in size. The parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. A 0.7 cm hypoechoic nodule was noted in the left liver as well as a hyperechoic, approximately 1.0 cm nodule in the left liver. A 1.86 cm hyperechoic area was also noted in the right liver. Normal curvilinear pattern appears maintained. Visible vasculature and biliary tree appear normal without distension or congestion.

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Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

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Gastrointestinal

The visible stomach wall is normal in thickness 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. 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.

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

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Pancreas

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

WEIGHT

-

Free Abdomen**INTERPRETED BY**Beth Johnson, DVM
DACVIM

There is no evidence of peritoneal effusion or apparent lymphadenopathy noted in these images.

ULTRASONOGRAPHIC FINDINGS**IMAGING PERFORMED BY**

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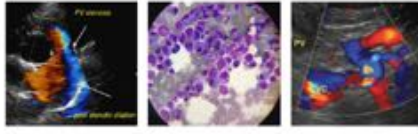
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- **Bilateral adrenomegaly** – consistent with adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism vs stress or normal variant. Interpret in combination with clinical signs of hyperadrenocorticism.
- **Hyperechoic adrenal nodules** – Differentials include primary adrenal cortical adenoma or adenocarcinoma, pheochromocytoma, myelolipoma, adrenal hyperplasia secondary to pituitary disease or metastatic disease. Ultrasound alone cannot differentiate between functional and non-functional nodules and/or between benign and malignant disease. Small nodules without other evidence of abdominal disease (to suggest metastatic disease) and/or clinical signs (to suggest adrenal disease) are most often incidental and should be monitored.
- **Gallbladder debris** - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.
- **Liver nodules** – Differentials for discrete liver nodules include primarily benign changes such as nodular hyperplasia, fibrosis of an old hematoma, granuloma, etc.; however, while considered less likely, primary hepatic neoplasia, infiltrative round cell neoplasia and metastatic disease can mimic benign lesions and cannot be definitively ruled out.



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

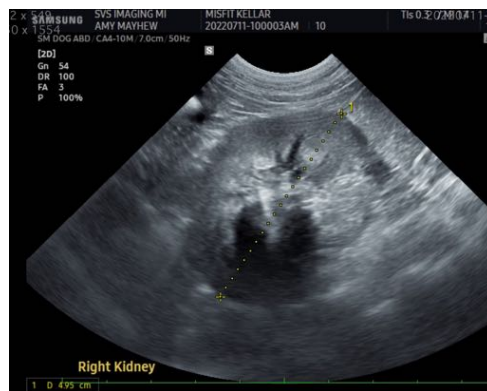
The described adrenal gland, liver and gallbladder changes are all suggestive of hyperadrenocorticism. If clinical signs of hyperadrenocorticism, such as polyuria, polydipsia, polyphagia, panting, hair loss, hypertension, etc. are present, testing for hyperadrenocorticism with a LDDS test is warranted. If a LDDS test has been evaluated with a normal result, investigation of possible atypical hyperadrenocorticism with a full ACTH stimulation adrenal panel to the University of Tennessee could be considered.

If clinical signs are not present, monitoring is recommended with testing pursued when/if clinical signs develop.

If not recently evaluated, blood pressure is recommended.

If not recently evaluated, a urinalysis and, if indicated based on urinalysis results, urine culture are also recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.

Testing for Leptospirosis can be considered.

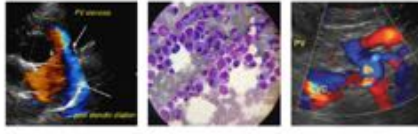


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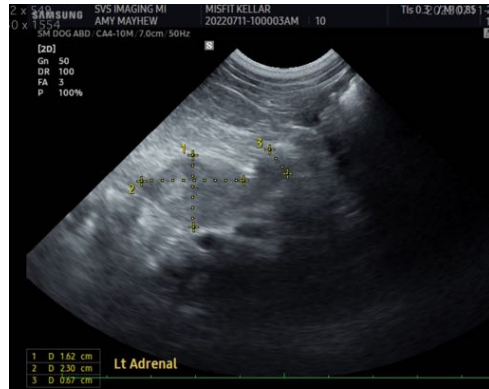
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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

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