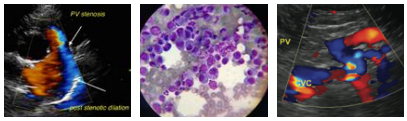
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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DATE

10/5/22

PATIENT

Milo Yerrid

SPECIES

Canine

BREED

Labrador Mix

SEX

Male

AGE

9/29/12

WEIGHT

40 lbs

INTERPRETED BY

Beth Johnson, DVM DACVIM

HOSPITAL NAME

Paradise AH

REFERRING VET

Dr.Pound

INVOICE

399936

PRESENTING CLINICAL SIGNS

Owner adopted P ~1 month prior from a friend. P was underweight on adoption with generalized alopecia. Is picky with his food at home, prefers human food to dog food. Seen at emergency clinic 9/15 for multiple swollen digits. On presentation P was weak and ataxic. Bladder significantly distended. Bloodwork unremarkable. 1700 mL of dark urine removed via catheterization. O reports P has been urinating well, weakness has somewhat improved. Hyporexia persists and alopecia worsens. Weight stable. Severe cachexia. Generalized alopecia. Multiple swollen digits. Subjective cranial organomegaly on palpation. AFAST scan concern for significantly distended gall bladder.
Current Medications: None at this time.
Lab Results: 9/15: Mild anemia, Stress leukogram, Mild elevation BUN
Radiographs: Emergency DVM radiographs not available for review. Reported bronchial pattern in lungs.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is moderately to markedly subjectively over distended with anechoic contents. There is a large amount of mineral/sand debris settled along the dependent wall. No masses, inflammatory changes, or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Prostate (neutered) is normal in size, echotexture and echogenicity for a neutered male. The prostate measures 1.7 cm wide.

Left kidney is normal is size (7.77 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted. There is no evidence of pyelectasia or infarcts observed.

Right kidney is normal is size (7.4 cm),shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted. There is no evidence of pyelectasia or infarcts observed.

Adrenal Glands

Adrenal glands are plump/swollen in size. Normal shape and contour are maintained without evidence of capsular invasion. Some parenchymal heterogenicity is present without concerning capsular distortion. Visible surrounding vasculature appears normal. The left adrenal gland measures 3.3 cm long, 1.2 cm at the cranial pole and 1.3 cm at the caudal pole. The right adrenal gland measures 3.8 cm long, 1.1 cm at the cranial pole and 1.1 cm at the caudal pole.

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 enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.

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 visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering. Hyperechoic mucosal fogging or speckling is noted. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction or foreign material noted.

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

Pancreas
The area of the pancreas contains irregular hyperechoic pancreatic remodeling.

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

There is no apparent lymphadenopathy noted in these images.

There is no evidence of testicular pathology.

ULTRASONOGRAPHIC FINDINGS
Primary Findings
1. **Bilateral adrenomegaly –** consistent with adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism vs stress or normal variant. Interpret in combination with clinical signs of hyperadrenocorticism.

2. **Heterogenous Liver –** These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.

3. **Emerging mucocele –** 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. The non-dependent nature of this sludge combined with the cystic areas are suggestive, however, of possible emerging cystic mucosal hyperplasia or early gallbladder mucocele.

4. **Hyperechoic pancreas –** This finding is suggestive of pancreatic fibrosis, possibly secondary to chronic pancreatitis. A TLI is recommended to rule out exocrine pancreatic insufficiency (EPI), especially if clinical signs (weight loss, diarrhea, etc.) are present.

5. **A large amount of mineral urinary bladder debris and sand.**

6. **Mucosal speckling –** Mucosal speckling is often present with inflammatory bowel disease (IBD). It is not specific for type or severity of disease. Mild speckling change can occur as a normal patient variant in the post-prandial state. Given the appearance of the stomach and bowel this change is considered most likely post prandial.

Secondary Findings

1. **Non-obstructive dystrophic mineralization in the kidneys bilaterally.**

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Some of the findings described above including the adrenal gland, liver and gallbladder are suggestive of possible hyperadrenocorticism. Therefore, testing may be indicated in the future if clinical signs are present (the described alopecia may be a clinical sign of hyperadrenocorticism); however, hyperadrenocorticism does not typically result in decreased appetite, weight loss, etc. and should not be pursued in the face of concurrent analysis.

Urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

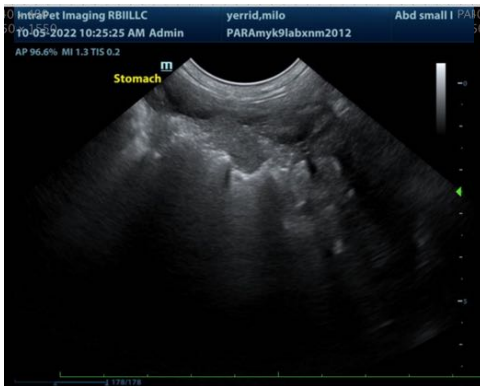
Given the pancreatic and bowel changes a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

In the meantime, possible differential for this patient's decreased appetite is the emerging gallbladder mucocele. Empirical therapy could include a course of Ursodiol +/- broad spectrum antibiotics with monitoring for improvement. However, if cranial abdominal pain is present and/or clinical signs persist a cholecystectomy may eventually be warranted.

Empirical deworming with a 5 day course of Panacur as well as a symptomatic medical management of gastrointestinal signs with antiemetics, gastroprotectants and an appetite stimulant are all recommended. Incidentally the reported joint swelling cannot be related to an underlying cause based on ultrasound images and may be a contributing factor to the patient's clinical signs and should be further evaluated if believed to be clinically relevant.


IntraPet Imaging RBIILLC
yerrid,milo
Abd small I
10-05-2022 10:20:21 AM Admin
PARAmyk9labxnm2012
AP 96.6% MI 1.4 TIS 0.2
Rt Kidney
1 Dist 7.40 cm


IntraPet Imaging RBIILLC
yerrid,milo
Abd small I
10-05-2022 10:25:34 AM Admin
PARAmyk9labxnm2012
AP 96.6% MI 1.3 TIS 0.1
Liver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Abd small I
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PARAmyk9labxnm2012
AP 96.6% MI 1.3 TIS 0.2
Stomach


IntraPet Imaging RBIILLC
yerrid,milo
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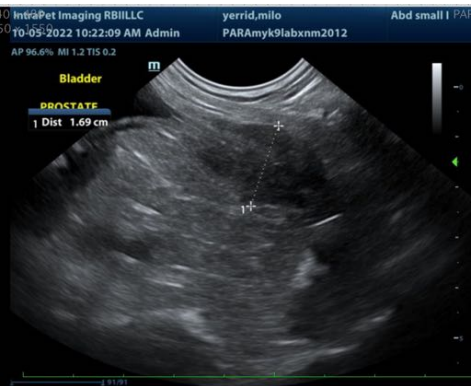
PARAmyk9labxnm2012
AP 96.6% MI 1.2 TIS 0.2
Lt adr
1 Dist 3.31 cm
2 Dist 1.31 cm
3 Dist 1.25 cm


IntraPet Imaging RBIILLC
yerrid,milo
Abd small I
10-05-2022 10:24:07 AM Admin
PARAmyk9labxnm2012
AP 96.6% MI 1.4 TIS 0.2
Lt Kidney
1 Dist 7.77 cm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yerrid,milo
Abd small I
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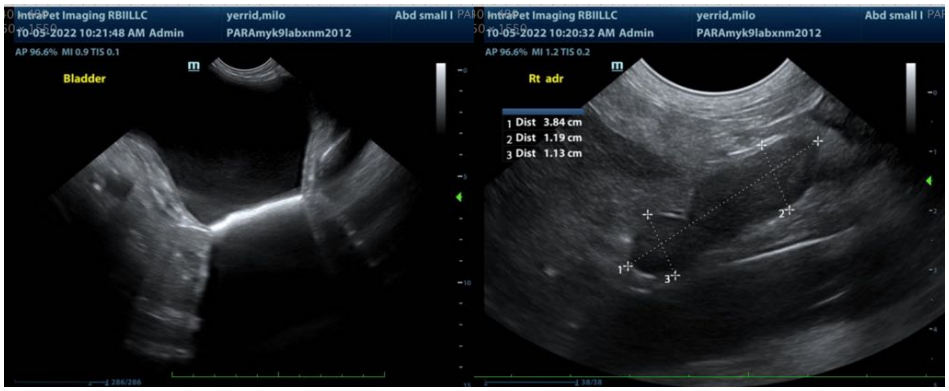
PARAmyk9labxnm2012
AP 96.6% MI 1.2 TIS 0.2
Bladder
PROSTATE
1 Dist 1.69 cm



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.

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