

**DATE PRESENTING CLINICAL SIGNS**

2/14/2022

2/10/2022 Missy presented for a dental scale and polish. She appeared healthy and safe for anesthesia. She was accidentally given a dose of Carprofen that was higher than recommended (18.9mg/kg SubQ 2 ml of 50mg/ml). She presented today with anorexia, Lethargy, pericardial effusion, pleural effusion, ascites, pancreatitis, hyper bilirubinemia, She had no murmur on 4/11 but has a grade 5 out of 6 murmur today.

PATIENT

Missy Hall

SPECIES

Canine

BREED

Dachshund

SEX

Spayed Female

AGE

11/8/09

WEIGHT

11 lbs.

INTERPRETED BY

Andrea Nicastro, DMV,
Diplomate DACVIM
(Small Animal
Internal Medicine)

HOSPITAL NAME

Timonium Animal
Hospital

REFERRING VET

Dr. Gernhart

INVOICE

10343

Current Medications: 4/10/22 Omeprazole 1 mg/kg PO BID 5 days, Sucralfate TID 7 days, Cerneia 0.5ml IV, Convneia 0.5 ml Sub Q, 4/14/22 Pantoprazole IV, IV fluids, Cerenia 5 mg 0.5ml IV, Buprenex 0.25 ml IV, Metronidazole 50 mg IV slow over 30 minutes.
Lab Results: Hyperglycemia, Azotemia 69, Hyperphosphatemia, 11.4, Hypocalcemia 7.8 ALKP 1,812, AMYL .2500, lipase.6,000, NA 121, CL 94 Na/K ratio 19
Bili 4.1
Neutrophilia, with bands,
Fluid from Ascites has no visible bacteria but has neutrophils on cytology.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Stat requested by DVM.
Imaging Performed By: Rachel Brillhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The left kidney presented normal size (4.21 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal size (5.53 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is mildly enlarged (0.40 cm at cranial pole) (0.69 cm at caudal pole) (1.63 cm in length); with a slightly irregular shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is mildly enlarged (0.62 cm at cranial pole) (0.73 cm at caudal pole) (2.19 cm in length); with a slightly irregular shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is normal in size (1.12 cm in width at the level of the hilus) with a normal capsular contour. The

parenchyma is subtly mottled in appearance. No focal lesions are observed. Splenic vasculature is normal.

Liver

The liver is subjectively prominent in size with slightly swollen peripheral contours. The parenchyma is hypoechoic relative to the spleen and subtly heterogenous in appearance. There is an increase in portal markings. Hepatic vasculature is of normal volume with no evidence of congestion.

The gall bladder is moderately distended. The wall is normal in thickness. A small amount of echogenic debris is observed within the lumen, most of which is gravity dependent, and some of which is suspended. The cystic and common bile ducts are normal. The common bile duct can be followed to the level of the duodenal papilla and is normal in diameter (0.52 cm). The duodenal papilla itself is borderline thickened (0.45 cm in width). There is no obvious evidence of an intraluminal obstruction.

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive or overt infiltrative disease is noted.

Pancreas

The pancreas is diffusely enlarged with irregular peripheral contours. The parenchyma is diffusely heterogenous in appearance. The pancreatic duct is not overtly dilated. Surrounding mesentery is hyperechoic.

Free Abdomen

A small amount of free fluid is observed. A 1.55 x 0.99 cm irregular hypoechoic lymph node is observed in the mid to caudal abdomen, near the aortic trifurcation. In addition, 1-2 prominent sublumbar lymph nodes are seen, the largest measuring 0.73 cm in length. One to two prominent jejunal lymph nodes are also observed, the largest measuring 0.98 cm in length.

Other

A brief evaluation of the thorax reveals a small amount of anechoic pleural effusion on the left side and trace pleural effusion on the right side. The right atrium is subjectively prominent in size. There is no obvious evidence of pericardial effusion.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The pancreatic changes are most consistent with acute-on-chronic pancreatitis with age-related remodeling +/- fibrosis. Regional peritonitis is present.
- The increase in hepatic portal markings is suggestive of inflammatory disease. However, other hepatopathies +/- age-related change (i.e., vacuolar hepatopathy and/or regenerative nodular hyperplasia) cannot be excluded.
- The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is also possible.

- Pleural effusion
- Suspected right atrium enlargement.
- Bilateral minor age-related renal changes. Given the clinical history, acute-on-chronic renal failure is suspected.

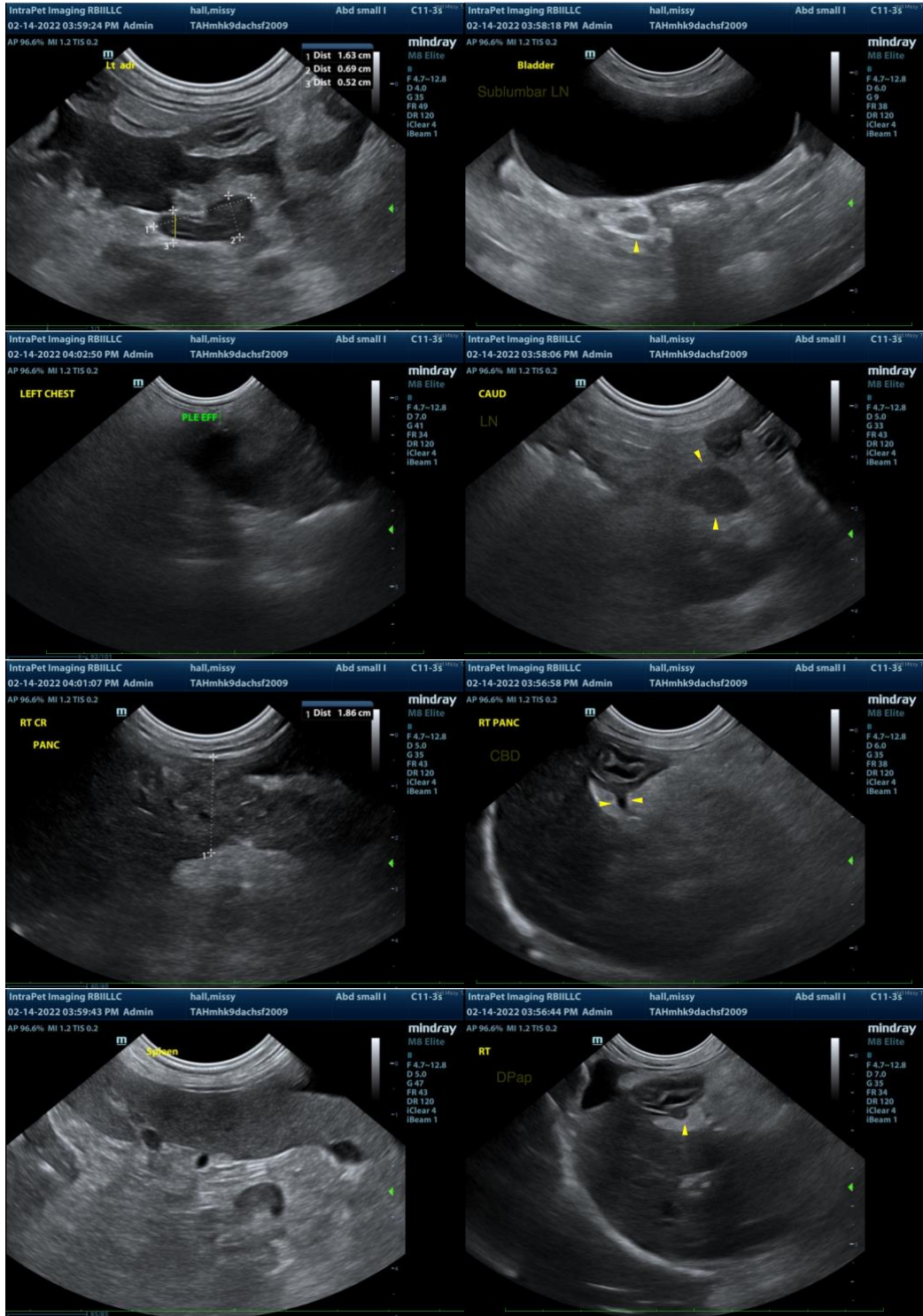
Secondary Findings

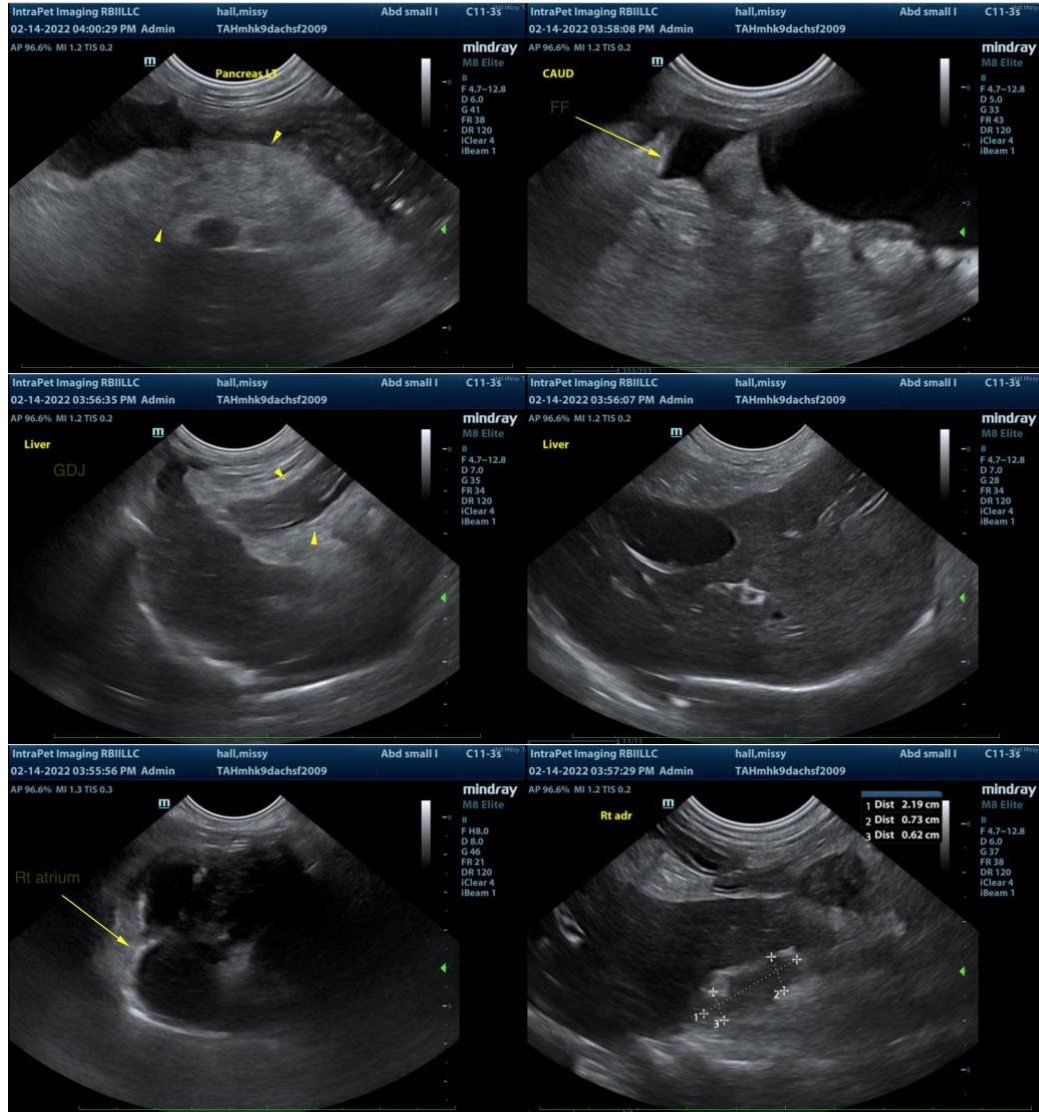
- Bilateral adrenomegaly
- The splenic parenchyma changes trend toward the benign (i.e., lymphoid hyperplasia or extramedullary hematopoiesis with a lower possibility of emerging neoplasia).

*Given the recent history of a dental procedure, a hypotensive event while under anesthesia, resulting in renal and pancreatic hypoxia, is a consideration.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Supportive care for pancreatitis and acute-on-chronic renal failure is recommended, including IV fluids (use judiciously), antiemetics, gastric protectants, pain medication as needed +/- fresh frozen plasma.
- Three-view thoracic radiographs, as well as an echocardiogram and blood pressure measurement are also recommended.
- Other diagnostic considerations include the following:
 1. Urine culture and sensitivity
 2. UPC (if proteinuria is present)
 3. +/- fine-needle aspiration of an enlarged abdominal if accessible and if clotting status is appropriate.





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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