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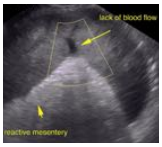
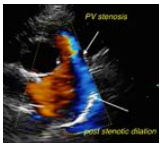
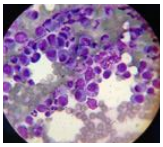
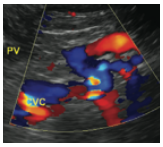





PATIENT
Simba Vadera

SPECIES
Canine

BREED
Canine

SEX
Shih-Poo

AGE
14 years

WEIGHT
9.08 kg

INTERPRETED BY
Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY
JSS

HOSPITAL NAME
King Hopkins Pet Hospital

REFERRING VET
Dr. Conteh

INVOICE
31546

DATE
7/10/22

PRESENTING CLINICAL SIGNS

Simba is a 14 yr old neutered Shih-Poo dog that presented with the complaint of vomiting 3 times from yesterday, not eating or drinking much and seems uncomfortable. He initially had vestibular signs including vomiting about 5 weeks ago, improved slightly 2 weeks ago, and he was limping a little. He was on pain meds and improved, but by this week the O noticed that the stools started to get runny but he seemed normal. He ate scrambled eggs and beef sticks in the day but would not eat chicken last night. He was diagnosed with borderline Cushing's, last tested the week before the vestibular signs. Not currently on any medication/tx. Diet: Raw food or boiled chicken, minced meat/liver and kibble Abnormal PE/Chem/CBC/UA Results: CBC: elevated WBC with neutrophilia, monocytosis, eosinopenia --> stress leukon CHEM: increased SDMA, UREA, elevated ALT, ALKP, GGT, LIPA, hypokalemia, low T4 (EUTHYROID ILLNESS) cPL: Abnormal Other PE findings: pendulous abdomen, generalized alopecia *NOTE*: - patient displayed high discomfort when palpated around middle abdominal area, between bellybutton and RT Kidney; not possible to acquire clear sonographs of this region

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** is well distended with anechoic contents. The wall is mildly thickened (0.17-0.19 cm) and irregular, particularly the apex. No abnormalities are present with the trigone or proximal urethra. A very small amount of free floating sediment is observed. An echogenic structure, measuring approximately 0.2 cm, is noted along the gravity dependent wall. It casts a subtle acoustic shadow, i.e. a cystolith in its early development is present. There are no signs of polyps or a mass.

The **prostate** is homogenous and measures 0.93 cm; within normal limits for a neutered male.

Kidneys

The **left** kidney measures 4.54 cm. The capsule is smooth. The cortex is hyperechoic, i.e., it is isoechoic to the spleen. A mild loss of the normal definition of the cortico-medullary junction is present. Very small mineralizations of the diverticulae and pelvis are present, without evidence of nephroliths or pyelectasia. The surrounding mesentery may be very mildly hyperechoic.

The **right** kidney measures 5,21 cm. The capsule is smooth. A mild loss of the normal definition of the cortico-medullary junction is present. Very small mineralizations of the diverticulae and pelvis are present, without evidence of nephroliths or pyelectasia. The surrounding mesentery is mildly hyperechoic.

Aortic bifurcation/trifurcation No abnormalities observed.

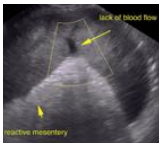
Adrenal Glands

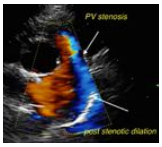
The **left** adrenal gland is not visualized.

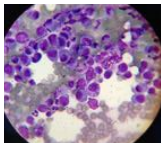
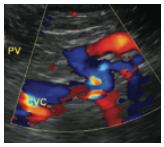
The **right** adrenal gland measures 0.49 cm in diameter. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture.

Spleen

The spleen is within normal limits in size, architecture, echotexture, and echogenicity. The capsule is smooth. Comments regarding its vasculature are not possible based on the still images.





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A still image of the spleen with a hyperechoic nodule a mildly echogenic periphery is provided. The nodule and hyperechoic periphery measures approximately 0.95 cm in diameter x 1.24 cm in length. It is difficult to determine where it is located within the spleen and whether it disrupts the capsule.

Liver

A few well-defined and mildly ill-defined hypoechoic nodules are observed.

Well-defined hypoechoic nodule: 0.40 cm in diameter x 0.43 cm in length

Less well-defined hypoechoic nodules:

- 0.96 cm in diameter x 0.0.88 cm in length
- 0.82 cm in diameter x 1.01 cm in length
- 0.42 cm in diameter x 0.58 cm in length

Perivascular cuffing, consistent with myelolipomas is observed. The latter are clinically insignificant. No obvious abnormalities are observed with the hepatic vessels.

The **gallbladder** (GB) wall is within normal limits in thickness (1.2 mm) and echogenicity. A small amount of free floating, gravity-dependent and inspissated, nodular echogenic material (sludge) is present within the GB. Some of the nodules are visualized at the neck of the GB. Sludge is also present in the proximal portion of the cystic duct. The common bile duct is not visualized.

Gastrointestinal

The gastric wall is within normal limits in thickness and the wall layers are well defined. No obvious abnormalities are observed with its peristalsis.

The small intestinal wall thickness, including the duodenum, is within normal limits and the definition of the wall layers is preserved. Abnormally dilated loops of bowel are not observed.

The colonic wall is not thickened and mural detail is considered normal.

There are no obvious signs of a mass, foreign body, infiltrative disease or an obstruction in the gastrointestinal tract.

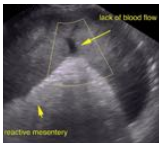
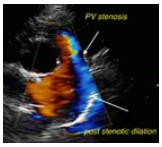
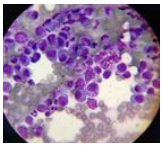
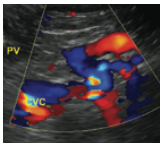
Pancreas

The **left limb** is mildly to moderately enlarged, mildly hypoechoic with slightly irregular contours. A mildly coarse echotexture is also noted, in addition to the previous changes described. The mildly coarse echotexture is likely due to age related changes, as well as possible previous episodes of pancreatitis. The surrounding mesentery is moderately to severely hyperechoic, which is highly suggestive of active pancreatitis.

The hypoechogenicity of the parenchyma of the **right limb** and hyperechogenicity of the surrounding mesentery are more severe compared to the left. That is, changes are consistent with active pancreatitis and saponification of the mesenteric fat. Dr. Conteh also mentioned that Simba was very painful in the right abdomen during the exam.

Other

Lymph nodes No abnormalities are observed

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Abdominal effusion is not visualized.

ULTRASONOGRAPHIC FINDINGS

- **Pancreas:** Signs of *active pancreatitis* are evident, in addition to age-related changes. Previous episodes of pancreatitis cannot be excluded.
- **Gallbladder**: Gallbladder *sludge* is often clinically insignificant, however, gastroesophageal reflux disease (GERD), can occur in some patients. Obtaining a history regarding signs of GERD from the client is suggested. Treatment with an anti-acid, proton pump inhibitor or ursodeoxycholic acid may be required. There is no evidence of a mucocele.
- **Liver**: The hepatic nodules are suggestive of *nodular hyperplasia*, which is a benign, age-related change. Target-like lesions are not observed, i.e. neoplasia is considered less likely.
- **Urinary bladder:** A *urinary tract infection and cystitis* may be present, in addition to a cystolith in its early development, i.e. a strong acoustic shadow is not yet evident.
- **Kidneys:** *Age-related degenerative changes* are evident, however, pyelonephritis cannot be excluded.
- **Spleen**: It is difficult to determine the location of the nodule in the spleen based on the still image. Differential diagnoses may include extramedullary hematopoiesis, lymphoid or nodular hyperplasia, however, cine loops are required to perform a more in-depth evaluation.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The following are suggested/recommended

Urinalysis and urine culture to exclude a urinary tract infection and pyelonephritis.

Fasting triglycerides (12 hours minimum) to determine whether additional measures (other than diet) required to address hyperlipidemia

Intravenous fluids, if not already receiving

A bolus of 10 ml/kg over 20 minutes is suggested. His hydration status should be reassessed and an additional bolus of 10 ml/kg over 20 minutes may be administered, if necessary.

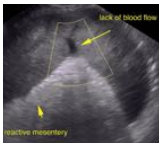
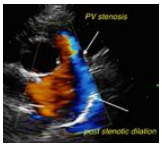
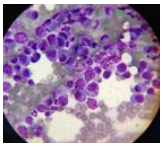
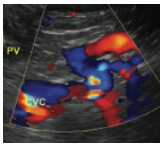
Analgesia – IV, ideally a CRI of an opioid (e.g. fentanyl), and CRI of lidocaine and ketamine. Not sure if he will tolerate gabapentin orally, in addition to IV analgesics.

Monitor weight twice a day; helps monitor ins and outs to maintain hydration and avoid volume overload.

Antibiotics are not necessary unless hematemesis is observed or hematochezia or melena with signs of sepsis.

Pantoprazole IV twice a day

Maropitant (Cerenia) intravenously, at 1 mg/kg. If ineffective, you could try combining it with metoclopramide as a CRI. Ondansetron is another option (IV), although it is more expensive.

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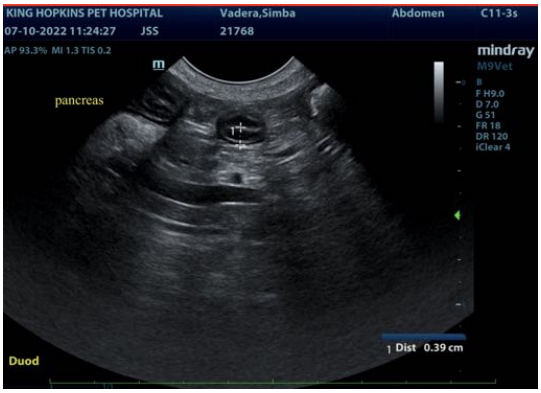
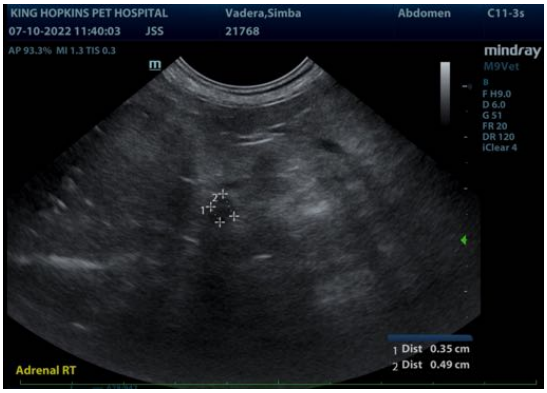
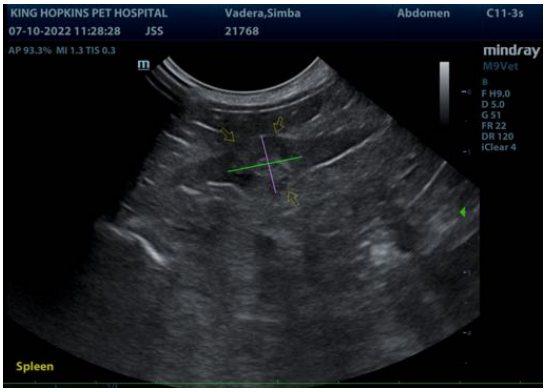
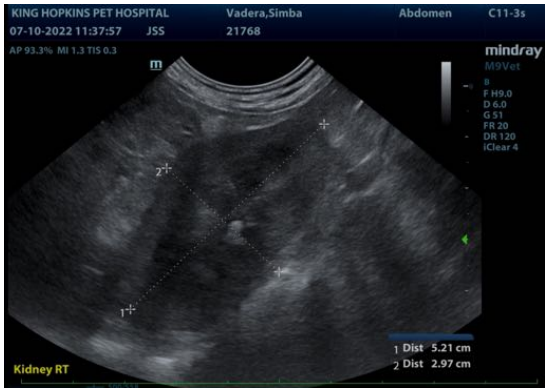
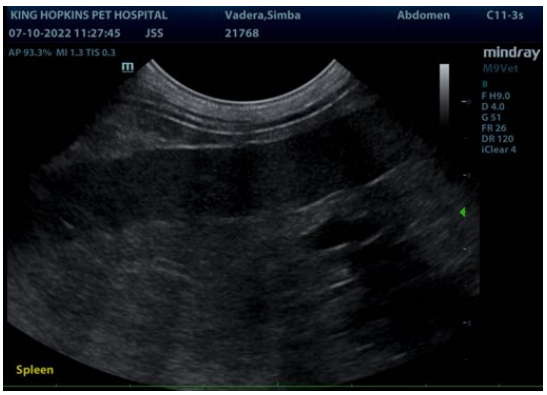
Once he is ready to eat, a bland, easily digestible, low fat, moderately restricted fibre diet is recommended to help decrease bloating and cramps.

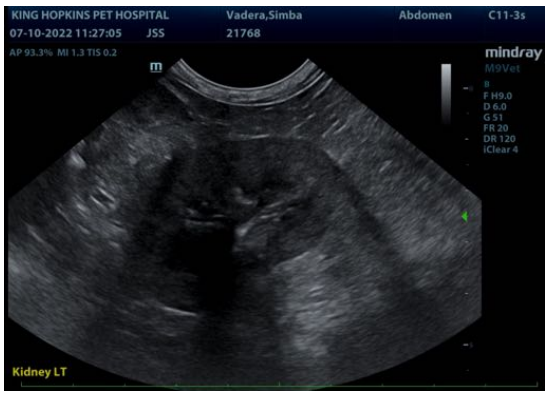












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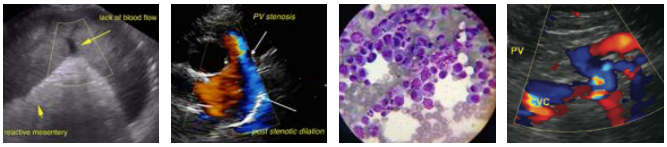

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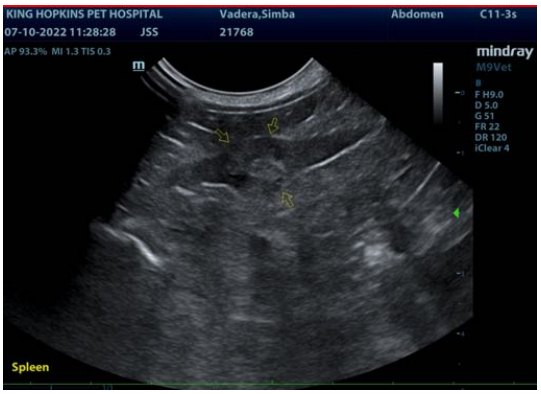

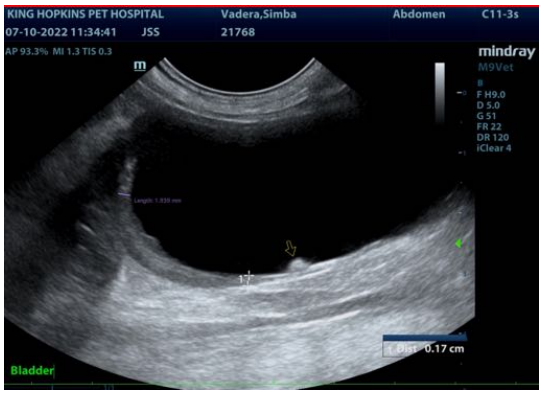

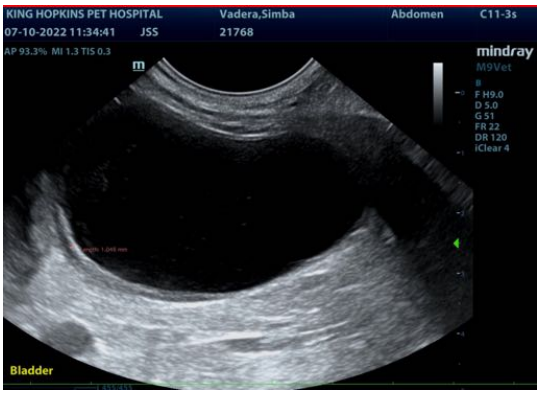

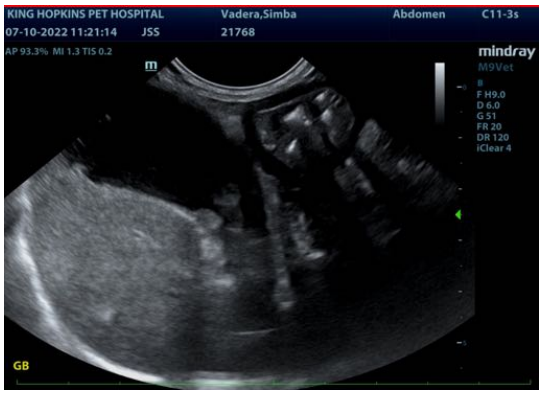

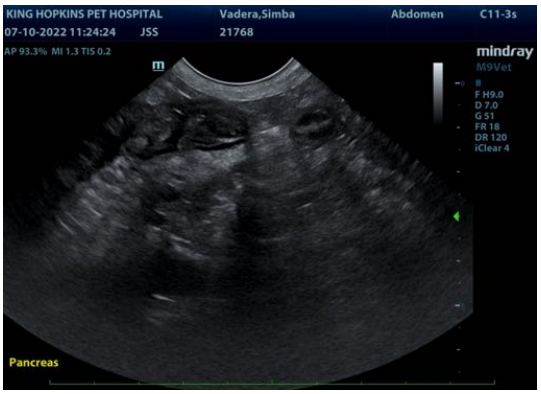

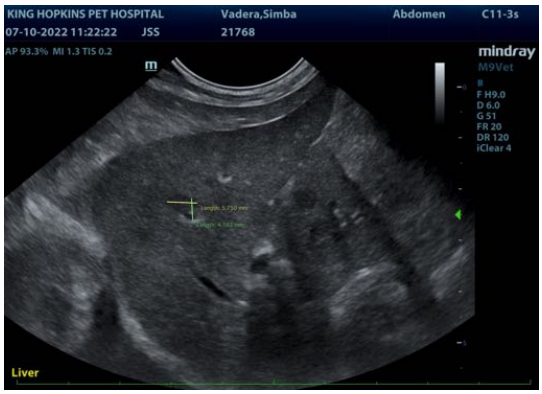

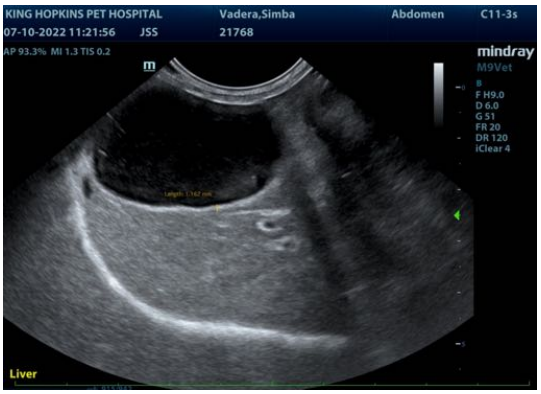

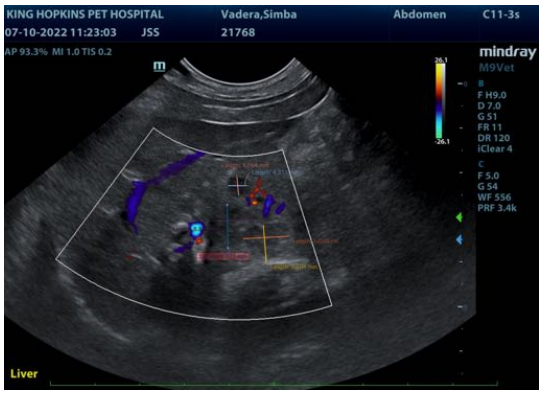

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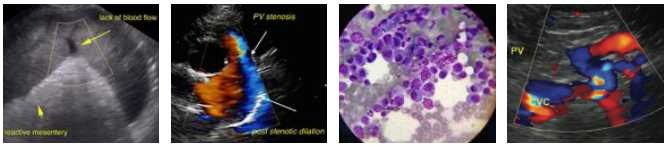

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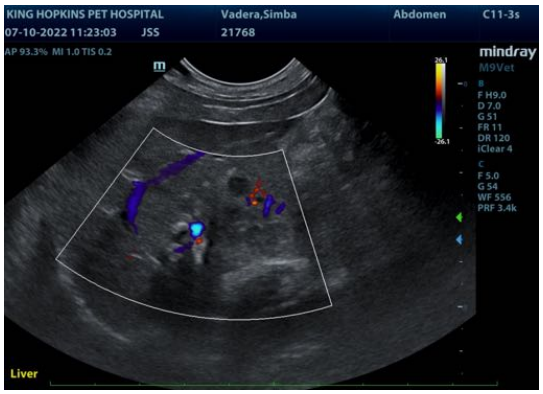

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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