



**PATIENT**

Otis Simpson

**SPECIES**

Canine

**BREED**

Aussie Mix

**SEX**

Neutered Male

**AGE**

9 Years

**WEIGHT**

25 kg

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Dr Callihan

**HOSPITAL NAME**

Animal Emergency  
Care

**REFERRING VET**

Dr. Williams

**INVOICE**

20349

**DATE**

1/5/23

**PRESENTING CLINICAL SIGNS**

History: Presented for collapse

Abnormal PE/Chem/CBC/UA Results: thready femoral pulses CBC normal Chems normal other than mild elev ALT 262

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone and cystourethral junction exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

No overt pathology in the area of the residual prostate.

No evidence of medial iliac or sublumbar lymphadenopathy.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 6.5 cm in length. The right kidney measured 6.6 cm in length.

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.68 cm width at the caudal pole.

The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.64 cm width at the caudal pole.

**Spleen**

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted. No evidence of splenic nodules or masses.

**Liver**

The liver presented mildly enlarged in size with symmetrical yet swollen contour. The parenchyma exhibited conserved uniform parenchyma with normal echogenicity isoechoic to the spleen and falciform fat. The hepatic vasculature was dilated in appearance, most notable at the level of the hepatic vein /caudal vena cava junction, without evidence of thrombosis.

The gallbladder was non-distended in size. The gallbladder wall was thickened in appearance consisting of an echogenic double rim corresponding to the inner and outer portions of the wall. This is consistent with mild to moderate generalized gallbladder wall edema. Possible causes may include acute inflammation, edema and anaphylaxis. Anechoic content was present with mild nonorganized echogenic luminal gallbladder sludge. The cystic and common bile ducts were normal.



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***Gastrointestinal***

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The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction or foreign material.

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The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

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***Pancreas***

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The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

***Free Abdomen***

**AGE**

9 Years

Mild volume anechoic peritoneal effusion was present with subjective mild increased generalized omental echogenicity. Intermittent, variably enlarged, nonhomogenous, potentially cystic cranial mesenteric/hepatic lymph nodes. The lymph nodes exhibited borderline to abnormal width to length ratio (>0.5). An example of lymph node size measured 3.3 cm x 2.0 cm.

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***Other***

A brief sonographic assessment of the heart revealed moderate volume pericardial effusion with nonhomogenous mass lesion in the area of the right atrium/auricle with possible intramass cystic component, measuring 3.6 cm in diameter. Evidence of diastolic collapse of the right atrial free wall, consistent with cardiac tamponade, was noted. Overtly normal LA/LV appearance and size was present with potentially mild decreased LV volume.

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**ULTRASONOGRAPHIC FINDINGS**

**IMAGING**

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- Nonhomogenous mass lesion in the area of the right atrium/auricle
- Moderate volume pericardial effusion with secondary cardiac tamponade
- Congestive hepatopathy pattern with concurrent gallbladder wall edema
- Mild volume ascites
- Nonspecific yet suspicious cranial mesenteric/hepatic lymphadenopathy
- Sonographically unremarkable spleen

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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The cause of the clinical signs is cardiac tamponade, owing to pericardial effusion with right atrium/auricle mass lesion, strongly suggestive of neoplastic criteria. The most likely tumor type given this location is hemangiosarcoma, although other tumor types are possible. Potential pericardial blood clot is considered a less likely differential diagnosis. Emergency pericardiocentesis is strongly suggested with pericardial fluid cytology in search of a definitive diagnosis.

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Given the likelihood of cardiac hemangiosarcoma, prognosis, unfortunately, is poor with limiting factors often including recurrent pericardial hemorrhage, development of malignant arrhythmias and/or



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sudden death. Pending additional diagnostics, oncology consult with chemotherapy or radiation options could be discussed.

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Empirically, over the counter supplement, Yunnan Baiyao, could be considered given the suspected hemorrhagic pericardial effusion. Close monitoring with likely recurrent as needed pericardiocentesis would be a more conservative approach.

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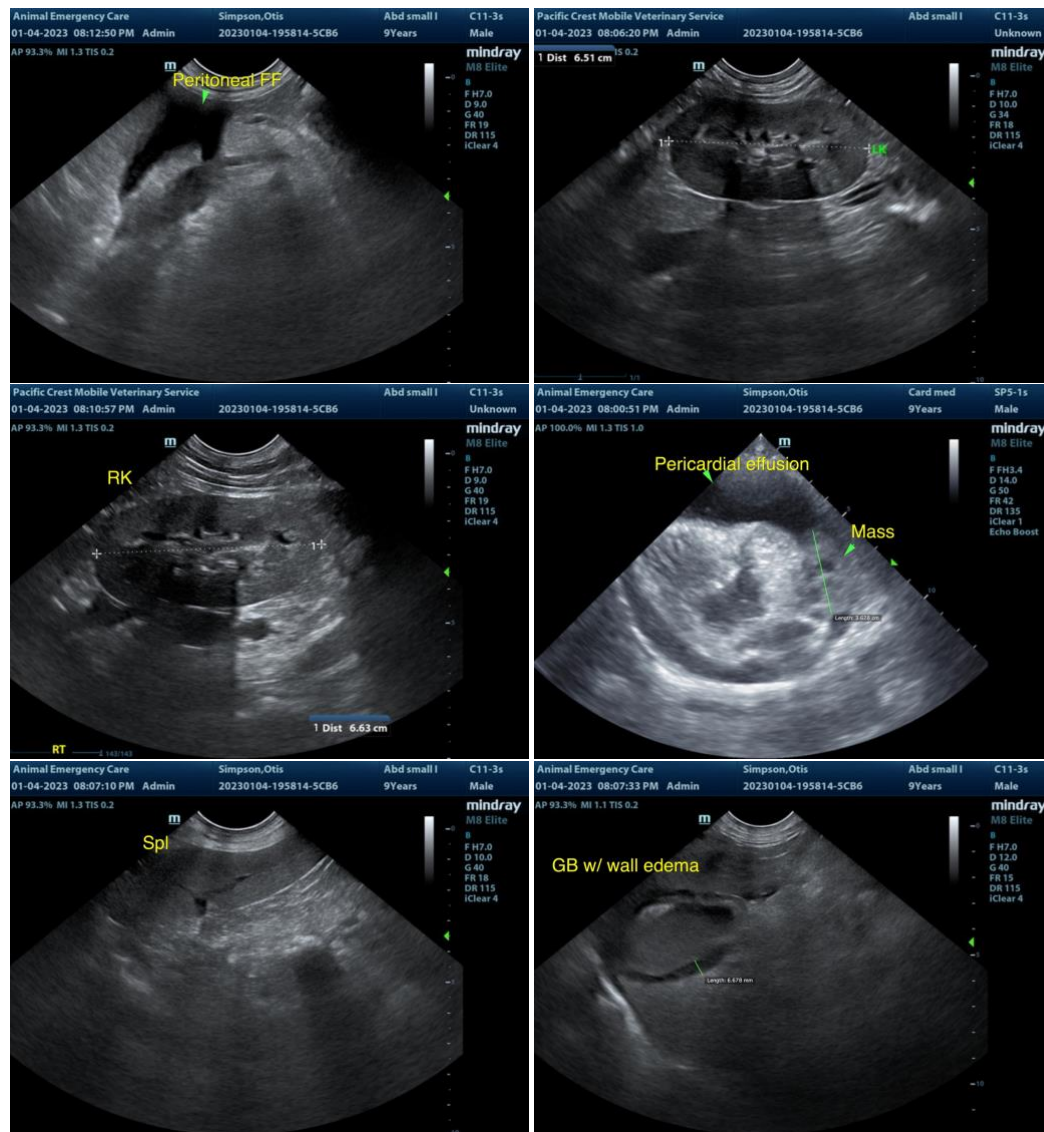
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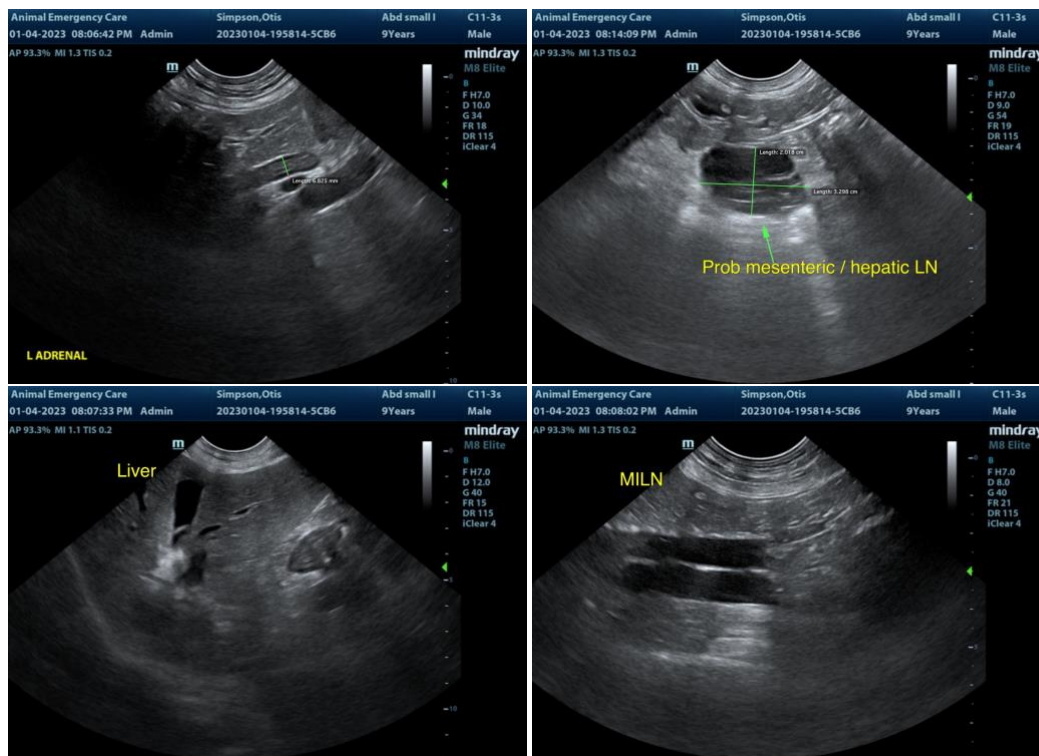
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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