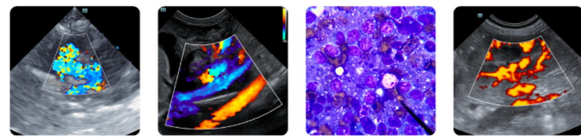


PATIENT
Sweet Welsch

SPECIES
Canine

BREED
Border Collie

SEX
Female Spayed

AGE
13y 10m

WEIGHT
37.8 lbs

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

IMAGING PERFORMED BY
Shari Reffi, CVT

HOSPITAL NAME
Newton VH

REFERRING VET
Dr. Babaev

INVOICE
13073

DATE
1/15/26

PRESENTING CLINICAL SIGNS

History: Collapse, bloody diarrhea, hx of CHF. DECREASED BP.

Current meds: Pimobendan 5mg bid; Spironolactone 25mg Sid; Benazapril 5mg (1.5 tabs bid)

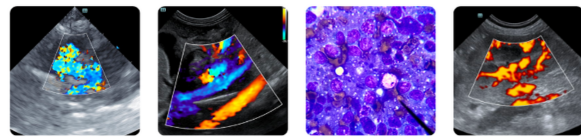
Abnormal PE/Chem/CBC/UA Results: Bun 69; Creat 2.4; Phos 8.3; TP 4.5; Choles 101; wbc 19.69; Neuts 17.51; hct 33.8; hgb 11.8; RBc 4.69; ALT unreadable

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (M-Mode)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	5.0	3.5	--	2.2	40	74	0.2
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (lbs)	**LAD** LA MAX 4 Chamber	**LVIDd** Avg; 2D and m-mode short axis (cm)	**LVIDs** Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
PATIENT	NM	1.0	0.6	37.8	5.5	4.3	--

Cardiac Presentation

The echocardiogram in this patient demonstrated moderate to severe increased **left atrial** size based on 2 different LA measurement methods with intra atrial septal deviation. The cranial and caudal **mitral** valve leaflets presented thickening consistent with endocardiosis and mild valvular prolapse. Doppler indicated measurable significant eccentric insufficiency. MR velocity measured 5.0 m/s. The **left ventricle** presented moderate to significant increased LV dimension. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. Mild cardiac tamponade. **Tricuspid** valvular assessment demonstrated mild thickening with TR noted on doppler. TR velocity measured 3.5 m/s (estimated 49 mmHg). The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). Normal measured RVOT velocity was noted. Moderate volume pericardial effusion homogeneous mass lesion or blood clot within the pericardial space was present measuring ~5.0 cm x 2.8 cm. No overt arrythmia or pleural effusion.



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Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm 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.

The area of the aortic trifurcation was free of pathology.

Normal size and margination was present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. Mild pyelectasia was present in the left kidney. The left kidney measured 4.9 cm in length. The right kidney measured 5.6 cm in length.

Adrenal Glands

The bilateral adrenal glands were normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 0.7 cm width in the caudal pole. The right adrenal gland measured 0.69 cm width in the caudal pole.

Spleen

The spleen was not definitively visualized potentially owing to splenic displacement or volume contraction. Correlation with clinical history recommended if potential splenectomy.

Liver

The liver presented mildly enlarged in size. The parenchyma exhibited conserved uniform parenchyma with normal echogenicity isoechoic to the spleen and falciform fat. Dilated cranial abdomen caudal vena cava at the level of the liver measuring 1.8 cm in diameter. The gallbladder was non-distended in size. The gallbladder wall was mildly thickened in appearance consisting of an echogenic double rim corresponding to the inner and outer portions of the wall. This is consistent with gallbladder wall edema. Possible causes may include acute inflammation, edema and anaphylaxis. Mild, gravity dependent, congealed yet non-organized bile debris were present. The common bile duct was not visualized.

Gastrointestinal

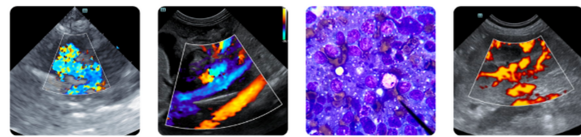
The stomach presented intact mildly thickened edematous wall. The lumen of the stomach was empty with no signs of ileus, obstruction or foreign material.

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.

The colon walls presented intact yet prominent wall layering with mild thickened to echogenic submucosa. The colon was primarily empty with lumen gas and semi-formed to soft fecal matter.

Pancreas

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.



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Free Abdomen

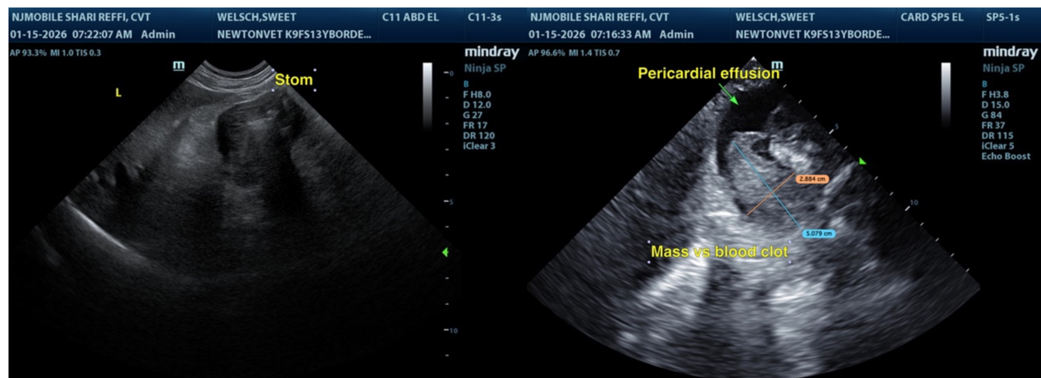
Mild volume ascites, no obvious visualized significant omental lymphadenopathy present.

ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease with mild valve prolapse (ACVIM stage C)
- Mild pulmonary hypertension
- Pericardial effusion with pericardial homogeneous mass lesion vs blood clot
- Mild cardiac tamponade
- Congestive hepatopathy with mild gallbladder wall edema
- Gastritis/gastric edema with concurrent colitis pattern
- Mild ascites
- Chronic renal changes with left kidney pyelectasia

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Pericardial effusion secondary to left atrial rupture with pericardial space blood clot in conjunction with patient history or neoplasia, possible. Additional causes such as infectious or inflammatory disease thought less likely. Evidence of cardiac tamponade in conjunction with congestive liver and gallbladder wall edema present. Concurrent primary hepatopathy, i.e. inflammatory disease, occult neoplasia not definitively excluded. Continued current cardiac support with Lasix Spironolactone combination both 1-2 mg/kg BID despite azotemia with monitoring of renal parameters is warranted. ECG and systemic BP assessment recommended. Evidence of pulmonary hypertension is present yet overtly does not appear to be severe given lack of right chamber or pulmonary artery enlargement. A diagnostic pericardiocentesis in conjunction with peritoneal effusion analysis and +/- screening hepatic FNA cytology assuming normal clotting status would be ideal for further clarification yet consideration for current clinical status and extremely guarded prognosis indicated.



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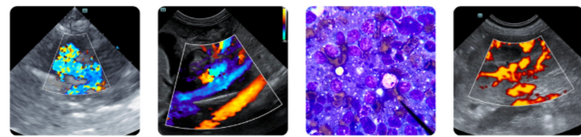

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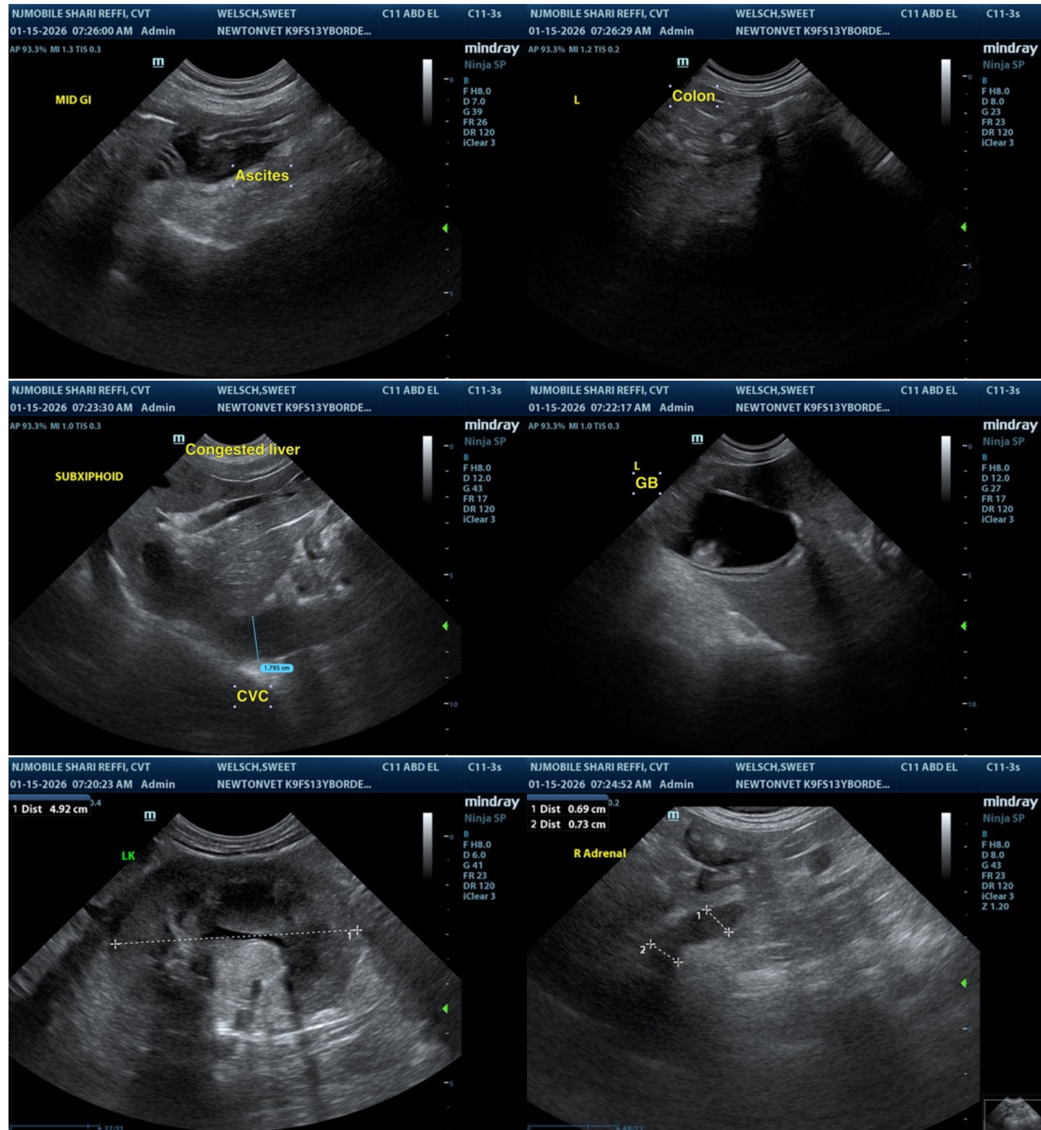
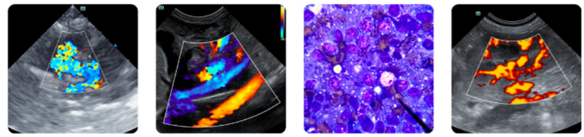


The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

info@sonopath.com



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