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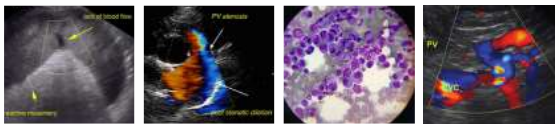


ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT

Mouse Rice

SPECIES

Feline

BREED

DSH

SEX

FS

AGE

9 years

WEIGHT

12.311 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

Amazon Park AC

REFERRING VET

Dr. Jones

INVOICE

12446

DATE

10/26/21

PRESENTING CLINICAL SIGNS

Cat born with cerebellar hypoplasia. Recently stopped eating, and was having frequent vomiting. Labwork was unremarkable, with normal spec fPL. Radiographs showed grossly thickened bowels, a distended stomach, abnormal liver silhouette, and a mass cranial to the heart. Current Medications Convenia injection 10/19, methylprednisolone injection 20 mg 10/20, cerenia 6 mg PO daily

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

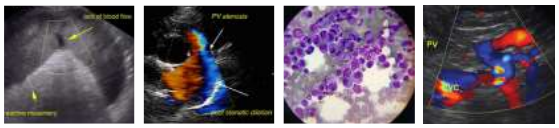
FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	------	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT		137	0.47	1.6	0.46	56.7	89.9

FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Sisson)	LA 2D 4-chamber long axis AS to FW (Sisson) (cm)	LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7	<1.6	<1.3	40-60
PATIENT	1.4	1.1	1.3	1.0	0.85	NM

Adapted from June Boon,Veterinary Echocardiography,1998
Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate LA measurements. The cranial and caudal **mitral** valve leaflets presented normal linear structure and kinetics. The **left ventricle** presented normal thicknesses with linear contour and was not dilated nor restricted. 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 and angles 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. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinetics. Color doppler assessment revealed minor tricuspid valve insufficiency, measuring 2.0 m/s. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract



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assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted. Examination in the area of the cranial mediastinum adjacent to the heart base revealed a solitary, cystic-appearing structure measuring approximately 2.3 cm in diameter. This structure appeared to be thinly walled, containing anechoic fluid, although the potential for hypoechoic nodule is possible. No other evidence of pericardial or cranial mediastinum pathology.

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited normal thickness and tone. Primarily anechoic urine was present in the lumen. Moderate, nondependent, particulate to mildly congealed sediment was present without evidence of calculus formation. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic mural changes were noted.

The area of the aortic trifurcation was free of pathology.

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 4.0 cm in length. The right kidney measured 4.3 cm in length.

Adrenal Glands

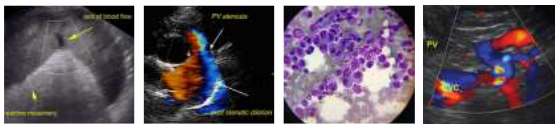
No overt pathology was noted in the area of the left adrenal gland. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.39 cm width.

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. The spleen measured 0.83 cm width.

Liver/ Gallbladder

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.



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Gastrointestinal

The stomach exhibited marked distention with echogenic to progressively shadowing ingesta. The visualized gastric walls were sonographically unremarkable in the fundus, body, and pylorus, without evidence of mechanical pyloric outflow obstruction. The pylorus wall width measured 0.23 cm.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. Segmental, echogenic, nonshadowing intestinal digesta and chyme were present. The jejunum wall width measured 0.20 cm.

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

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 were evident.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

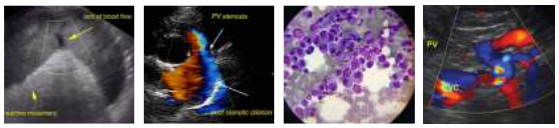
Primary Findings

- Moderate urinary bladder sediment
- Marked potentially retained gastric ingesta
- Sonographically unremarkable small bowel
- Overtly normal cardiac structure and function
- Minor tricuspid valve insufficiency - not considered clinically significant
- Cystic-appearing structure cranial to the heart base - likely branchial cyst

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The urinary bladder sediment may suggest cellular / crystalline debris or mucus. Cystocentesis for UA +/- C/S if evidence of inflammatory cells is recommended.

The presence of marked gastric ingesta in this case, given the history of anorexia, is nonspecific and may correlate with unknown post prandial presentation. However, potential for unspecified gastric stasis or delayed gastric emptying is of concern. No overt evidence of mechanical obstruction as with foreign material or upper gastrointestinal mural pathology. However, potential for nonobvious mechanical obstruction, given the degree of potentially retained gastric ingesta, cannot be definitively excluded.



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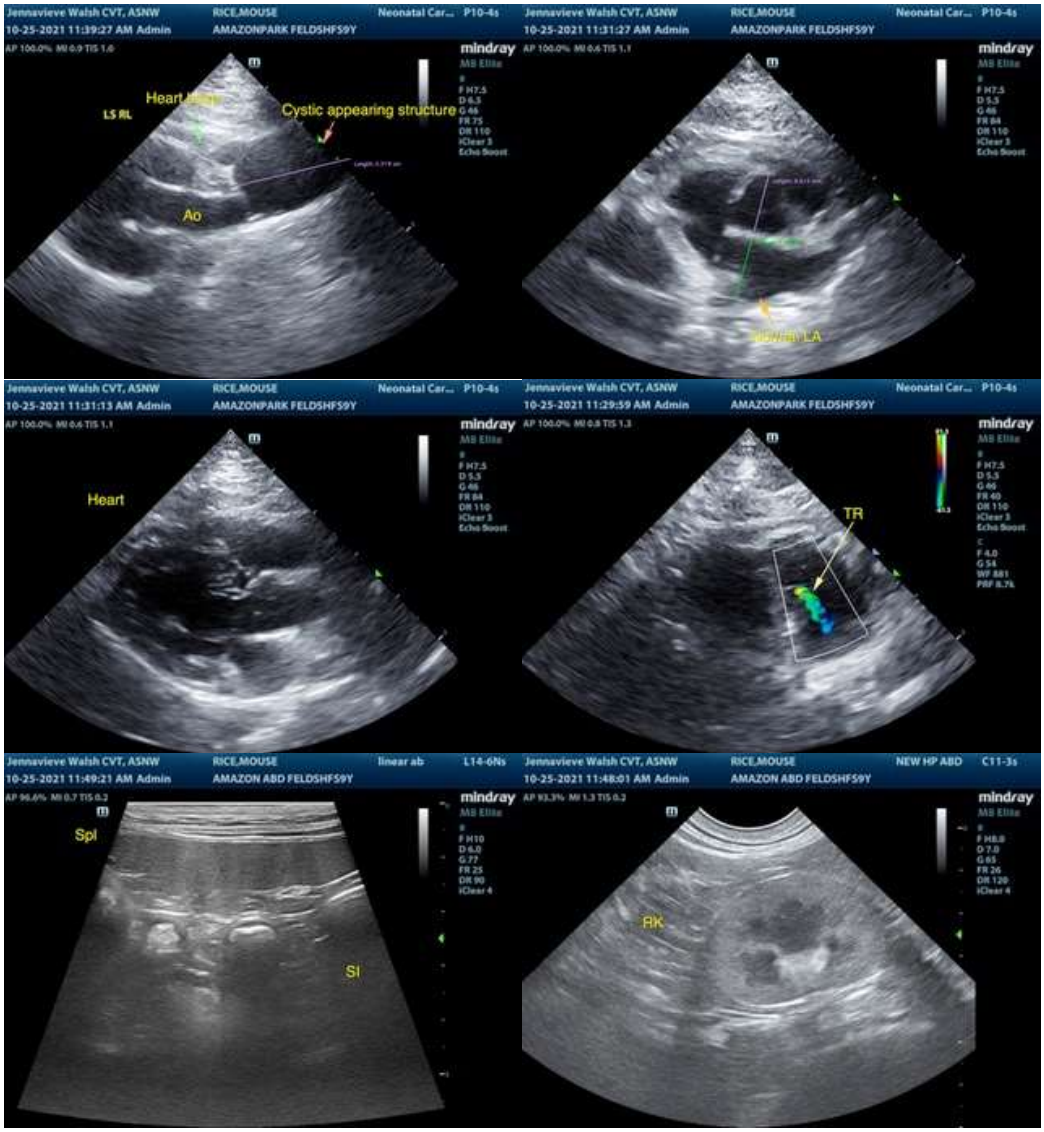
Hospitalization with IV fluid and gastrointestinal support with either sonographic or radiographic monitoring for evidence of normal gastric emptying following documented fast is suggested. Gastrointestinal prokinetic agents such as Metoclopramide or similar may prove beneficial. Otherwise, essentially sonographically normal abdomen without evidence of additional visceral pathology.

No overt evidence of structural or functional cardiomyopathy was noted. The suspected branchial cyst is likely incidental. The potential for nonspecific cranial mediastinal lymphadenopathy is possible yet considered less likely. Sonographic or radiographic monitoring of the cystic-appearing structure for evidence of progression would be appropriate.



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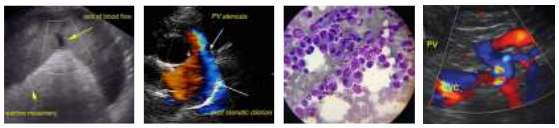

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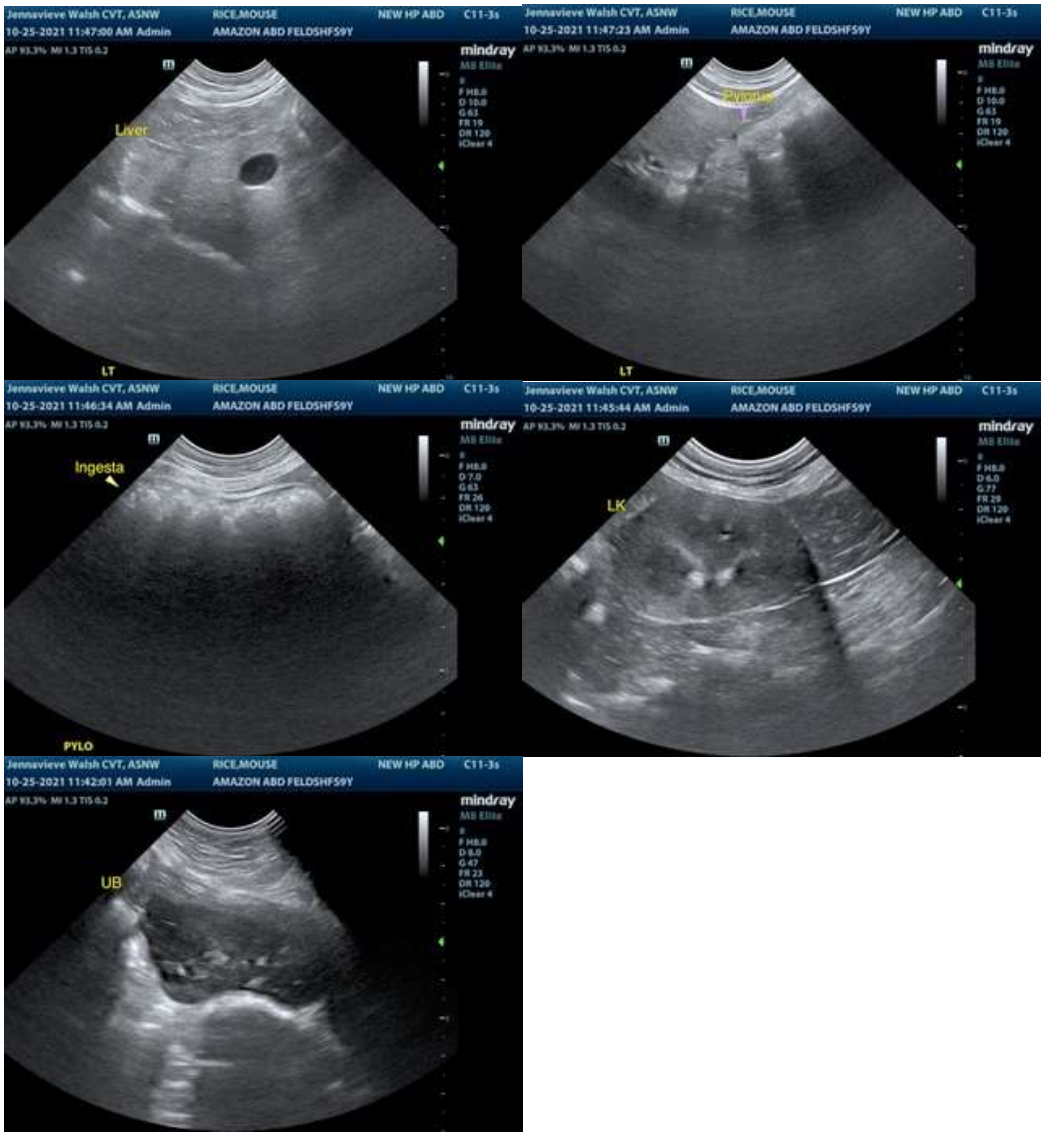

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com