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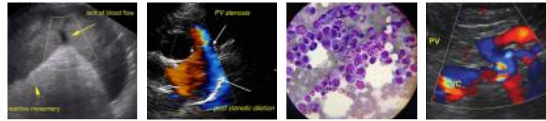


ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT

Coco Judkins

SPECIES

Canine

BREED

Mini Poodle

SEX

FS

AGE

8yr

WEIGHT

12.67ag

INTERPRETED BY

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

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

Corvallis Veterinary Hospital

REFERRING VET

Dr. Gross

INVOICE

12038ag

DATE

10/28/2022

PRESENTING CLINICAL SIGNS

Pet first presented in September (9-29) with resolving vestibular disease and a hx of grade 3 mammary gland carcinoma (already had surgery). Pet had a nonproductive cough at that point and radiographs of the thorax were taken. Pets coughing has worsened and pet returned 10-25. Pet has a grade 3//6 murmur. Pet has estimated grade 2/4 periodontal disease. Pets head tilt to the left had improved and was nearly gone. Pet has increased lung sounds and possibly some crackles. At that point a lateral radiograph indicated pet had an interstitial pattern and some probable perihilar edema. Pet was sent home on 6.25 mg furosemide po bid, 1.25 mg pimobendan BID, then clavamox 62.5 mg po bid

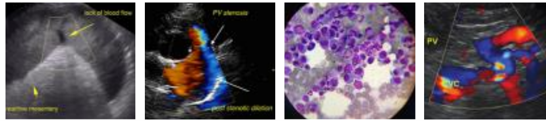
Abnormal PE/Chem/CBC/UA Results: 10-25 CBC leukocytosis at 22,400 platelets increased at 511,000 relative and absolute neutrophilia Chem panel: alk phos 318 Potassium increased at 5.8 NaK ratio 26 Heart Rate and Respiratory Rates 144/40 Blood Pressure Measurments 160 mmhm Current Medications 6.25 mg furosemide po bid, 1.25 mg pimobendan BID, then clavamox 62.5 mg po bid Radiographic Findings Slight lack of cardiac waste on original lateral and splitting of mainstream bronchi on v/d; VHS was wnl Recheck lateral rad shows perihilar edema +/- interstitial pattern

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE CARDIAC PARAMETERS	**MR VMAX** (m/s)	**TR VMAX** (m/s)	**LA/AO** (Boon method)	**LA/AO** (Heart Base; Swe)	**FS** (%)	**EF** (%)	**EPSS** (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
PATIENT				1.38	52	90	0.2
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (kg)	**LA** 2D short axis Base view (cm)	**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	1.45	0.8		3.1	2.9	

Cardiac Presentation

The echocardiogram in this patient demonstrated normal left atrial size based on 2 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal mitral valve leaflets presented mild thickening consistent with mild endocardiosis. Doppler indicated mild eccentric insufficiency. The left ventricle presented 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 of the myocardium. The left ventricular outflow tract demonstrated normal laminar flow and subjective structural integrity. Normal LVOT velocity. 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. The right ventricle



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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 RVOT velocity. No visible pericardial or free pleura fluid was noted. A small non-homogenous mass was present in the area of the heart base in the area of the aorta and left atrium measuring ~ 1.7 cm in diameter. No overt pathology in the area of the cranial mediastinum or pericardial regions.

Brief sonographic assessment of the liver revealed no evidence of hepatic congestion.

Transdiaphragmatic view revealed comet tail lung pattern, which is echogenic sound wave interface with microconsolidations within the caudal lung field. The lung field should not be visualized by sonogram unless pathology is present. Chest radiographs are recommended to rule out alveolar/lung disease such as neoplasia, thromboembolic disease, chronic inflammatory disease with microconsolidation.

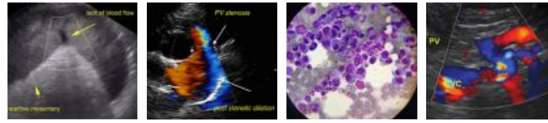
ULTRASONOGRAPHIC FINDINGS

- Compensated chronic mitral valve disease (ACVIM B1)
- Small heart base mass noted between the aorta and left atrium
- Transdiaphragmatic comet tail artifact-nonspecific

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. The lack of left atrial enlargement implies that the risk of complication secondary to mitral valve insufficiency is low at this time. No other clinical issues such as LV systolic dysfunction or evidence of clinical pulmonary hypertension were present. The cardiac presentation indicates that the cough is most likely non-cardiogenic in origin. No indication for cardiac medications.

The heart base mass is suggestive of emerging neoplastic criteria such as sarcoma, chemodectoma or other. Referral for further assessment +/- additional imaging and/or oncology consult is recommended.



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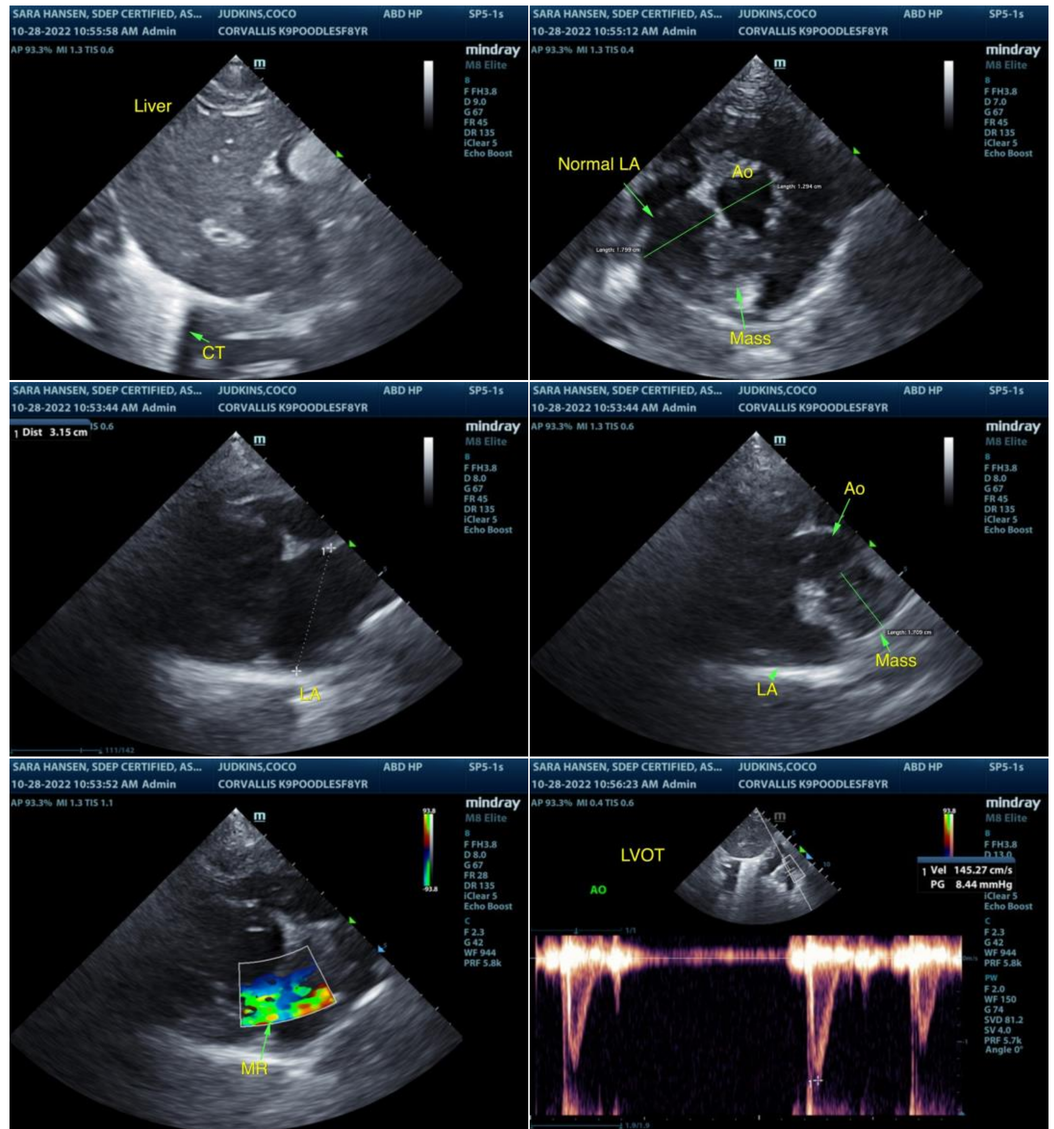

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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