



PATIENT PRESENTING CLINICAL SIGNS

Nikki Christy
 Nikki has been coughing for years. Put on hydrocodone in 4/21 for coughing. Put on furosemide on 11/18. On 11/12/21 put on Vetmedin. No heart murmur noted. Heart looks large on radiographs. Also had pleural edema noted. Coughing seems to be getting worse. She has a large fatty lipoma on her right upper neck mandible area and several more throughout her body.

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

BREED

Miniature Pinscher

SEX

Spayed Female

AGE

15 Years

WEIGHT

15.7 Pounds

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	<1.6	28-40	40-100	<0.6
PATIENT	--	1.1	NM	1.3	50	85	0.22
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	163	1.4	1.1		2.0	2.0	

INTERPRETED BY

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

IMAGING PERFORMED BY

Kim Liedberg

HOSPITAL NAME

SVS Imaging WI

REFERRING VET

Dr. George - Country Vet Service

INVOICE

33621

DATE

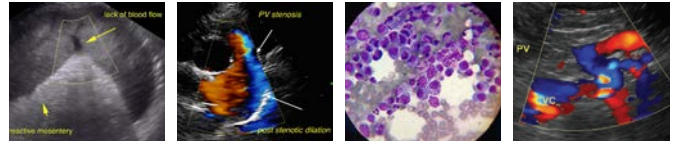
12/21/21

Cardiac Presentation

The echocardiogram presented a mildly prominent **right heart** with mild **right ventricular** hypertrophy, without significant **tricuspid** regurgitation, and normal **right atrial** size. No evidence of neoplasia was noted in the right auricle, or elsewhere in the heart. The **pulmonary artery** was uniformly prominent with mildly depressed pulmonic velocity measured on PW Doppler. No overt heartworms were noted in the main or visible deep pulmonary arteries. Yet, theoretically heartworms could be present in the deep pulmonary vasculature out of visible sonographic range. More likely, however, this prominent right heart is due to excessive intra-thoracic pressures caused by chronic respiratory disease or potentially excessive intra-thoracic fat (Pickwickian syndrome). The **left heart** demonstrated a linear **ventricular septum**. Contractility was functionally adequate demonstrated by the FS% measurement. The **mitral valve** was not significantly insufficient and no significant **left atrial** dilation was noted. The **left ventricular outflow** demonstrated normal flow patterns and velocities through the aortic valve. No evidence of tumor, pericardial or pleural effusion was noted. The visible **extra-cardiac** tissues were uniformly linear without evidence of masses, infiltrative or inflammatory mediastinal tissue. No evident arrhythmic activity was noted during the exam.

ULTRASONOGRAPHIC FINDINGS

- Normal LA/LV
- Mildly prominent right ventricle - suggestive of mild cor pulmonale



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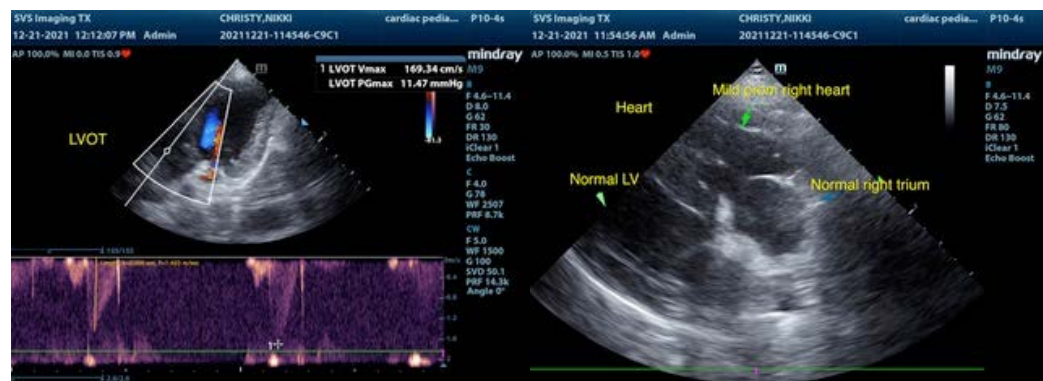
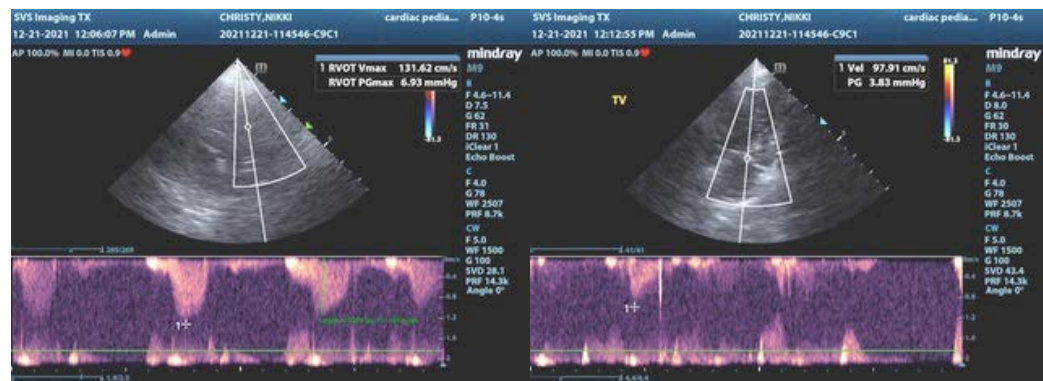
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The estimated pulmonary pressure gradient in this patient based on measured tricuspid valve insufficiency velocity was not overtly consistent with clinical pulmonary hypertension. However, some degree of mildly elevated pulmonary pressure is suspected/possible. Overall, given the lack of significant left or right heart cardiomegaly, as well as normal overall systolic function, the chronic cough in this patient is most likely non-cardiogenic in origin. Primary chronic lower airway disease may be considered a primary rule out.

Overall, no obvious indication for Pimobendan based on this study. Non-cardiogenic pulmonary edema could also be present. Respiratory therapy based on clinical impression of the thoracic radiographs is recommended. Heartworm test could be considered if not recently done, or if clinical concern for heartworm disease.





PATIENT

Nikki Christy

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.

SPECIES

Canine

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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info@SonoPath.com

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