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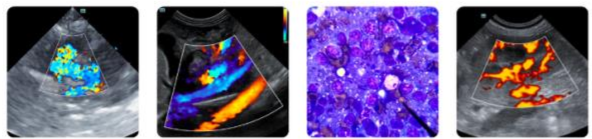
FOSTERING THE ART OF VETERINARY MEDICINE™



SonoPath.com info@sonopath.com 1.800.838.4268

Clinical Sonography & Telecytology

Educational Teleconsultation Services™

PATIENT

Dande Grimshire

SPECIES

Canine

BREED

Husky Shepard X

SEX

Spayed Female

AGE

7 Years

WEIGHT

21 kg

INTERPRETED BY

James Wood, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY

Dr. Iacovides

HOSPITAL NAME

Oakbank AH

REFERRING VET

Dr. Atkinson

INVOICE

37216

DATE

5/26/26

PRESENTING CLINICAL SIGNS

History: Only presenting complain is that dog has been more anxious in car rides. Otherwise, has no clinical signs. Heart murmur since a young age. Echo for chronic heart murmur work-up. Avg blood pressure readings today with trazadone sedation: 108/67 mmHg (81 MAP) HR 70.

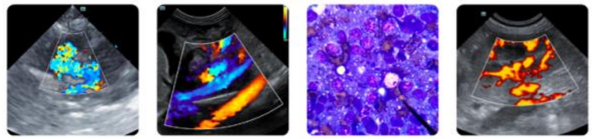
Abnormal PE/Chem/CBC/UA Results: Cardiovascular: A grade 4/6 pansystolic murmur and an arrhythmia (very irregular heartbeat) were auscultated. Respiratory: Normal bronchovesicular sounds bilaterally. Rads: there is heart enlargement; her heart is bigger than it should be. There are no signs of heart failure, such as congestion or anything similar.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE CARDIAC PARAMETERS	LA long axis	LAmaxN	Ao long axis	LA/AO (Heart Base; Swe, short axis)	LA/AO long axis	LVIDd	LVIDdN
NORMAL PARAMETER		<1.57		<1.6	<2.5		<1.7
PATIENT	3.53	1.38	1.51	1.14	2.34	3.74	1.43
CARDIAC PARAMETERS	**Body Weight (kg)**	**AV VMAX (m/s)**	**PV MAX (m/s)**	**MR VMAX (m/s)**	**TR VMAX (m/s)**	**FS (%)**	**LVIDsN**
NORMAL PARAMETER		0.7-1.7	0.7-1.6			22 - 49%	<0.9
PATIENT	21	2.01	5.36	--	4.92	39.5	0.79
CARDIAC PARAMETERS	**HR (bpm)**	**MV E (m/s)**	**MV A (m/s)**	**MV E/A (m/s)**	**EF (%)**	**IVSdN**	**LVFWdN**
NORMAL PARAMETER						<0.6	<0.6
PATIENT	103	0.67	0.74	0.91	--	--	--

Cardiac Presentation

The mitral valve leaflets are normal and there is no mitral regurgitation. Leaflet prolapse is not identified. The left atrial size is normal. Left ventricular systolic and diastolic function is within normal limits. The aortic valve is normal in thickness with normal valve excursion. The transaortic flow profile is normal with a mildly increased velocity. There is mild aortic valve insufficiency. The subaortic LVOT



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is morphologically normal with no subaortic ridge, ring or tunneling lesions. The right atrium is normal in size. There is mild central tricuspid valve insufficiency. The estimated RV systolic pressure is severely elevated. There is moderate right ventricular wall thickening with systolic flattening of the interventricular septum, consistent with an RV pressure overload. The pulmonary valve leaflets are mildly thickened and there us scrolling of the leaflet, commissural fusion with systolic doming. There is a severe RVOT obstruction at the level of the valve based on CW doppler with a maximum instantaneous pressure gradient of ~115mmHg. There is mild pulmonary valve insufficiency. The pulmonary trunk and proximal PA branches are mildly dilated. On the left cranial imaging window, there is a flow convergence within the PA near the LPA that is suspicious/concerning for a small, left to right shunting patent ductus arteriosus. This region is not well visualized on any other view.

ULTRASONOGRAPHIC FINDINGS

- Pulmonary valve stenosis – severe, PG 115mmHg
- Suspect small left to right PDA
- Aortic valve insufficiency - mild

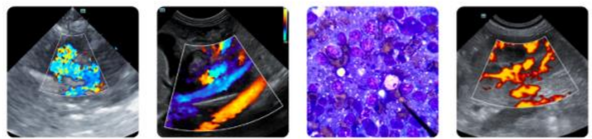
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Dande has severe pulmonary valve stenosis with moderate to severe RV concentric hypertrophy, but normal RA size. Patients with severe PS generally have a reduced lifespan with anticipated survival times of ~4-6 years with medical management on a beta blocker. Outcomes include progressive right atrial enlargement culminating in right sided CHF, clinical signs of exercise intolerance/syncope and arrhythmias, with sudden death being a possible outcome of ventricular arrhythmias. Intervention with a balloon valvuloplasty is generally recommended in these patients to prolong survival.
Given this patient's signalment and the lack of any right atrial enlargement, it is unclear if intervention with a balloon valvuloplasty will prolong this patient's lifespan or quality of life if they are asymptomatic.

An ECG was not attached during this study, but given the reported concern for an arrhythmia, a six lead ECG is recommended. Atenolol should be considered for this patient, starting at ~0.5mg/kg q12, titrating up to a target dose of 1mg/kg PO q12hr.

There is additionally concern for a small left to right shunting PDA. Given the normal left heart dimensions, this is not suspected to be hemodynamically significant, and no specific therapy is recommended for this finding.

Recheck echocardiogram in 3 months while on atenolol or sooner if concerns arise.



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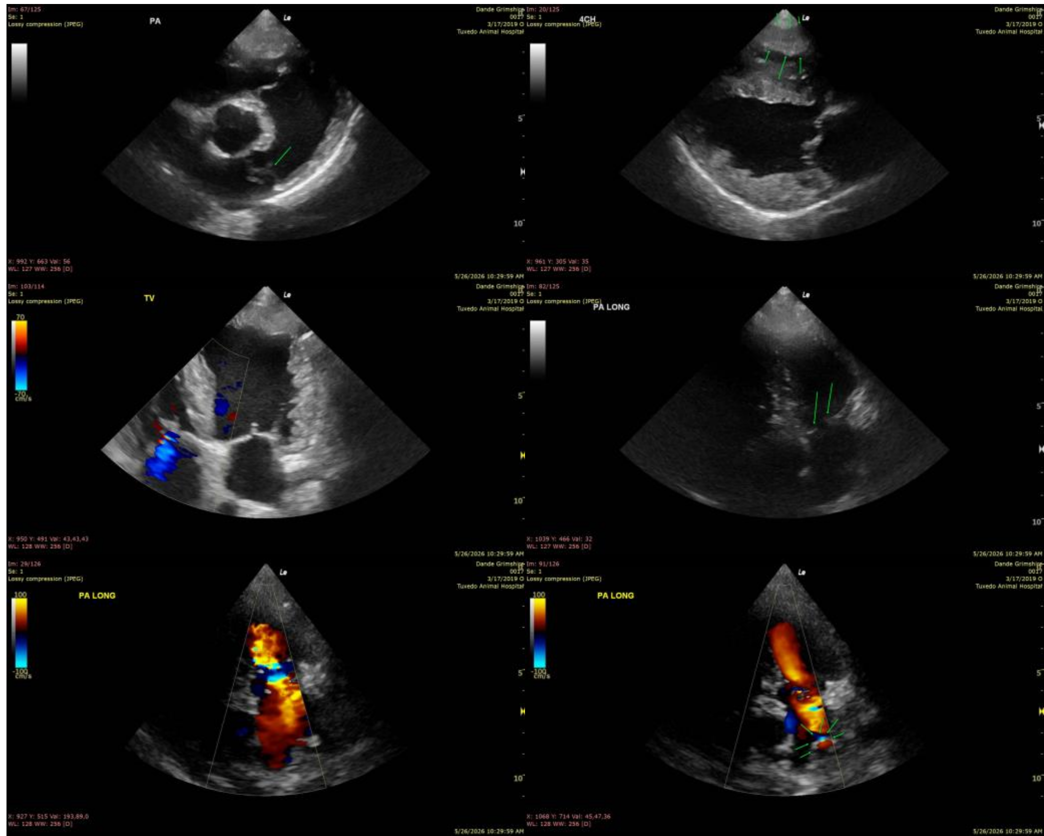

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

James Wood, DVM, DACVIM (Cardiology)

info@SonoPath.com