



PATIENT PRESENTING CLINICAL SIGNS

Mookie Kobb

History: Grade 3/6 systolic murmur, bilateral pulmonary crackles, 75% improvement with Lasix, prior to Lasix coughing more. Lasix 12.5 mgs 1 tab BID. Galliprant 20mgs.

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART

Canine

BREED	CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swedish)	FS (%)	EF (%)	EPSS (cm)
Miniature Pinscher				1.3	<1.6	28-40	40-100	<0.6
SEX	NORMAL PARAMETER	4.5-5.5	<2.7					
Neutered male	PATIENT	5.82	2.97		2.23	30	NM	0.50
AGE	CANINE CARDIAC	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT kg	LA 2D long axis Base view	LVIDd Avg; 2D and m- mode short axis	LVIDs Avg; 2D and m- mode short axis
16 years								
	NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
WEIGHT	PATIENT	103	1.8	1.1	7.82		Long axis	Long axis
17.2 lbs						3.11	3.72	2.59
Adapted from June Boon, Veterinary Echocardiography, 1998 Sisson D et al. JVIM 1991; 5: 232, and Jacobs et al. Am J Vet Res 1985; 46:1705								

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

IMAGING PERFORMED BY

Kelly Vazquez, CVT

HOSPITAL NAME

North Jersey AH

REFERRING VET

Dr. Reidel

INVOICE

31724

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7/15/22

Echocardiographic findings

Mitral valve

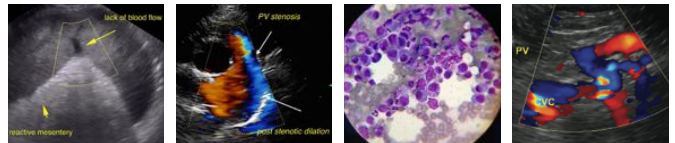
- Very mild (posterior) to mild (septal) thickening and irregularity; consistent with myxomatous degeneration
- No prolapse of either leaflet.
- Severe mitral regurgitation (posterior jet).
- Mild to moderate left auricular enlargement.
- Mild rounding of the interventricular septum, i.e. left ventricular enlargement is present
- M to moderate increase of LA: Ao ratio
- LA normalized for BW (LAN = 1.54); marked enlargement
- LVIDd normalized for BW (LVIDND = 2.0); moderate to marked enlargement
- LVIDs normalized for BW (LVIDNs = 1.36); moderately increased

Aortic valve

- No abnormalities



PATIENT	<ul style="list-style-type: none"> No aortic insufficiency
Mookie Kobb	<i>Tricuspid valve</i>
SPECIES	<ul style="list-style-type: none"> Mild to moderate thickening and irregularity of the septal leaflet, very mild to mild of the posterior leaflet; consistent with myxomatous degeneration
Canine	<ul style="list-style-type: none"> Thickening/hypertrophy of the apical papillary muscle, which inserts at the tip of the posterior leaflet
BREED	<ul style="list-style-type: none"> No prolapse of leaflet.
Miniature Pinscher	<ul style="list-style-type: none"> Moderate tricuspid regurgitation. Subjectively, the right atrium (2.22 cm) and auricle are more prominent than usual.
SEX	<ul style="list-style-type: none"> No obvious right ventricular enlargement
Neutered male	<i>Pulmonic valve</i>
AGE	<ul style="list-style-type: none"> No abnormalities
16 years	<ul style="list-style-type: none"> No pulmonary insufficiency. Main pulmonary artery within normal limits.
WEIGHT	<ul style="list-style-type: none"> Pulmonary artery - bifurcation, no abnormalities.
17.2 lbs	<ul style="list-style-type: none"> Pulmonary artery: aortic ratio not measured, but appears within normal limits.
INTERPRETED BY	<i>Other</i>
Lisa Carioto, DVM, DVSc, Diplomate ACVIM	<ul style="list-style-type: none"> No signs of pericardial or pleural effusion No evidence of pulmonary edema. No obvious signs of a mass.
IMAGING PERFORMED BY	ULTRASONOGRAPHIC FINDINGS
Kelly Vazquez, CVT	<ul style="list-style-type: none"> Myxomatous degeneration of the mitral (moderate) and tricuspid (mild to moderate) valves, ACVIM stage C. ACVIM stage C refers to presence of signs of congestive heart failure. Incidental finding of a very mild form of tricuspid valve dysplasia with mild hypertrophy of the apical papillary muscle. There is no evidence of leaflet prolapse. Subjectively, the right atrium and right auricle may be very mildly more prominent than usual, however, there is no evidence of distention of the vena cava.
HOSPITAL NAME	<ul style="list-style-type: none"> Treatment for congestive heart failure is recommended.
North Jersey AH	
REFERRING VET	<u>INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS</u>
Dr. Reidel	Suggestions/recommendations include:
INVOICE	<ul style="list-style-type: none"> Evaluation of arterial blood pressure
31724	<ul style="list-style-type: none"> pimobendan (Vetmedin) at 0.25-0.30 mg/kg PO every 12 hours. Note, if sensitive GI system, the dose should be started at 0.10 mg/kg PO every 12 hours for 3 days prior to increasing to
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PATIENT	the full dose. Administer with a small amount of food to decrease nausea. Avoid compounded products.
Mookie Kobb	
SPECIES	<ul style="list-style-type: none"> furosemide 20 mg/tablet - Administer 12.5 mg every 12 hours for 4 additional days – may require every 8 hours if resting (sleeping) respiratory rate not well controlled. Then try to decrease dose to 12.5 mg in the morning and 5 mg in the evening PO for 3 days, and then try decreasing to 5 mg PO every 12 hours thereafter. The goal is to wean to the minimum dose effective in controlling clinical signs. Return to previous dose that controlled cough if clinical signs recur.
Canine	
BREED	<ul style="list-style-type: none"> In 5 days, introduce benazepril at 0.1 mg/kg PO once a day for 3 days, then 0.25 mg/kg PO once a day for 3 days, then 0.25 mg/kg PO every 12 hours. Monitor for signs of nausea, vomiting and diarrhea.
Miniature Pinscher	
SEX	<ul style="list-style-type: none"> One week after introducing benazepril, introduce spironolactone at 0.5-1 mg/kg every 12 hours. It is helpful in decreasing the dose of furosemide required to control one's cough and is potassium sparing. It also has anti-fibrotic effects.
Neutered male	
AGE	<ul style="list-style-type: none"> Monitoring of the resting (sleeping) respiratory rate (RRR) is highly recommended once a day. The RRR should NOT EXCEED 30 breaths per minute (bpm). If the respiratory rate is greater than 30 bpm, <u>or</u> if there is a gradual increase (over a day or two) toward 30 bpm, the patient should be evaluated immediately for congestive heart failure and the appropriate treatment initiated.
16 years	
WEIGHT	<ul style="list-style-type: none"> Other clinical signs clients should monitor for include coughing (particularly at night), fatigue, lethargy, decreased exercise tolerance (i.e., not being able to walk for as long before becoming tired, or "running out of breath" while playing, or going up and down stairs, as well as syncope (collapsing or fainting spells). Restlessness, or agitation during the night, or being unable to find a comfortable position to sleep are also very common clinical signs.
17.2 lbs	
INTERPRETED BY	<ul style="list-style-type: none"> Moderate salt restriction is suggested (between 0.4-0.5 grams/1000 kcal of food). Monitor salt content in treats.
Lisa Carioto, DVM, DVSc, Diplomate ACVIM	
IMAGING PERFORMED BY	<ul style="list-style-type: none"> Blood work, a CBC, serum biochemical profile, SDMA and arterial blood pressure, are recommended 10-14 days after initiation of spironolactone.
Kelly Vazquez, CVT	
HOSPITAL NAME	<ul style="list-style-type: none"> Blood work, CBC, serum biochemical profile, including a SDMA, and arterial blood pressure, are recommended at least twice a year to monitor renal parameters
North Jersey AH	
REFERRING VET	<ul style="list-style-type: none"> Re-evaluation – physical exam is suggested in 2 weeks and then one month later.
Dr. Reidel	
INVOICE	<ul style="list-style-type: none"> A re-evaluation of an echocardiogram every 6 to 8 months, or sooner if clinical signs develop, is recommended.
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Miniature Pinscher

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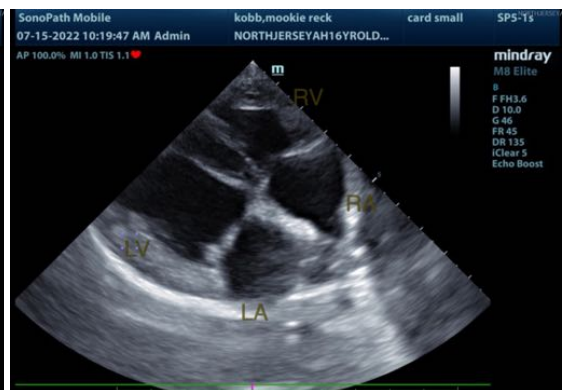
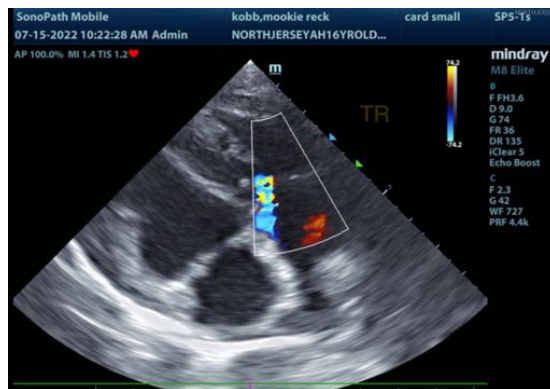
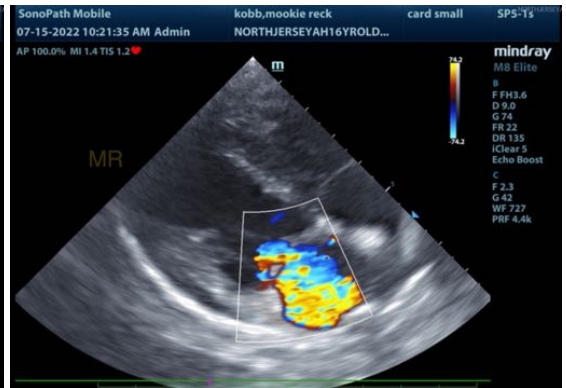
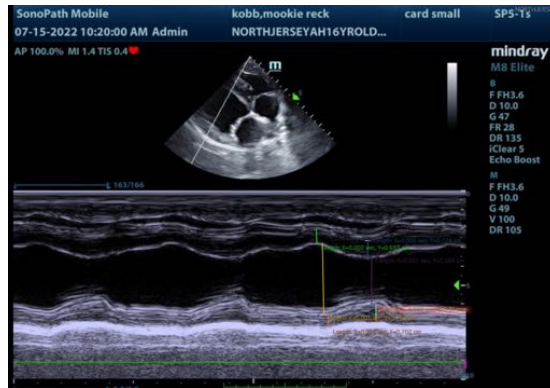
Dr. Reidel

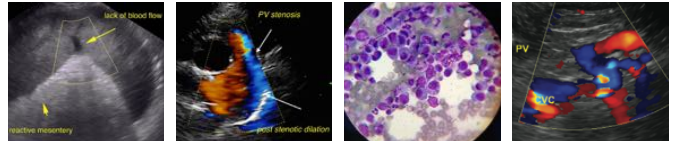
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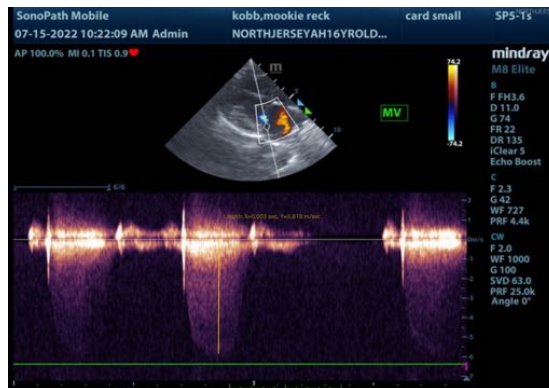
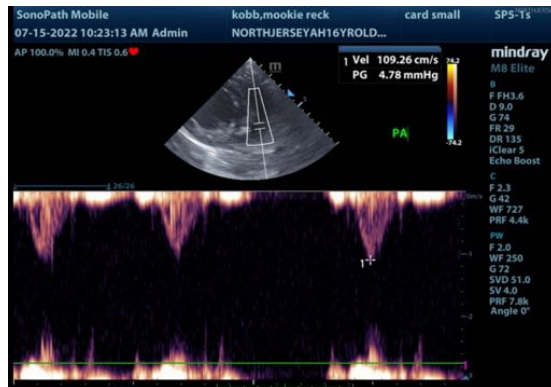
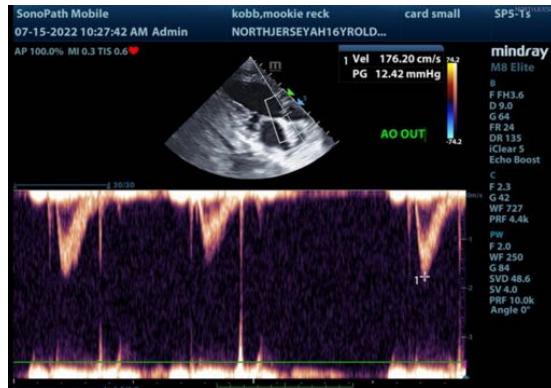
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

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