



## PATIENT

Dobi Kislyuk

## SPECIES

Canine

## BREED

Coonhound Mix

## SEX

FS

## AGE

12y

## WEIGHT

72lbs

## INTERPRETED BY

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

## IMAGING PERFORMED BY

## HOSPITAL NAME

Mass Veterinary  
Services

## REFERRING VET

Dr. Masloski

## INVOICE

31644

## DATE

7/3/23

## PRESENTING CLINICAL SIGNS

History: Dobi is doing well at home with a good appetite and normal activity level. The family feels he is doing better since getting fed a homemade diet. He does not have any current C/S/V/D/PU/PD Pertinent echo results (MML 6/27/23): 2<sup>nd</sup> degree AV block with a HR of 40bpm; CVD B2, rec pimo

## HOLTER MONITOR FINDINGS AND RHYTHM ASSESSMENT

Time analyzed	23:11h
Mean heart rate	32bpm
Maximum heart rate	75bpm
Minimum heart rate	20bpm
VPCs	Rare
APCs	0

Interpretation: Second degree AV block persists throughout the tracing. The majority is high grade (3:1 up to 5:1), type II with a sinus/P wave rate of 120bpm. The majority of the tracing has a ventricular rate of 40-50bpm. The max ventricular rate is 75bpm during a walk; however, 2:1 conduction persists. When sleeping, P wave rate declines appropriately. Brief periods of complete AV block when sleeping with a ventricular escape beat. Occasional VPCs with periods of bigeminy.

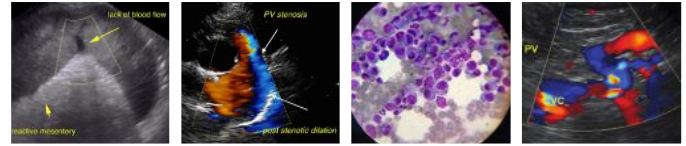
Rhythm diagnosis: High grade type II second degree AV block. Occasional 3<sup>rd</sup> degree (complete) AV block with ventricular escape beats. VPCs; singles only.

## RECOMMENDATIONS

The rhythm diagnosis is high grade type II 2<sup>nd</sup> degree AV block with a slow ventricular rate. Periods of 3<sup>rd</sup> degree AV block are noted with a ventricular escape rate of 40bpm. The heart rate does appear to stimulate mildly with activity, which may suggest medical management should be attempted. Regardless, this is considered pathologic and likely warrants pacemaker implantation. Given that the patient is largely asymptomatic, an alternative approach would be to simply monitor at home and consider a pacemaker should lethargy or syncope develop. Significant bradycardia and AV block is usually an acutely progressive disorder, with most dogs requiring transvenous pacemaker implantation to relieve clinical signs such as collapse or lethargy at some point (or alternatively electing euthanasia). **Referral should certainly be considered for discussion of medical and surgical options.**

AV block is typically idiopathic in origin, with progressive deterioration of the electrical system resulting in persistent bradycardia, significant lethargy and collapse. **An atropine challenge is recommended** in any case of bradycardia, although the response is expected to be mild. If there is any improvement in resting heart rate, stimulation through theophylline or propantheline (see below) can be attempted. Baseline full lab work should be performed, to rule out any electrolyte abnormalities that may be contributing. Additionally, baseline full body radiographs are recommended to rule out any neoplastic issues.

Barring any treatable systemic issues, the recommended treatment in this case is referral for discussion of pacemaker implantation. If declined, heart rate stimulation can be attempted as discussed; however, this is typically of limited benefit. If the rhythm is not corrected and chronic bradycardia ensues, this patient will succumb to either continued cardiac dilation resulting in CHF (which will be difficult to manage in the absence of a normal heart rate), or to worsening



**PATIENT**

bradycardia/syncope/sudden death. The goal would be to stabilize the situation through heart rate management and use medical support to hopefully support the structural disease.

Dobi Kislyuk

**SPECIES**

Unfortunately, the patient will always be at risk for recurrent CHF, development of arrhythmias, syncope and/or sudden death in the future. **Anesthesia is NOT advised in this case.** Continue Pimobendan as dictated by the Echo report.

Canine

**BREED**

Plan  
If elected, consider immediate referral for pacemaker consultation pending lab review, full systemic evaluation.

Coonhound Mix

Consider Atropine challenge if referral is declined. Administer 0.04mg/kg atropine IV and reassess ECG for 5-10 minutes post-injection.

**SEX**

- If there is any improvement with atropine, can attempt Theophylline 10mg/kg PO q12h. If this is ineffective, can attempt HR stimulation with propantheline bromide (difficult to find typically).

FS

**AGE**

If referral is declined and the patient deteriorates (ie syncope or lethargy develop), consider humane euthanasia at that time.

12y

**IMAGES**

**WEIGHT**



72lbs

7:52:25pm-1 Max. heart rate HR = 75



8:26:46pm-1 Bigeminy HR = 57



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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.

**INVOICE**

31644

Maggie Machen Lamy, DVM  
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**DATE**

7/3/23