

PATIENT

Marlo Crane

SPECIES

Canine

BREED

Collie Mix

SEX

FS

AGE

12 years

WEIGHT

48

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

HOSPITAL NAME

Mass Veterinary
Services

REFERRING VET

Dr. Masloski

INVOICE

26072

DATE

8/29/22

PRESENTING CLINICAL SIGNS

History: Marlo had an episode of bradycardia and AV block. She has not had any collapse episodes. Marlo does cough occasionally and does seem to pant more than normal. She is eating well with no S/V/D/PU/PD. Marlo is a bit quieter than her normal self today.

HOLTER MONITOR FINDINGS AND RHYTHM ASSESSMENT

Time analyzed	22:37h
Mean heart rate	27bpm
Maximum heart rate	216bpm
Minimum heart rate	20bpm
VPCs	17 VPCs, 471 escapes
APCs	

Interpretation: The primary finding is third degree AV block with a ventricular escape rhythm. The avg escape rate is 20bpm although some variability is noted. Occasionally the escape focus fails to fire, resulting in an extended pause. The sinus/p wave rate varies 75-100bpm. A brief run of an accelerated idioventricular rhythm is noted with a HR of 158bpm. A separate focus is noted with a narrow complex QRS (suspect junctional rhythm; brief AV conduction is not ruled out) and associated premature ventricular beats.

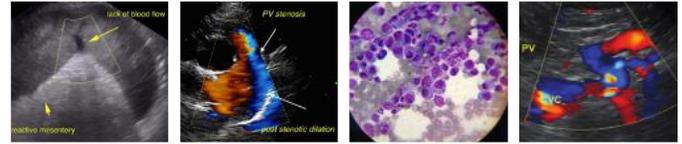
Rhythm diagnosis: Complete (3rd degree) AV block with a ventricular escape rhythm. Occasional AIVR with VPCs.

RECOMMENDATIONS

The holter recording confirms complete AV dissociation, consistent with third degree AV block. The sinus or P wave rate is uncommonly slow, which may suggest a primary sinus node issue as well (such as Sick Sinus Syndrome). There are various types of AV block with a range of clinical symptoms from dogs who are asymptomatic to those that are collapsing at home. Most often AV block occurs due to age-related electrical system degeneration, although it can also be encountered with cardiac tumors, in younger dogs associated with idiopathic dysfunction, secondary to severe metabolic derangements, or with inflammatory diseases such as myocarditis or endocarditis. Given the presentation of an asymptomatic senior dog, consider full systemic work up including lab work, CXR, AUS and an echocardiogram to screen for underlying contributing issues.

Regardless of cause, unfortunately with AV block medications are ineffective and the ideal treatment is placing a permanent cardiac pacemaker. Pacemaker implantation is fairly routine, minimally-invasive, and in cases of uncomplicated heart block is very well tolerated and eliminates any clinical signs due to slow heart rate. This procedure if elected should be performed as soon as possible, as the condition is often progressive. If pacemaker implantation is not sought, and no treatable causes are found on systemic evaluation, prognosis is grave and humane euthanasia should be considered.

Plan: Consider further systemic evaluation, including CXR, labs, echocardiogram, AUS to screen for underlying issues. If no contraindication to pacemaker implantation is seen, referral for evaluation/consultation for pacemaker implantation is recommended. If referral is declined, consider attempted heart rate support with theophylline (10mg/kg PO q12h) or isoproterenol if available (minimal response is expected).



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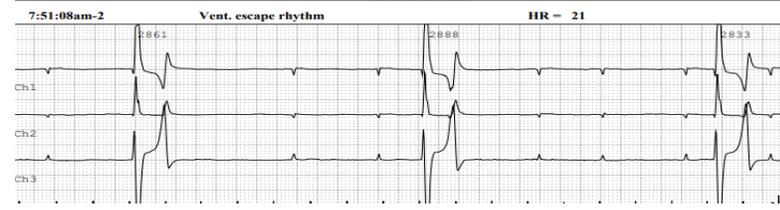
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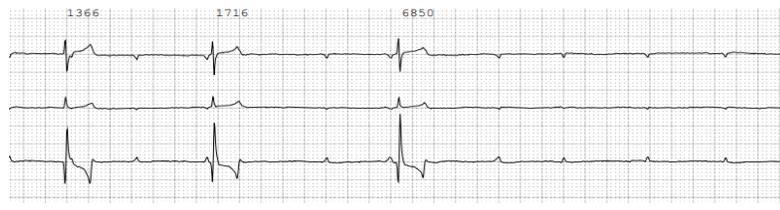
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IMAGES



Complete AVB



Lack of escape rhythm

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.

Maggie Machen Lamy, DVM
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