



PATIENT

Armane Burrage

SPECIES

Canine

BREED

American Bulldog

SEX

Female Intact

AGE

9 weeks

WEIGHT

9lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Sarah Pender, CVT

HOSPITAL NAME

SVS Imaging QC

REFERRING VET

Dr. Noy

INVOICE

29718

DATE

3/20/23

PRESENTING CLINICAL SIGNS

History: Presented on 3/15 for heavy/difficult breathing and not as active as the other puppies in the litter. Heart murmur, grade 4/6 systolic murmur noted as well as potbellied and possible ascites at exam on 3/15. No ascites seen on brief scan.

ECHOCARDIOGRAM FINDINGS

obvious prolapse into the left atrial lumen. No mitral regurgitation. Normal left atrial dimension. Normal LV diameter with normal myocardial function. The LV wall thickness is normal. The tricuspid valve appears normal in form and function. Mild right atrial and ventricular prominence. Mild RV hypertrophy suspected. Mild elevation of pulmonic outflow velocities. The pulmonic valve is difficult to visualize, although does not appear overtly abnormal. Trace pulmonic insufficiency. The aortic valve appears to have normal morphology and mobility. Normal LVOT velocity. No pericardial or pleural effusion noted. No obvious cardiac masses.

CARDIAC CHART

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	NA	NA	NM	1.4	52	86	0.2
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	BELOW	BELOW	BELOW	BELOW
PATIENT	230	1.3	2.3	4.1	1.7	2.5	1.2
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
BODY WEIGHT DEPENDENT PARAMETERS				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>				10	1.50 (3.8)	3.27 (3.5)	2.06 (3.1)
				15	1.83 (2.0)	3.71 (2.4)	2.43 (2.1)
				20	2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
				40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
				50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The only cause of the murmur identified is mildly elevated flow velocity through the pulmonary artery. This may reflect mild pulmonic stenosis, although the pulmonic valve does not appear overtly abnormal. A benign normal flow abnormality is possible; however, other possibilities should be considered, such as a double chamber right ventricular, sub valvular stenosis, etc. The right heart does appear mildly enlarged, supporting some ancillary pathology. No obvious additional issues are identified; however, it is important to note these are easily missed in juvenile animals.

IMAGING PERFORMED BY

svsmobileimaging.com 309-737-3070



PATIENT

Armane Burrage

Given mild changes seen here, this is unlikely to be related to current clinical issues, Highly recommended referral in this case for advanced imaging, chest radiograph evaluation, etc., particularly if the symptoms worsen.

SPECIES

Canine

Given what is seen here, no medications are warranted at this time. Prognosis is guarded long-term.

BREED

American Bulldog

Breeding this animal is not advised due to the genetic link of this disease.

SEX

Female Intact

Anesthetic risk is considered mildly elevated. **Avoid heart rate stimulating drugs such as atropine or glycopyrrolate.** Avoid excessive vasodilation/hypotension. Pre-oxygenate for 5-10 minutes prior to induction. A reasonable protocol would be as follows: premedicate with opioid/benzodiazepine, propofol or alfaxalone induction, isoflurane maintenance. Monitor ECG, BP as is standard. Monitor for hypoxia in recovery; utilize O2 chamber if needed. Mild IV fluid restriction is advised.

AGE

9 weeks

Monitor for development of associated clinical signs (exertional collapse, abdominal distention, cough, labored breathing). Omega fatty acid supplementation may have some long-term benefit, given that these cases are predisposed to development of arrhythmias going forward. Breeding is not advised as this condition is genetically linked.

PLAN

WEIGHT

9lbs

Highly recommend referral for advanced echocardiography. If declined baseline CXR with a Radiologist review is recommended.

INTERPRETED BY

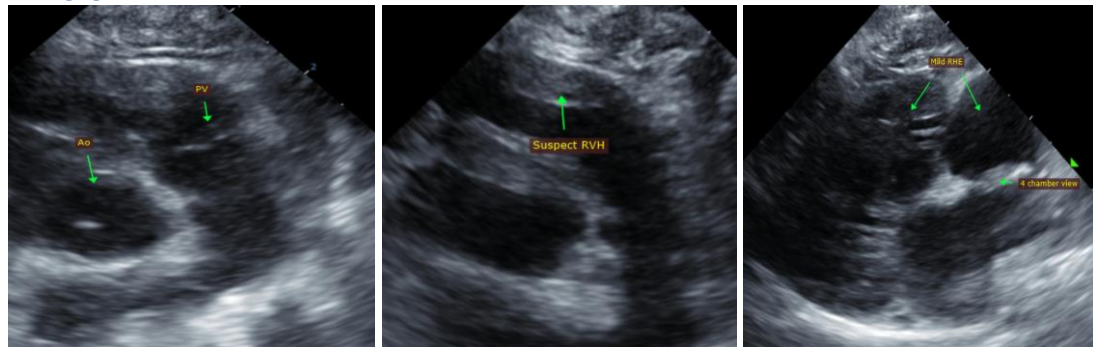
Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

If referral is declined, recommend recheck echocardiogram in 6 months to assess for progression, sooner if clinical signs arise in the interim.

IMAGING PERFORMED BY

Sarah Pender, CVT

IMAGES



HOSPITAL NAME

SVS Imaging QC

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.

REFERRING VET

Dr. Noy

INVOICE

29718

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.

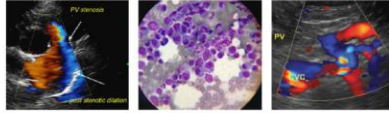
DATE

3/20/23

Maggie Machen Lamy, DVM

IMAGING PERFORMED BY

svsmobileimaging.com 309-737-3070



EDUCATIONAL TELECONSULTATION SERVICES™

1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT

Diplomate of the American College of Veterinary Internal Medicine (Cardiology)

info@sonopath.com

Armane Burrage

SPECIES

Canine

BREED

American Bulldog

SEX

Female Intact

AGE

9 weeks

WEIGHT

9lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

**IMAGING
PERFORMED BY**

Sarah Pender, CVT

HOSPITAL NAME

SVS Imaging QC

REFERRING VET

Dr. Noy

INVOICE

29718

DATE

3/20/23