

**PATIENT**

Bella Schulte

PRESENTING CLINICAL SIGNS

History: Pleural effusion diagnosed in January 2022. Started on Lasix. CXR showed improved effusion; however, cardiomegaly noted. New heart murmur. Previously on Depo-Medrol.

SPECIES

Feline

BREED

DLH

SEX

Female Spayed

AGE

12 years

WEIGHT

6.1lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Kim Liedberg

HOSPITAL NAME

SVS Imaging WI

REFERRING VET

Dr. Steele

INVOICE

23173

DATE

3/17/22

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is minimally increased in dimension with a decreased LV chamber. There is a diffusely hyperechoic endocardium consistent with age-related fibrosis. Diffuse remodeling. The papillary muscles are hyperechoic. The left atrium is normal in size. The right atrium is normal in size. The right ventricle appears normal. The mitral valve is normal in structure and mobility. No MR. The tricuspid valve appears normal in structure and mobility. No TR. Blood flow through both the LVOT and RVOT are normal in velocity. No effusions. No obvious cardiac tumors.

CARDIAC CHART

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) <small>(Moise, Pipers)</small>	LVIDd (cm) <small>(Moise, Pipers)</small>	LWVd (cm) <small>(Moise, Pipers)</small>	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	2.8	220	0.61	1.0	0.62	40	82
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Swe) (Abbott)	LA 2D short axis Base view (cm) (Abbott)	LVOT VEL (m/s)	RVOT VEL (m/s)	E max (m/s)	
NORMAL	<1.5	<1.3	<1.2	<1.6	<1.3	<0.9	
PATIENT	1.5	1.2	1.2	1.1	1.5	NM	

**Note: All measurements based upon multi-modal images and methods. An average value is reported.*
 Adapted from June Boon, Veterinary Echocardiography, 1998
 Abbott J & MacLean H JVIM 2006;20: 111-119, Moise et al. Am J Vet Res 47:1476, 1986. Pipers et al. Am J Vet Res 40:882, 1979.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overtly normal geriatric cardiac structure and function. The LV wall thickness is minimally increased with a decreased LV chamber dimension, which is most consistent with pseudohypertrophy. This can happen due to Lasix administration, volume depletion, etc. and baseline lab work is strongly recommended. Most importantly there is no evidence of elevated left atrial pressure at this time. There is mild remodeling and fibrosis of the left ventricular wall, which is likely a normal age-related finding. No obvious murmur origin is identified here, making it likely physiologic in origin. No additional issues are identified.

These findings would suggest a noncardiac cause for the prior pleural effusion is most likely. One exception to this would be acute steroid intolerance; however, timing of the Depo-Medrol injection, as well as information on historical tolerance is needed to determine this correlation. If the steroid injection was given immediately prior to the episode of respiratory distress, I would certainly avoid this going forward. Regardless, no effusion is seen here and there is obvious indication to continue Lasix at this time. Should the pleural effusion recur in the future,

**PATIENT**

Bella Schulte

independent of steroid use, highly recommend further evaluation, such as a thoracic CT scan, fluid cytology and full systemic evaluation.

SPECIES

Feline

If needed, anesthetic risk is considered mild. With remodeling and diastolic stiffening, there is an elevated risk for fluid overload in this patient and judicious IV fluid use is recommended. Heart rate stimulating drugs such as atropine, glycopyrrolate or ketamine should be avoided unless medically necessary. Risk for complication with steroid use typically follows LA dilation, which in this case is low. That being said, any cat can experience unexpected signs of intolerance and monitoring of RR/RE is advised particularly in the initiation phase.

BREED

DLH

PLAN

No obvious indication to continue Lasix therapy. Further historical information/correlation with steroid injection is needed. If effusion recurs, further evaluation is indicated. Baseline lab is recommended due to the appearance of the LV.

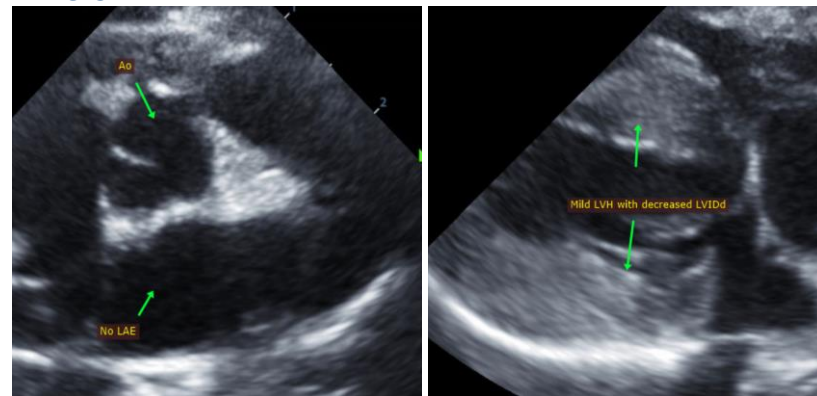
SEX

Female Spayed

Recommend recheck echocardiogram in 1 year to assess for any progressive issues

AGE

12 years

**WEIGHT**

6.1lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

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.

IMAGING PERFORMED BY

Kim Liedberg

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.

HOSPITAL NAME

SVS Imaging WI

Maggie Machen Lamy, DVM

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

info@sonopath.com

REFERRING VET

Dr. Steele

INVOICE

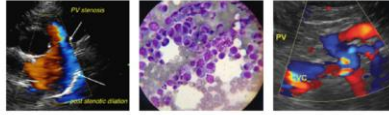
23173

DATE

3/17/22

IMAGING PERFORMED BY

svsmobileimaging.com 309 - 737 - 3070



Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

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

PATIENT

Bella Schulte

SPECIES

Feline

BREED

DLH

SEX

Female Spayed

AGE

12 years

WEIGHT

6.1lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

**IMAGING
PERFORMED BY**

Kim Liedberg

HOSPITAL NAME

SVS Imaging WI

REFERRING VET

Dr. Steele

INVOICE

23173

DATE

3/17/22