


**RESENTING CLINICAL SIGNS**

**DATE** History: Presented on 6/21/22 for a soft to hacking cough, mild dyspnea, and an increased respiratory rate. Grade 2/6 murmur and pulmonary crackles noted. Radiographs showed pulmonary edema. Started on furosemide 12.5 mg TID and pimobendan 1.25 mg BID, which improved cough and resolved crackles. Also started on enalapril 2.5 mg BID. ECG from 6/27 showed normal sinus rhythm, while radiographs showed no evidence of pulmonary edema.

6/29/22

**PERFORMED BY:**

Loetitia Saint-Jacques, RVT, LVT

**ECHOCARDIOGRAPHIC FINDINGS**

2D, M-mode, and Doppler study.

**INTERPRETED BY**

Keith Blass, DVM, MS, DACVIM (Cardiology)

There is borderline mild left atrial dilation. The mitral valve leaflets are mildly thickened and exhibit mild systolic prolapse. There is Doppler evidence of mitral regurgitation present. Left ventricular dimensions are normal. Left ventricular systolic function is hyperdynamic. The aorta and aortic valve appear normal, though trivial aortic insufficiency is present. Right atrial and right ventricular dimensions are normal. The tricuspid valve leaflets are mildly thickened, and there is Doppler evidence of tricuspid regurgitation present. TR velocity is consistent with the presence of mild pulmonary hypertension (PG 37 mmHg). The pulmonic valve is normal. There is mild dilation of the main pulmonary artery. No shunting lesions are visualized. No pericardial effusion or cardiac masses are seen.

**PATIENT**

Bonnie Egan  
 LA - 26.3 mm  
 LVIDd - 25.6 mm  
 LVIDs - 12.9 mm  
 FS - 49.6%  
 RA - 14.5 mm  
 LVOT - 1.20 m/s  
 RVOT - 0.80 m/s  
 TR - 3.05 m/s

**BREED**

Shih Tzu

**ASSESSMENT/RECOMMENDATIONS**

Degenerative mitral and tricuspid valve disease  
 Pulmonary hypertension

**SEX**

FS

**AGE**

15 y

This examination demonstrates regurgitation of blood across Bonnie's mitral and tricuspid valves resulting from degenerative valve disease. Bonnie's tricuspid valve disease is mild, and is well-compensated at this time. Her mitral valve disease is slightly more advanced, as Bonnie has borderline mild secondary dilation of her left atrium, though her left ventricular dimensions are normal, and her left ventricular systolic function is well-preserved. As only borderline mild left atrial dilation is present, it would be surprising if Bonnie experienced an episode of left-sided congestive heart failure, however, I would certainly believe that she did if her original radiographs showed an infiltrate consistent with cardiogenic pulmonary edema and her clinical signs improved with diuretic therapy. As for Bonnie's cough, it's unlikely that her mitral valve disease is the cause, and its improvement is likely due to the anti-inflammatory effect of furosemide, rather than its diuretic effect.

**WEIGHT**

16.7 lb

Bonnie's tricuspid regurgitation velocity is consistent with the presence of mild pulmonary hypertension. Mild pulmonary hypertension is well-tolerated in dogs, therefore, it's unlikely to be contributing to Bonnie's respiratory clinical signs.

**HOSPITAL NAME**

Alpine AH

The appearance of a possible heart base mass in Bonnie's radiograph is very likely due to the presence of mild dilation of her main pulmonary artery.

**REFERRING VET**

Dr. Sjojin

Continued use of Bonnie's current medications (furosemide can likely be reduced to BID therapy) would be warranted if they have resulted in clinical improvement. No therapy is recommended for



Bonnie's pulmonary hypertension at this time.

DATE

6/29/22

A recheck echocardiogram is recommended in ~6 months. Repeat radiographs are recommended any time Bonnie experiences labored breathing.

PERFORMED BY:

Loetitia Saint-Jacques, RVT, LVT

INTERPRETED BY

Keith Blass, DVM, MS, DACVIM (Cardiology)

PATIENT

Bonnie Egan

SPECIES

Canine

BREED

Shih Tzu

SEX

FS

AGE

15 y

WEIGHT

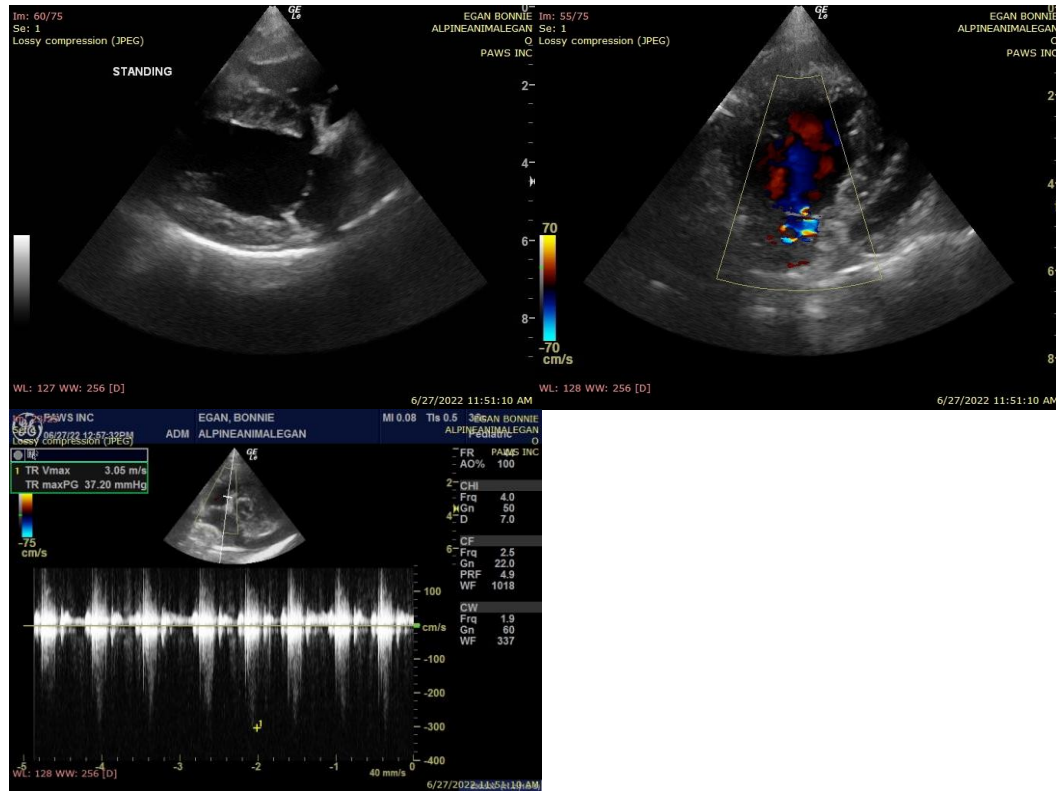
16.7 lb

HOSPITAL NAME

Alpine AH

REFERRING VET

Dr. Sjoloin



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.

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