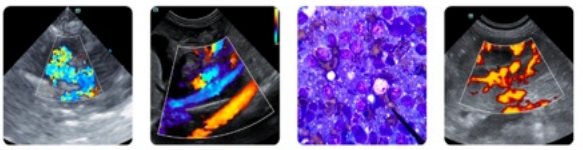

SonoPath www.thefocalzone.com info@thefocalzone.com 289.808.2608

PATIENT

Porkchop Collins

SPECIES

Canine

BREED

American Bulldog

SEX

Neutered male

AGE

5 years

WEIGHT

18.2 kg

INTERPRETED BY

Bradley Harris, DVM, DACVECC, DACVIM (cardiology)

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

Hamilton Burlington SPCA Companion AH

REFERRING VET

Dr. Dam

INVOICE

78183

DATE

6/1/26

PRESENTING CLINICAL SIGNS

History: Had known history grade 2/6 upon adoption as well as severe allergies not controlled. Heart murmur has progressed to a grade 4/6. Had two seizure episodes last week, not thought to be syncope as he was vocalizing, paddling appeared to be traditional grand mal, two episodes in two days. Started Phenobarbital, no further seizures since.
BW all WNL, no evidence of toxicity, no evidence of a shunt. Pro BNP elevated 3074(0-900).

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The left atrium is normal in dimension. The left ventricle is normal in dimension, with normal systolic function. The right atrium and ventricle are normal in dimension, with normal systolic function. The anterior and posterior mitral valve leaflets are thickened and redundant, and there is minimal prolapse. There is mild to moderate mitral regurgitation identified. The tricuspid valve leaflets are appropriately thin with adequate apposition, intact chordae, with trivial tricuspid regurgitation and no overt pulmonary hypertension. The left ventricular outflow tract demonstrated normal laminar flow and the visible aorta is unremarkable. The right ventricular outflow tract assessment revealed normal laminar flow, with appropriate main pulmonary artery diameter and right pulmonary artery distensibility. There is no pulmonic and mild aortic valve insufficiency identified. There is no visible pericardial, pleural, or free peritoneal fluid documented. No evidence of hepatic venous congestion is noted. The cardiac chambers, pericardial and visible extra-cardiac regions were free of masses, spontaneous echo contrast, or thrombi.

CANINE CARDIAC PARAMETERS	Body Weight kg	HR BPM	LAD 4 ch Long	RAD 4 ch Long	La/Ao Heart Base	LVIDd	LVIDs
NORMAL PARAMETER		50-100			<1.6		
PATIENT	18.2 kg	110	3.98	2.02	1.17	3.27	2.24
CANINE CARDIAC PARAMETERS	**FS**	**EPSS**	**PV V MAX (m/s)**	**AV V Max (m/sec)**	**MR Vmax**	**TR Vmax**	**RPA distensibility (normal >30%)**
NORMAL PARAMETER	28-40	<0.6	0.7-1.6	0.7-1.7	4.5-5.5	< 2.7	
PATIENT	31	0.4	1.1	3.5	NM	1.6	17

ULTRASONOGRAPHIC FINDINGS

These findings identify an increased left ventricular outflow tract gradient with aortic insufficiency, most consistent with subvalvular aortic stenosis (SAS). Given that the murmur has been present since adoption, a congenital condition is suspected. The mitral regurgitation may be a result of concurrent mitral valve dysplasia (commonly seen with SAS), or due to acquired degenerative mitral valve disease (given the recent increase in murmur intensity). Regardless, the SAS is moderate in severity, with an LVOT gradient of 50mmHg. Dogs with moderate disease are more likely to develop complications associated with disease (arrhythmias, CHF and sudden death) than dogs with mild disease, but have a prognosis better than that of dogs with more severe disease. There are no current hemodynamic effects of the mitral regurgitation observed at this time.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

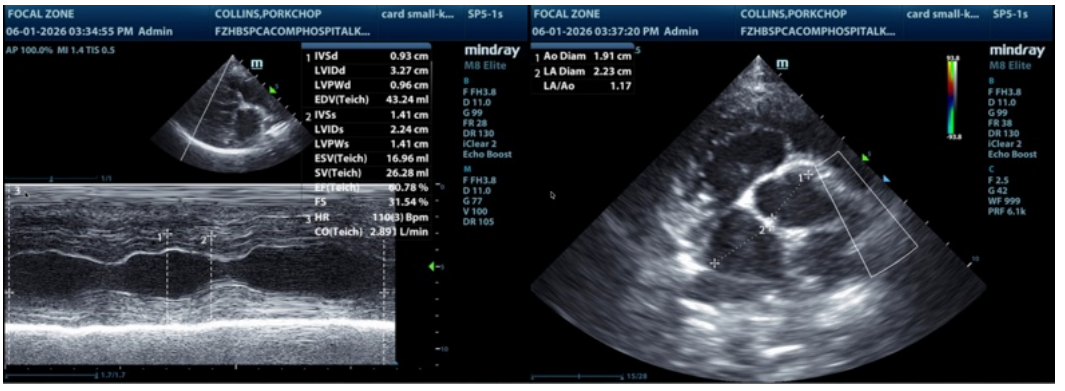
The treatment for moderate SAS is a matter of debate, as these patients represent a transition between mild disease (which generally carries a good prognosis and is not treated) and more severe disease (which has a poor prognosis and requires therapy). In most cases, the recommendation for moderate SAS is to start beta blocker therapy (ie atenolol), but in Porkchop's case it is less clear due to his age and lack of any clinical signs to this point. However, it is possible the episodes may be related to the SAS, and thus a starting dose of 1mg/kg BID will be recommended. If the initial dose is tolerated an increase to 2mg/kg BID in 1 week is recommended. A BP and heart rate should be evaluated 2 weeks after the increased dose, and a follow up echo is recommended in 6-12 months.

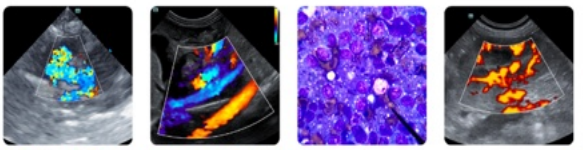
It is also important to recognize that dogs with SAS (of any severity) are also at an increased risk of bacterial endocarditis on the aortic valve. As such, antibiotics should be used in the event of any surgeries (including dentals) bite wounds, laceration, etc.

Anesthesia:
If anesthesia is necessary, then alpha-2 agonists, ketamine, high dose acepromazine, and Telazol should be avoided. Skip any ACE-inhibitor (if receiving) on morning of anesthesia. Fluid therapy during anesthesia should be considered at a reduced rate (e.g., 5 ml/kg/hour) if possible. A shorter anesthetic duration will reduce the risk of complications. Pre-oxygenation is advised. Pre-medication with an opioid (i.e., butorphanol, hydromorphone, oxymorphone) with or without a benzodiazepine is generally the safest protocol. An induction agent such as Propofol, alfaxalone, or diazepam/etomidate can be used to effect. Maintenance of anesthesia with isoflurane or sevoflurane is reasonable.

Diet:
A high-quality food from Hills, Royal Canin, Science Diet, Eukanuba, Iams, or Purina that is highly palatable with adequate protein and calories for maintaining optimal body condition is reasonable.

Activity:
Avoid overly strenuous activity.





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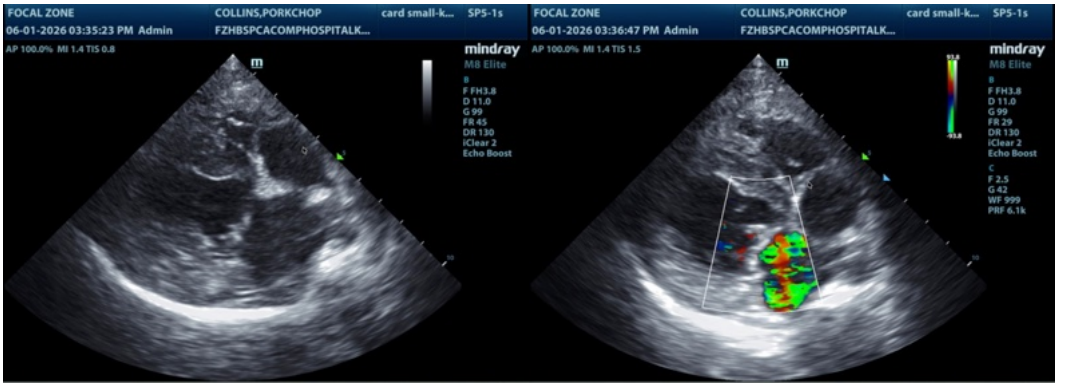

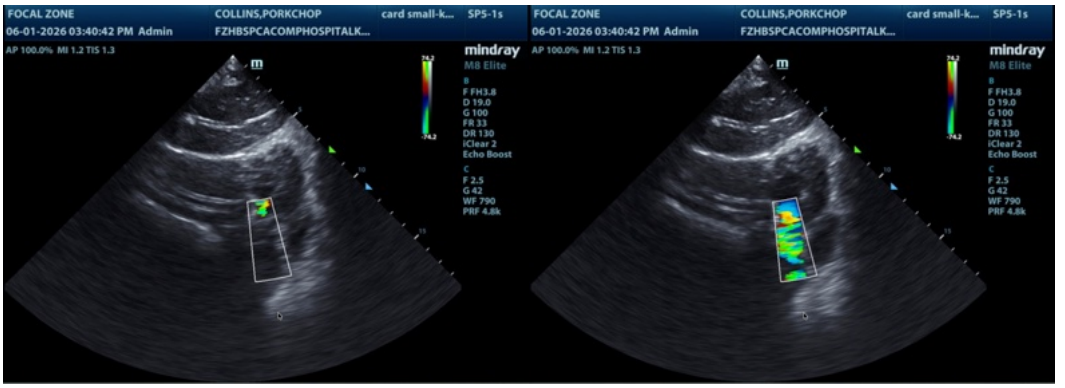

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Bradley Harris, DVM, DACVECC, DACVIM (cardiology)

info@SonoPath.com