Additional Cardiology for General Practice notes:

Physiologic flow murmurs are typically grades 1-2 (not immediately audible when you put your stethoscope on the chest and/or only heard in a quiet environment) and should never be louder than a grade 3/6. These 'flow' murmurs should be soft blowing, and not coarse sounding.

Aortic regurgitation is typically age-related degenerative valve disease. Therefore, prognosis may be worse and consider recommending echocardiogram earlier if present in horses under 10 years of age.

Mitral valve regurgitation is the #1 cause of congestive heart failure in horses & predisposes to atrial fibrillation due to left atrial enlargement – a common and concerning murmur to hear on pre-purchase examination (systolic loudest over aortic or mitral valve area).

- Mitral regurgitation can have several causes: prolapse (generally benign in horses, best prognosis), degeneration, dysplasia, chordae tendinae ruptures – emphases the importance of an echocardiogram to try and determine underlying cause and severity.
- Some murmur characteristics can help you: prolapses and generally late-to-mid systolic, crescendo (starts quiet, gets louder); high frequency, musical 'whistling', or 'honking' murmurs are concerning for chordae tendinae rupture.

Aortic regurgitation does not commonly cause congestive heart failure but can limit performance life due to ventricular enlargement predisposing to ventricular arrhythmias.

Atrial fibrillation is the most common clinically significant arrhythmia in horses. Causes poor performance in racehorses and other 'high performing athletes', like 3-day eventers. It's significance as a cause of poor performance in other types of sport horses (dressage, show jumpers, hunters, etc) is questionable.

<u>Some predispositions:</u>

Standardbreds & atrial fibrillation – appears to be heritable.

Standardbreds, Arabians & Welsh ponies all overrepresented in ventricular septal defects.

Arabians overrepresented in complex congenital abnormalities.

Iatrogenic thyroid hormone administration & atrial fibrillation (or other substances containing high levels of iodine, feeding kelp).

Friesians & aortopulmonary fistulas – aorta ruptures at a site more distal than the 'typical' aortic rupture and causes a communication between the aorta and pulmonary artery. Suspected collagen/connective tissue abnormality leads to a weak spot.

- Can be acute rupture and sudden death, or chronic rupture leading to congestive heart failure
- All sexes, any age (1-20 years, mean 3.9 years)
- Clinical signs very variable, can include colic, respiratory distress, epistaxis, signs of congestive heart failure (jugular pulses, jugular distension, peripheral edema, increased respiratory rate & effort, coughing, exercise intolerance)

- Murmurs are variable or may not be present at all
- Frequently fevers

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