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Common Cardiac Diseases in Small Animals

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Canine Chronic Mitral Valvular Disease:

Chronic Mitral Valve Disease (CMVDz, CMD, also known as myxomatous valvular degeneration/MVD or “endocardiosis”) is a degenerative condition of the heart valves and supporting structures that causes leakage of blood backwards through the heart due to the inability of the valves to form a tight seal. This disease is diagnosed most effectively by echocardiography (ultrasound of the heart). The mitral valve is commonly the most severely affected valve. Over time, this can cause heart chamber enlargement. The body’s response is to retain salt and water. The increase in blood volume that results helps the patient in the short term. Eventually, however, the excessive blood volume may become too much for the heart, and congestive heart failure may result. This happens when the pressure in the veins within the lungs increases, causing fluid to leak into the air spaces. This is known as heart failure fluid (“congestive heart failure,” pulmonary edema or congestion). This causes exercise intolerance, coughing and difficulty breathing, and is best managed with diuretics. Advanced mitral valvular disease may also lead to airway compression, resulting in more coughing, which may be helped with the addition of a cough suppressant. A chest x-ray is needed to diagnose fluid in the lungs and airway compression, and is also used to chart the size of the heart over time. Occasionally, this disease primarily affects the tricuspid valve, leading to right-sided heart failure, which typically results in abdominal distention from fluid accumulation (“ascites” or “abdominal effusion”), which occasionally requires manual removal. Mitral valve disease may also be associated with certain arrhythmias, or abnormal heart beats. These are diagnosed with an EKG (ECG or electrocardiogram). We cannot stop the progression of this disease, but we can help once clinical signs develop with certain medications and dietary recommendation (low-sodium, or low-salt diets).

Dilated Cardiomyopathy:

Dilated Cardiomyopathy (DCM, idiopathic or non-ischemic cardiomyopathy, or “congestive cardiomyopathy”). This is a disease of the heart muscle itself that causes the heart to contract poorly. Over time, this causes the entire heart to enlarge and become dilated and flabby. The valves stretch apart and blood starts to leak through them backwards through the heart. Eventually, this leads to an increase in blood volume. When this becomes excessive, it can lead to congestive heart failure. This happens when the pressure in the veins within the lungs increases, causing fluid to leak into the air spaces. This is known as heart failure fluid (“congestive heart failure,” pulmonary edema or congestion). This causes exercise intolerance, coughing and difficulty breathing, and is best managed with diuretics. This disease is diagnosed most effectively by echocardiography (ultrasound of the heart). A chest x-ray is needed to diagnose fluid in the lungs and airway compression, and is also used to chart the size of the heart over time. Occasionally, this disease may cause fluid to accumulate free in the chest cavity, outside the heart and lungs, impairing the patient’s ability to expand the lungs. This is called “pleural effusion,” and we may periodically need to manually remove this fluid to reduce the pressure on your pet’s diaphragm, making it easier for them to breathe. In some cases, DCM leads to right-sided heart failure, which typically results in abdominal distention from fluid accumulation (“ascites” or “abdominal effusion”), which may also require

manual removal. Dilated cardiomyopathy may also be associated with certain arrhythmias, or abnormal heart beats. These are diagnosed with an EKG (ECG or electrocardiogram). A common arrhythmia associated with DCM is atrial fibrillation (A-fib or AF), which usually requires antiarrhythmic medication to slow the heart rate. We cannot stop the progression of this disease, but we can help once clinical signs develop with certain medications and dietary recommendation (low-sodium, or low-salt diets).

Feline Hypertrophic Cardiomyopathy:

Hypertrophic Cardiomyopathy (HCM) is a disease of the heart muscle itself that leads to excessive heart muscle thickening. The heart muscle has a harder time relaxing properly, which may cause heart chamber enlargement over time. Eventually, this leads to an increase in blood volume. When this becomes excessive, it can lead to congestive heart failure. This happens when the pressure in the veins within the lungs increases, causing fluid to leak into the air spaces. This is known as heart failure fluid ("congestive heart failure," pulmonary edema or congestion). This causes difficulty breathing, and is best managed with diuretics. This disease is diagnosed most effectively by echocardiography (ultrasound of the heart). High blood pressure (hypertension) or hyperthyroidism may result in heart muscle thickening and a heart murmur, and we may need to check your pet's blood pressure and thyroid levels to help rule out these problems. A chest x-ray is needed to diagnose fluid in the lungs, and is also used to chart the size of the heart over time. Occasionally, this disease may cause fluid to accumulate free in the chest cavity, outside the heart and lungs, impairing the patient's ability to expand the lungs. This is called "pleural effusion," and we may periodically need to manually remove this fluid in order to reduce the pressure on your pet's diaphragm, making it easier for them to breathe. Cats with significant heart chamber enlargement are at risk for blood clot formation (thromboembolism), which may lead to limping/difficulty walking, and we may prescribe medication specifically for this. We cannot stop the progression of this disease, but we can help once clinical signs develop with certain medications.