Petcardia
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Supraventricular Tachycardia

A normal heartbeat starts with an electrical impulse originating from sinoatrial (SA) node located in the right atrium (upper chamber of the heart). This impulse causes contraction of both atria which pushes blood to the ventricles (lower chambers of the heart). The electrical impulse then reaches the atrioventricular (AV) node signaling both ventricles to contract pushing blood to the lungs and body. Supraventricular tachycardia (SVT) occurs when rapid electrical impulses are generated outside the SA node causing a fast heart rate. These abnormal impulses can originate from the heart muscle of the atria or within the AV node. The rapid impulses may occur periodically or be sustained for long periods of time causing damage to the heart muscle.

Symptoms

Supraventricular tachycardia occurring in periodic short burst may not cause any symptoms. Long periods of SVT with a high heart rate can cause heart muscle damage and congestive heart failure (CHF). Symptoms include weakness, lethargy, collapse, fainting, labored breathing, coughing and sudden death.

Diagnosis

An electrocardiogram (ECG) should be performed to assess the electrical activity of the heart. If SVT is diagnosed a cardiac ultrasound (echocardiogram or echo) should also be done to assess the structure and function within the heart. Chest x-rays may also be indicated if the pet is suspected to be in CHF.

Treatment

Cases of sustained SVT may need to be hospitalized. An IV catheter is placed and injectable anti-arrhythmic therapy started. The pet will be placed on continuous ECG monitoring until the arrhythmia is under control with oral anti-arrhythmic medications.

Once the arrhythmia is under control, serial rechecks will be needed to assess the heart rhythm for adequate control of the arrhythmia. A Holter monitor may be suggested to look at the heart rate over a 24-hour period. A holter monitor is a small device that is place on the pet, they can then go about

their day at home while the device records their ECG. The results are then analyzed and medication adjustments can be made.

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