



## PERICARDIAL EFFUSION

### ABOUT THE DISEASE

**Pericardial Effusion** refers to an accumulation of fluid within a membranous sac which surrounds the heart (pericardium.)

When fluid accumulates in this sac, it often compresses the heart and interferes with normal function. Additionally, some patients may develop an abnormal/irregular heart rhythm (arrhythmia).

- If fluid accumulates slowly, the pericardium will stretch and symptoms may be delayed or absent in the beginning.
- If fluid accumulates rapidly, the pericardium does not have time to adapt and causes life-threatening heart failure.

Symptoms can vary considerably but often include lethargy, breathing difficulty, weakness, collapse, or sudden death.

The two most common causes of **pericardial effusion** are heart-based tumors (usually malignant) and sometimes heart disease. Other causes include toxins (anticoagulants rodenticide) and, in feline patients, feline infectious peritonitis (FIP).

### OBTAINING A DIAGNOSIS

A physical examination by a veterinarian may find supporting evidence but an ultrasound of the heart (echocardiogram) is the diagnostic of choice for detecting fluid. However, isolating heart-based tumors are often very difficult. X-rays (radiographs) are not always definitive.

Electrocardiograms (ECGs) and blood-clotting tests are often performed to assess arrhythmias and/or diseases of spontaneous hemorrhage. Other diagnostics including expanded blood work, urine testing, or ultrasound may provide overall health status and/or help determine additional medications.

### TREATMENT

While some patients are responsive to initial immediate intervention, most success is short-lived. Frequently, patients will re-develop clinical signs in as little as a day or at most a few weeks, while others will have immediate life threatening decline.

For immediate care, patients require rapid intravenous (IV) fluids to improve blood pressure, and some require arrhythmia medications. The pericardial fluid must be drained from the pericardium using a long thoracic catheter or needle (pericardiocentesis).

Surgical referral is an option for some patients for a pericardiectomy, which opens a portion of the pericardial sac allowing the fluid to drain into the chest cavity. This is not a cure, but the procedure can often delay the life-threatening symptoms caused by heart compression.

### TIPS FOR SUCCESS

- Pericardial effusion often has no cure, and inevitably ends with euthanasia or spontaneous death
- Clinical signs are caused by heart compression, and if the patient has been treated, monitor for a recurrence of:
  - Lethargy, weakness, or exercise intolerance
  - Breathing difficulty
  - Collapse or fainting