

Restrictive/Unclassified Cardiomyopathy, Feline

ABOUT THE DIAGNOSIS

“Cardiomyopathy” is a term used for describing disease of the heart muscle. There are many types of cardiomyopathy, and “restrictive,” “unclassified,” and “intermediate” cardiomyopathy all refer to the same type: a disorder in which the heart muscle tissue has become stiffened so that the walls of the heart are less elastic than normal. The cause of this stiffening process is unknown. Cats are affected almost exclusively; dogs are not known to have this heart disease. The effect of this type of cardiomyopathy can be serious: The circulation can be hampered so severely that fluid seeps into the lungs, making breathing difficult, or else it may lead to distortions in the shape of the heart that allow blood clots to form and potentially cause strokes. These very serious developments occur in some (but not all) cats affected with this type of cardiomyopathy, and many have no symptoms at all.

A new onset of inactivity, poor appetite and weight loss, hiding or other fearful behavior, limping or sudden inability to use the hindlimbs, and rapid, difficult breathing are symptoms that may be seen with restrictive cardiomyopathy. Rarely, an affected cat will have fainting spells due to irregular heartbeats.

When one or more of these symptoms is present, a complete physical exam by the veterinarian will include listening to the chest with a stethoscope, which may reveal an irregular heartbeat or, rarely, a heart murmur. These findings can help a veterinarian to suspect restrictive cardiomyopathy, but many other types of heart problems also produce these same symptoms. Therefore, restrictive cardiomyopathy requires testing (mainly cardiac ultrasound, also called echocardiography) for confirmation.

X-rays of the chest are important for determining the overall size and proportion of the heart and the appearance of the surrounding organs, especially the lungs. Together with cardiac ultrasound (echocardiography), it is possible to confirm or exclude restrictive cardiomyopathy. Echocardiography is the diagnostic test of choice: it identifies the characteristic features of restrictive cardiomyopathy, which are enlargement of both atria while both ventricles remain of normal size. Echocardiography can also identify complicating factors, such as blood clots within the heart chambers, and provide an evaluation of the extent of the disease.

LIVING WITH THE DIAGNOSIS

Restrictive cardiomyopathy is a serious diagnosis because there is no treatment known to reverse it. However, medications can help to alleviate or eliminate symptoms in many cats and maintain a good quality of life. Short-term outlook depends upon the cat's response to therapy. The long-term outlook is a guarded one; many cats, even if they respond to the initial in-hospital treatment, develop symptoms again weeks or months later despite receiving medication. Overall, the life span of cats with restrictive cardiomyopathy is usually compromised by the disease, and many cats die or are euthanized within the first year or two of diagnosis; rarely, a cat may live longer than 2 to 3 years with this disease.

TREATMENT

A major concern, as mentioned above, is that cats with restrictive cardiomyopathy tend to accumulate fluid in the chest, both within the lung tissue (pulmonary edema) and within the chest cavity surrounding and partially collapsing the lungs (pleural effusion). Therefore, treatment with a diuretic (a medication that causes extra fluid to be eliminated through the urine) is vital for controlling this

fluid buildup. This type of medication is in pill or oral syrup form and must be given daily or twice a day, depending on the specific medication and the extent of the heart problem. Cats that have large amounts of pleural fluid occasionally may need to have it removed with a needle (thoracocentesis, “chest tap”) to allow them to breathe more easily. An angiotensin-converting enzyme (ACE) inhibitor is a type of medication also prescribed to help dilate the blood vessels and to reduce the workload of the heart. A medication that is not approved for cats but that seems to help in some cases of restrictive cardiomyopathy is pimobendan. For the latest information on emerging treatments, you may wish to make an appointment with a specialist (directories for veterinary cardiologists: www.acvim.org or www.vetspecialists.com in North America, www.ecvim-ca.org in Europe). Finally, cats with a likelihood of developing blood clots, or especially those that have already developed a blood clot to the legs (“saddle thrombus”), will need some form of anticoagulant or blood thinner. Many types are available, so you should discuss the advantages and drawbacks of each with your veterinarian before settling on one.

It is important to remember that severely affected cats may need to be hospitalized for several days until their condition is stabilized. Overall, after hospitalization is over and the cat is home, treatment generally consists of medications to maintain comfortable breathing, limit other complications, and must be given daily, for the rest of the cat's life. There is no surgery to help this type of heart problem.

DOs

- Give all medications as directed. If you have difficulty giving your cat pills, contact your veterinarian. Pharmacies can formulate liquid versions of most medications that are easier to give.
- Avoid situations that increase your cat's heart rate unnecessarily, which can be damaging to the heart. Enticing them to play until they are exhausted and allowing them to interact very vigorously with other cats are examples of situations that put excessive strain on the heart that you can control and reduce.

DON'Ts

- If your cat has restrictive cardiomyopathy, don't ignore mild limping or stiffness that has just recently appeared—these may be the first symptoms of a blood clot in the leg(s), and you should contact your veterinarian if you see these symptoms.
- Likewise, if your cat has restrictive cardiomyopathy, do not assume that an increased breathing rate, “belly breathing,” or any other change in respirations is due to a “cold” or other harmless condition. If your cat has restrictive cardiomyopathy, these are often the first symptoms of respiratory compromise due to fluid accumulation in or around the lungs, and an exam by your veterinarian and possibly chest x-rays are warranted without delay.

WHEN TO CALL YOUR VETERINARIAN

- If your cat is having difficulty breathing or is not eating.
- If your cat cannot get up on its hind legs or seems to be in pain.

SIGNS TO WATCH FOR

Signs that may indicate relapse (warranting immediate recheck):

- Lack of appetite.
- Rapid or difficult breathing.
- Fainting spells.

- Weakness or paralysis of the rear legs (may be a sign of a thromboembolism—see [Additional Information below](#)).

ROUTINE FOLLOW-UP

- Periodic examinations will be needed to evaluate your cat's response to treatment. The frequency of these examinations will depend upon the severity of your cat's condition and his/her response to treatment.

ADDITIONAL INFORMATION

- A common complication of heart disease in cats is the presence of emboli (blood clots) in the arteries. If the blood clot lodges in the main artery leading to the rear of the body, the blood supply to the rear legs can be cut off. Signs are severe weakness or paralysis of the hind legs, and any symptoms involving the hind legs always warrant a recheck in cats with restrictive cardiomyopathy.

Other information that may be useful: "How-To" Client Education Sheet:

- How to Count Respirations and Monitor Respiratory Effort



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