



Degenerative Mitral Valve Disease in Dogs

What is Myxomatous or Degenerative Mitral Valve Disease?

Canine myxomatous or degenerative mitral valve disease (MMVD) primarily affects older, small to medium size dogs, although any dog can be affected. Degenerative changes thicken the valve, causing it to leak. When the disease and leakage progress, the heart enlarges. Predisposed breeds include Cavalier King Charles Spaniels and Dachshunds and other breeds - although the genetics are being investigated, the disease is very common in small breed dogs as they age. Though many dogs are affected in their later years, only about 25-50% of those with MMVD experience clinical signs of congestive heart failure (CHF, or fluid build-up within the lungs).

How is DMVD diagnosed?

A distinctive heart murmur is the most common sign of mitral valve disease. The murmur is caused by the valve leak. Chest X-rays or an echocardiogram (ultrasound of the heart) or both are used to assess the severity of the leak, and the extent of heart enlargement.

How is DMVD treated?

Treatment depends on the severity of the valve leak. Mild leakage with minimal or no heart enlargement is typically monitored at regular intervals without treatment. Dogs with heart enlargement benefit from medication to delay the onset of CHF. Dogs that experience CHF require additional medication, and some dogs need to be hospitalized for heart failure treatment. Because medications control only the clinical signs of CHF and do not treat the primary valve problem, we are working on surgical methods to repair the valve itself. At this time, surgical treatment is not widely available, but the possibility of valve repair can be discussed with your cardiologist.

How is DMVD monitored by my veterinarian and my cardiologist?

Although an echocardiogram is often initially performed during the diagnosis, regular echocardiograms may not be needed, and chest x-rays may provide a more cost effective means of monitoring disease progression. Dogs that have experienced CHF are followed more closely with blood pressure and bloodwork, typically every 3-6 months or after medication changes.

How can I tell how my dog is doing at home?

Dogs with minimal heart enlargement should be treated as normal dogs, requiring only usual (annual or semiannual) monitoring. The first signs of CHF often include shortness of breath, exercise intolerance, or cough – these signs should prompt a call and usually a vet visit. In dogs that have experienced an episode of CHF, monitoring the breathing rate during sleep or rest provides a sensitive indicator of how they're doing - normal is less than 36 breaths/min. There are smartphone apps that can help to obtain and track the breathing rate.

Is diet important?

While some salt restriction (e.g. avoidance of high salt treats) is ideal for most dogs with significant MMVD, and moderate salt restriction aids CHF treatment, it's important that your dog's appetite remains good, and his or her caloric and protein needs are met.

What is the prognosis with MMVD?

Many older dogs affected with MMVD will not have their lifespan limited by their heart disease. The rate of disease progression varies, but it most often takes years before clinical signs of CHF develop. After CHF develops, dogs are expected to continue to have an excellent quality of life with treatment, and most survive for an additional 12-18 months, although their survival time varies widely.