

What is mitral valve dysplasia?

Mitral valve dysplasia describes a malformation of the mitral valve which is located on the left side of the heart. This valve malformation tends to result in enlargement of the left side of the heart, signs of heart failure and also sometimes abnormal heart rhythms. The signs associated with this disease are usually managed daily medications rather than surgical intervention.

What causes this disease?

Mitral valve dysplasia is a genetic disease more common in certain breeds such as Bull terriers, spaniels and is also one of the more common congenital heart diseases in cats. This condition results in a malformation of the mitral valve and sometimes also the adjacent structures that anchor the valve. This condition is present from birth and the severity of the valve leakage may worsen as the heart enlarges.

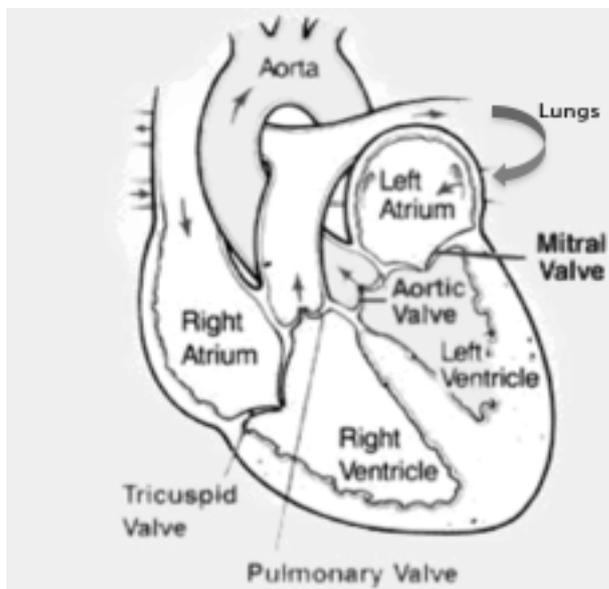
this age further investigation may be required especially in predisposed breeds with a loud heart murmur and also in individuals intended for breeding. Even in dogs with severe disease, signs of reduced heart output such as collapse and reduced ability to exercise are uncommon in the first year of life so the absence of signs should not preclude investigation.

How is the mitral valve dysplasia diagnosed?

Echocardiography (ultrasound of the heart) is a safe and painless test that can be performed without any anaesthetic or sedation. In our centre you can stay with your pet to reduce their anxiety whilst this test is performed. Ultrasound allows us to assess heart size, function and measure the speed of blood flow through the heart valves as changes in these parameters are the hallmarks of this disease.

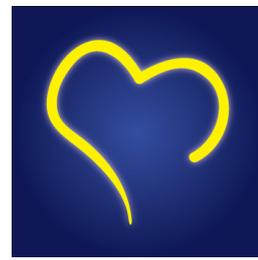
The speed of blood flow through the valve allows us to calculate whether the valve is also narrowed which tends to make the prognosis worse.

Other congenital defects may co-exist with mitral valve dysplasia and therefore a full and detailed heart examination is performed in every case.



What are the signs of this disease?

The most common sign of this condition is an audible heart murmur that is detected at puppy checks. Whilst non-pathological murmurs (also known as "innocent" or "puppy" murmurs) may also be present at



In some dogs abnormal heart rhythms are associated with this condition and this can have implications for treatment. As some abnormal heart rhythms are intermittent, we often place heart monitors (also known as Holter monitors or ambulatory ECGs) onto dogs that they wear at home for 24 hours whilst performing normal activities. At our centre, these recordings are analysed by veterinary cardiologists rather than technicians trained to analyse recordings from human patients.

The image shows a Boxer wearing a heart monitor which is placed underneath a protective vest:



Screening of breeding dogs

We advise pre-breeding screening in breeds such as Bull terriers where the disease is common. Pre-breeding screening involves both auscultation (listening with a stethoscope) and also echocardiography. Dogs with this condition should not be used for breeding.

Key points

- Mitral valve dysplasia is a heart defect that is present from birth,
- This condition causes signs of heart failure sometimes at a young age,
- Treatment usually involves daily medication rather than surgery.

How is mitral dysplasia treated?

Medical treatment can help to control the signs of heart failure. Diuretics such as furosemide (“Libeo”) and torasemide (“Upcard”) minimise fluid accumulation in the lungs. Pimobendan (“Vetmedin” or “Cardisure”) increase the efficiency of the heart muscle contraction. Cardalis contains two drugs (benazepril / spironolactone) and helps to slow heart enlargement and also ameliorates some of the detrimental effects of furosemide.

Surgical treatment such as valve repair or replacement is described but is not suitable for all cases.

Lifestyle management

Dogs with mitral valve dysplasia should be fed a proprietary diet and kept at the correct body weight. There is no evidence that a raw diet or supplements such as taurine or co-enzyme Q10 will help this condition.

Dogs should be allowed to exercise but, if possible, surges in activity should be avoided as this is when collapse may occur.

Whilst mild cases of this condition may be tolerated without ever showing any signs, dogs with severe disease will require regular monitoring by a specialist veterinary cardiologist.