

## Degenerative Mitral Valve Disease (MMVD)

Degenerative mitral valve disease is also termed myxomatous mitral valve disease (MMVD), or mitral endocardiosis. It is the most common heart disease seen in dogs.

This is an inherited, progressive degeneration that can affect any of the heart valves but is usually detected first on mitral valve, which is located on the left side of the heart between the left atrium and the left ventricle. MMVD is a slowly progressive condition in which the mitral valve thickens with the formation of small nodules on the valve leaflet edges. This prevents complete closing of the valves and as a result blood can flow backward into the left atrium when the ventricles contract. The resultant backflow is called mitral regurgitation. Over time, the atrium and ventricles compensate by enlarging. The leak progressively worsens over time, although the exact time course is very variable from patient to patient.

The increasing volume of the leak along with long-term compensatory mechanisms eventually leads to an increase in the pressure within the atrium. The increase in pressure is transmitted upstream to the lungs leading to fluid exuding from the capillaries in the lungs. This is termed congestive heart failure (CHF) and requires therapy.

It is estimated that MMVD affects about:

- 10% of dogs between the ages of 5 and 8 years
- 20–25% of dogs between the ages of 9 and 12 years
- 30–35% of dogs more than 13 years

This form of heart disease usually occurs in small to medium size dogs. The most susceptible breeds are Cavalier King Charles Spaniels, Poodles, Schnauzers, Chihuahuas, and Fox Terriers. Also, male dogs are more commonly affected than females.

MMVD is usually first detected when a heart murmur is heard during a routine veterinary check-ups using a stethoscope. To stage the level of disease Dr. Atkinson will need to complete a thorough clinical history and physical examination. The following test may also be recommend:

- Digital Thoracic Radiographs (Chest x-rays): to check for any fluid accumulation in the lungs
- Echocardiography (heart ultrasound): to show any thickening of the heart valve edges or enlargement of the chambers of the heart and to check for a condition termed pulmonary hypertension
- Blood tests to evaluate the renal/kidney parameters, heartworm status, electrolytes and biomarker that measures cardiac stretch

There is no cure for degenerative mitral valve disease but treatments are available to help pets live a longer life and feel better.

