- Middle aged to older dogs, < 20kg, CKCS
- Slowly progressive, non-inflammatory affecting AV valves
- Valve leaflets thickened, bulging, irregular with smooth opaque nodules
  - Nodules = Fibroblast proliferation + Mucopolysaccharide deposition
- Distortion of leaflets → Valvular insufficiency → Regurgitation (systolic murmur) → Volume overload → Atrial dilation + Ventricular Eccentric hypertrophy → CHF?
- Stretch Chordae Tendineae → Valvular prolapse into atria
  - Rupture = Flail leaflet → Acute Heart Failure (complete valve incompetence)
- High pressure jets of blood through distorted valve leaflets → traumatising atrial endocardium → Fibrosis (Jet Lesions)
  - Atrial tear/rupture → Acute Haemopericardium → Sudden death

Endocarditis = Inflammation
- Valvular Endocarditis = Inflammation of one/more heart valves.
- Farm animals
- Left (LAV, Aortic) most common, except in Farm Animals (Right AV most common)
- May be multiple valves simultaneously
- Bacterial agents - haematogenous
- Pathogenesis
  - Bacteraemia + Endothelial disruption → Bacterial invasion of endocardium
  - Inflammation + Thrombus on endocardial surface
    - Layers of fibrin, blood and bacterial colonies = vegetations
  - Base layers organise → fibrous granulation tissue w/ inflammatory cells
    - Thrombotic Vegetations firm/frangible, rough, raised, red/brown/yellow/grey
- Pathological Consequences
  - Valvular insufficiency +/- stenosis → CHF?
  - Septic embolism, bacteraemia, pyrexia
  - Left Valve Emboli → Systemic to any body site
  - Right Valve Emboli → Seed to the lungs

**Explain the terms ‘heart failure’, ‘acute heart failure’ and ‘congestive heart failure’**.

**Heart Failure**
- Failure to eject sufficient blood to meet tissue perfusion and metabolic requirements.
- Inadequate blood drainage from pulmonary and systemic venous and capillary beds.

**Acute Heart Failure (Cardiac Syncope)**
- Profound bp and HR changes → inadequate CO