

VALVULAR HEART DISEASE

- **Valvular heart disease is characterized by:**

1. Stenosis → Due to a chronic process (e.g. calcification or scarring)
2. Regurgitation → due to abnormality in valve cusps or supporting structures (can be acute or chronic).

- **Clinical Signs of Valve Disease:**

1. Abnormal heart sounds (murmurs)
2. Palpated heart sounds (thrills)
3. Specific clinical signs according to the involved valve

- **Valvular abnormalities can be:**

1. Congenital → Bicuspid aortic valve (the most common).
2. Acquired → Post-inflammatory scarring due to rheumatic fever (the most important cause).
 - Mitral valve is the most common target.

Bicuspid Aortic Valve

- **Characteristics of Bicuspid Aortic Valve:**

1. only 2 functional cusps instead of 3
2. In early life → Asymptomatic
3. Later → progressive degenerative calcification of aortic valve & Stenosis.

Rheumatic fever (Rheumatic Valve Disease)

- **Characteristics of Bicuspid Aortic Valve:**

1. An immune-mediated inflammatory disease that follows infection by group A streptococci
2. Pathogenesis? hypersensitivity reaction due to antibodies against group A streptococcal antigens, these antibodies are cross-reactive with host antigens.
3. Major organs involved? heart, joints, skin, and brain
4. Manifestations seen a few weeks after pharyngitis or skin infection.

▪ **2 Phases:**

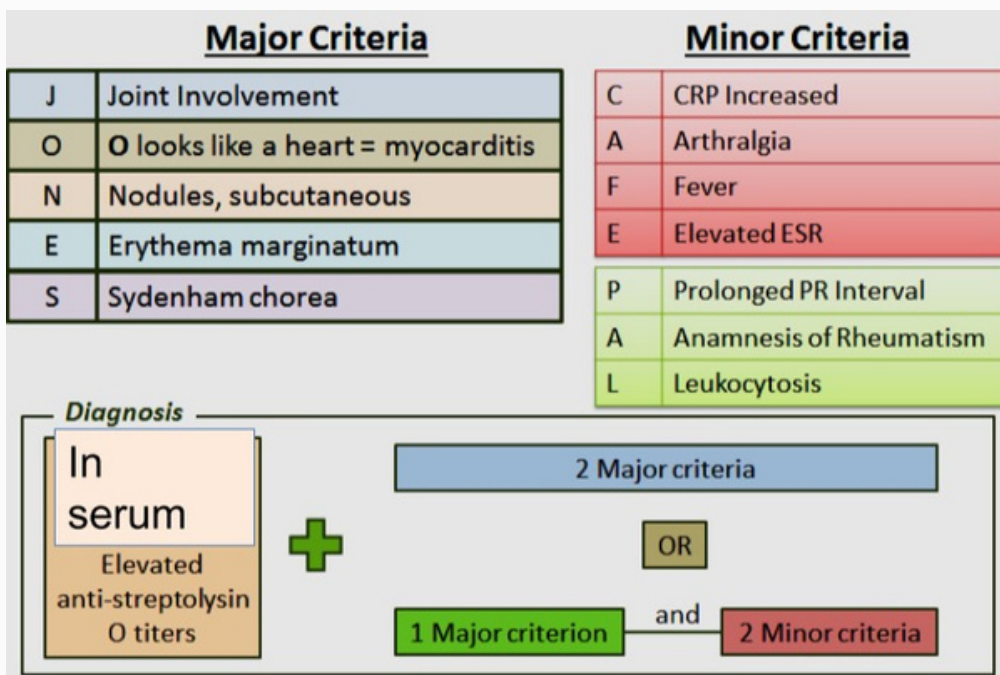
Acute phase	Chronic phase
80% children	years/ decades after initial acute episode
JONES criteria	murmurs - CHF - arrhythmias - mural thrombi
↑ serum titers streptococcal antigens (streptolysin O; DNA-ase)	
Morphology: * Valve vegetations * Aschoff bodies? - Pathognomonic (diagnostic) for RF - Collections of T lymphocytes+ plasma cells+ activated macrophages	- Chronic inflammation → scarring → stenosis - Valve stenosis is the most imp. functional consequence - Aschoff bodies rarely seen now

▪ **In the chronic RF:**

mitral valve → aortic valve → tricuspid valve → pulmonary valve (rare)

From the most common to the least common →

▪ **Diagnosis of acute Acute RF:**



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