

Acute Rheumatic Fever

- It is the disease that affects the heart, Joints, Brain & skin.
- It usually affects the children 5 to 15 years.
- After the infection of STREPT THROAT Post streptococcal β -Hemolytic Group A $\rightarrow$ Belongs to Group A β hemolysis $\rightarrow$ Streptolysin $\rightarrow$ β hemolysis Streptococcus $\rightarrow$

Pathophysiology

Delayed immune response.

$\downarrow$
Antibodies against streptococci infects body's own cells.

(Molecular mimicry theory).

$\downarrow$
Cells react with Cardiac myosin and sarcolemmal membrane.

$\downarrow$
Inflammation of endocardium, myocardium, pericardium, joints, skin.

- Aschoff Nodules are pathognomonic.

- They are multinucleated giant cells.

surrounded by lymphocytes, macrophages.

- Fibrinoid degeneration is seen with

immune cells and enlarged macrophage showing like caterpillar nuclei (Antithrocytes).

- They are not seen until the chronic or subacute phases.

- It is in inflammation of myocardium.

Clinical features

- Multisystem disorder causing fever, anorexia, lethargy and joint pain after 2-3 weeks of streptococcal pharyngitis

Jones Criteria

Major - J - Polyarthritides

O - Pancarditis

N - Nodular Subcutaneous

E - Erythema marginatum, Prolonged PR Interval

S - Sydenham's Chorea, First degree AV block

Minor:

C - TCRP

A - Arthralgia

F - Fever

E - ↑ ESR

B - ~~Pharyngitis~~ Block

A - Anamnesis of Rheumatism

L - Leucocytosis

Diagnosis

- 2 major or more
- 1 major or 2 minor, evidence of streptococcal infection
- Excluded causes of Pancarditis if all the other symptoms causes are ruled out

Polyarthritides

- Migratory multiple Joint inflammation of large
- Red, swollen and sensitive
- They are not permanent

Pancarditis:

Endocarditis → Mitral Valve regurgitation

→ Soft mid diastolic murmur

Coarse Corb murmur

→ Aortic Regurgitation

→ Tricuspid & Pulmonary are rarely involved

Myocarditis → Aschoff nodules.

- Common cause of death, can't contract.

Pericarditis → Pericarditis, chest pain.

~~Pericarditis~~ Friction rub, Breathlessness.

Subcutaneous nodules Erythema Marginatum

- Usually in trunk & extremities, not in face.

- Starts as red macules that fade at the centre, and remain red round the edges.

Subcutaneous nodules

Peinlers, small, firm, present at the extension surface of the bones and tendons.

- Usually present after 2-3 weeks after the onset, no only confirmation.

Sydenham Chorea or St. Vitus dance.

- Involuntary, purposeless & choreiform movements of the face, arms, due to

autoimmune reaction of Basal ganglia.

- Comes only after 3 months after the episode and after all the symptoms have disappeared.

Investigation

↑ ASO Titre (Anti Streptolysin O) Titre.

- ↑ CRP, ↑ ESR, ↑ leucocytes.

- Echocardiography → Pericarditis, valve affection.

- ECG.

Complication → Chronic Rheumatic Heart Disease

- About 50% of people, Repeated infection → Fibrosis

and fusion of valves → stenosis → Fifth mouth stenosis

Buttonhole stenosis.

→ Regurgitation

→ Infective Endocarditis