

## NURS 821

### Vascular and Cardiac Disorders

#### Inflammatory Heart Disorders

##### Lecture 6, Part 5

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### Rheumatic Endocarditis

- Etiology-3% develop Rheumatic fever secondary to Streptococcal sore throat
- Type III Hypersensitivity Response
- Manifestations
  - Carditis
  - Polyarthritis
  - Chorea
  - Erythema marginatum
  - Subcutaneous nodules

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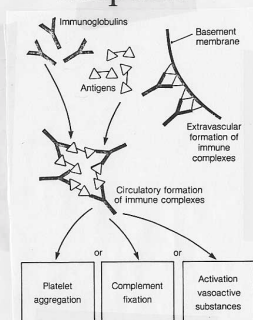
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### Type III Hypersensitivity Response



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## Scarlet Fever

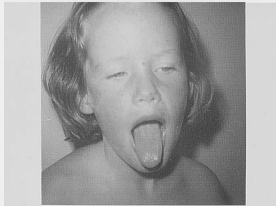


FIG 5-7.  
Bright red erythema and strawberry tongue in scarlet fever.

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## Erythema Marginatum in Rheumatic Fever



FIG 13-10.  
Erythema marginatum. Ring-like erythema on face of infant with acute rheumatic fever.

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## RHD

- Stages:
  - Acute
    - Initial infection affects connective tissue of heart, vessels, joints, subcutaneous tissues
  - Recurrent
    - Extension of cardiac manifestations
  - Chronic
    - Permanent deformity of valves, usually mitral
    - Happens 10+ years post-infection

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## Endocarditis

- Definition: Inflammation of heart's endothelial surface
- Classification
  - Acute-highly virulent like Staph; fulminant with valve destruction
  - Subacute (SBE)-less virulent, more insidious
    - Pre-existing valve abnormalities
    - Manifested by F, arthralgia, myalgia, skin manifestations

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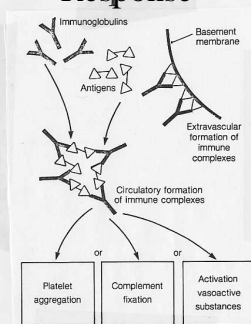
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## Type III Hypersensitivity Response



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## At Risk for IE

- Bacteremia
- Immunocompromised
- Complement deficient or organism complement resistant
- Damaged hearts
- IVDA
- Cardiac trauma

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### IE Manifestations

- Skin-Petechiae and splinter hemorrhages
  - Due to microembolization of vegetations
- Osler's nodes on finger pads due to infected emboli
- New onset murmur-acute mitral regurgitation

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### IE Complications

- Right heart
  - Pulmonary embolism or infarct
- Left heart
  - Infarction of:
    - Spleen
    - Kidney
    - Brain
    - Extremity

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