04.08.09

ENDOCARDITIS

ITAI GUETA

ENDOCARDITIS

Definition

Inflamation of the endocardium

- Infective endocarditis
- Marantic (NBTE) endocarditis
- Libman-Sacks endocarditis

ENDOCARDITIS- ETIOLOGY

Root of Entry – Oral/URT : S.viridans, HACEK

GI : S. bovis

Urogenital: Enterococci

Iatrogenic : S. aureus (6-25%)

prostethic valve – CoNS, S.aureus, Facultative g- bacilli, Fungi

Drug users : S.aureus* (R), P.aeruginoa (L)

PATHOPHYSIOLOGY

High velocity blood jets, Structual abnormalities

↓

Hematogenous spread

Plts-Fibrin thrombus formation (NBTE*)

Direct Infection

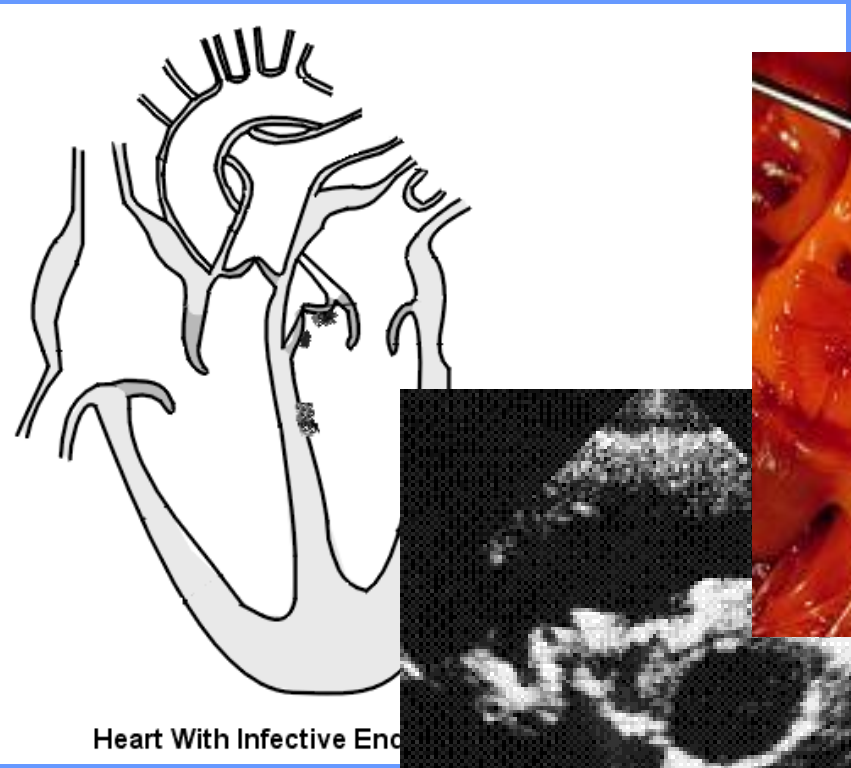
↓

Adhesion to injured surface (MSCRAMMs)

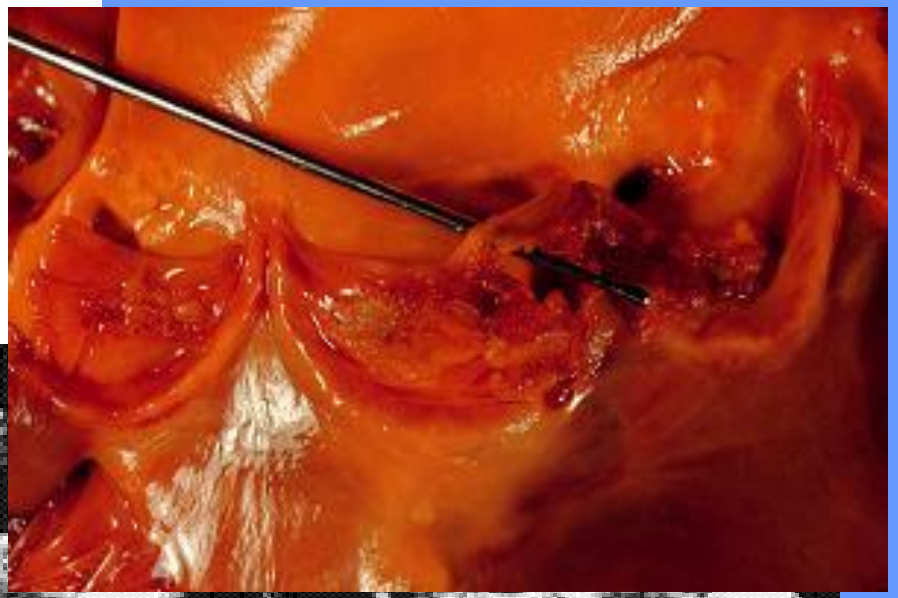
↓

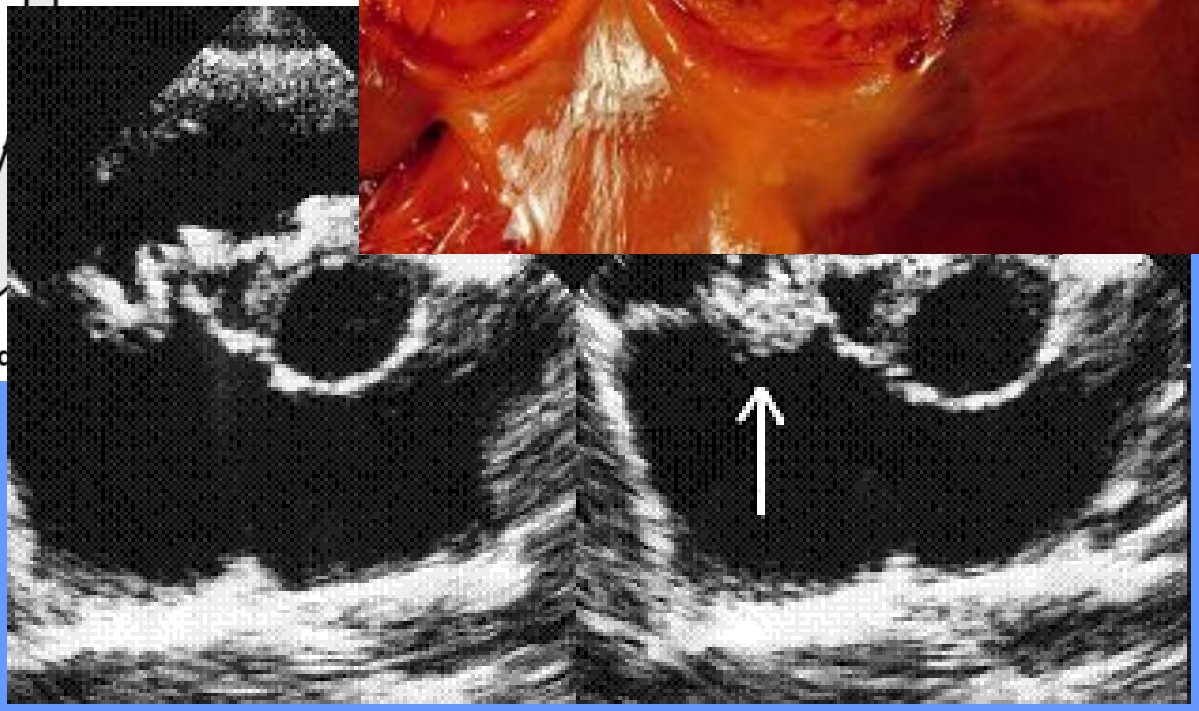
Vegetation formation

PATHOPHYSIOLOGY



Heart With Infective Enc



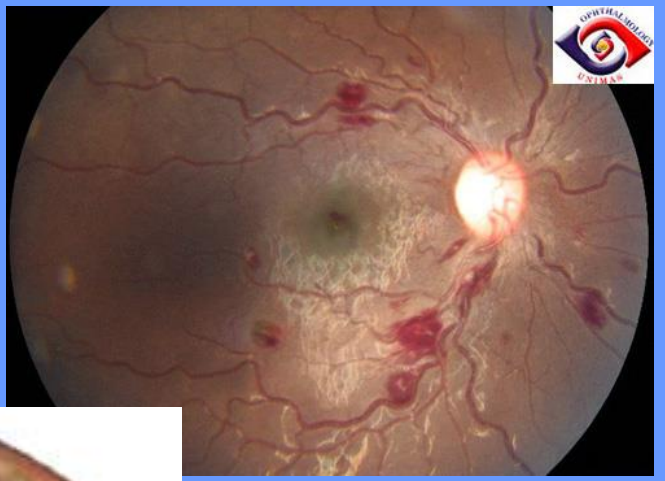


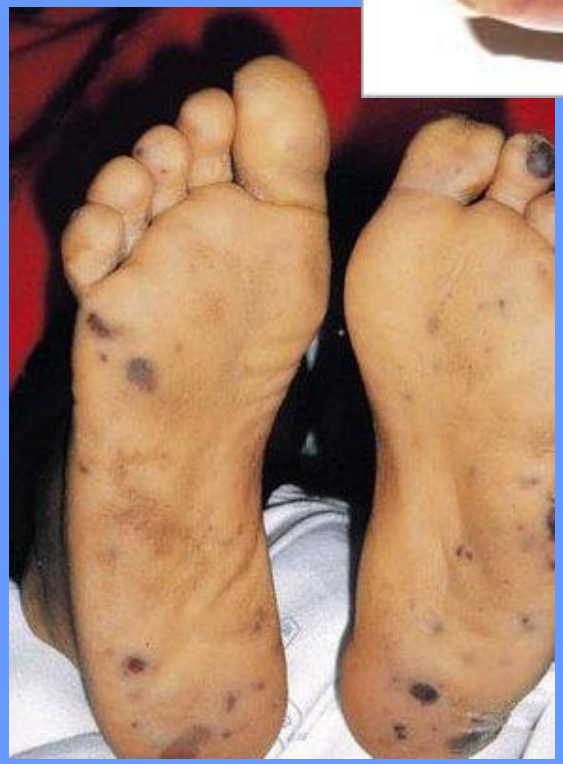
CLINICAL MANIFESTATIONS*

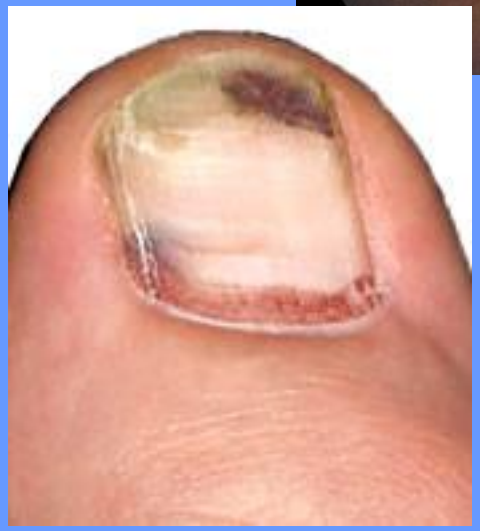
1. Fever subacute < **39.4** < acute (80-90%)
2. Heart murmur (80-85%)
3. Chills/sweat (40-75%)
4. Anorexia, malaise, weight loss (25-50%)
5. Back pain, arterial emboli, splenomegaly, clubbing, petechiae

Peripheral manifestations: Osler's nodes, Roth's spots,
Janeway lesions, Subungal Hmrg.

CLINICAL MANIFESTATIONS







CLINICAL MANIFESTATIONS cardiac and lab aspects

1. Congestive heart failure (30-40%)
2. New murmur ↓↑ (.. 85%)
3. Heart block – paravalvular tissue
4. Coronary emboli – MI

1. Anemia* (70-90%)
2. Circulating immune complexes (65-100%)
3. ↑ ESR (>90%)
4. ↑ CRP (>90%)

CLINICAL MANIFESTATIONS

RISK OF EMBOLISM

Mitral Valve		25%
Involvment of AMVL		40%
AMVL+ Vag >10 mm	60%	
AMVL+ Vag >10 mm + mobile		60-80%

DIAGNOSIS
the DUKE criteria

MAJOR: 1. ***Positive blood culture***

Tyipical microorganism from 2 seperated blood cultures

Persistently (+) culture defined as recovery of organism

Single (+) blood culture for Coxiella or phase IgG Ab titer of > 1:800

2. ***Evidence of Endocardial involvment***

Positive echocardiogram (vegatation, abcess, mass)

New partial dehiscence of prosthetic valve

New valvular regurgitation

DIAGNOSIS
the DUKE criteria

MINOR: 1. Predisposing heart condition or injection drug use

2. Fever > 38.0

3. Vascular phenomenon (Emboli, Janeway, etc)

4. Immunological phenomena (GN, Osler's, Roth's, etc)

5. Microbiological evidence

THERAPY*

ORGANISM SPECIFIC THERAPY

Streptococci – Penicillin G, Ceftriaxone, Vancomycin

Entercocci - Penicillin G, Ampicillin, Vancomycin

Staphylococci- Nafcillin/Oxacillin,
Cefazolin+Gentamycin, Vancomycin

MRSA – Vancomycin+Gentamycin+Rifampin

HACEK - Ceftriaxone

EMPIRICAL TREATMENT (etiology !)

Vancomycin+Gentamycin (IV drug users)

Ceftriaxone+Gentamycin (neg. subacute native valve)

SURGICAL INVOLVMENT

Definitie Indications

1. **Development of heart failure/ Heart block**
2. **Uncontrolled sepsis**
3. **Major peripheral emboli**
4. **Fungal endocarditis**

Relative Indications

1. **Major or Mobile Vagetation**
2. **Pathogens (e.g Coxiella, Brucella, Legionella)**
3. **Perianular distension**
4. **Intracranial/ Splenic Abcess**

OTHER FORMS

Libman- Sacks Endocarditis

Mitral valve, Fibrin-Neutrophils-Lymphocytes-Histiocytes

Loeffler Endocarditis

Restrictive cardiomyopathy with eosinophilia