

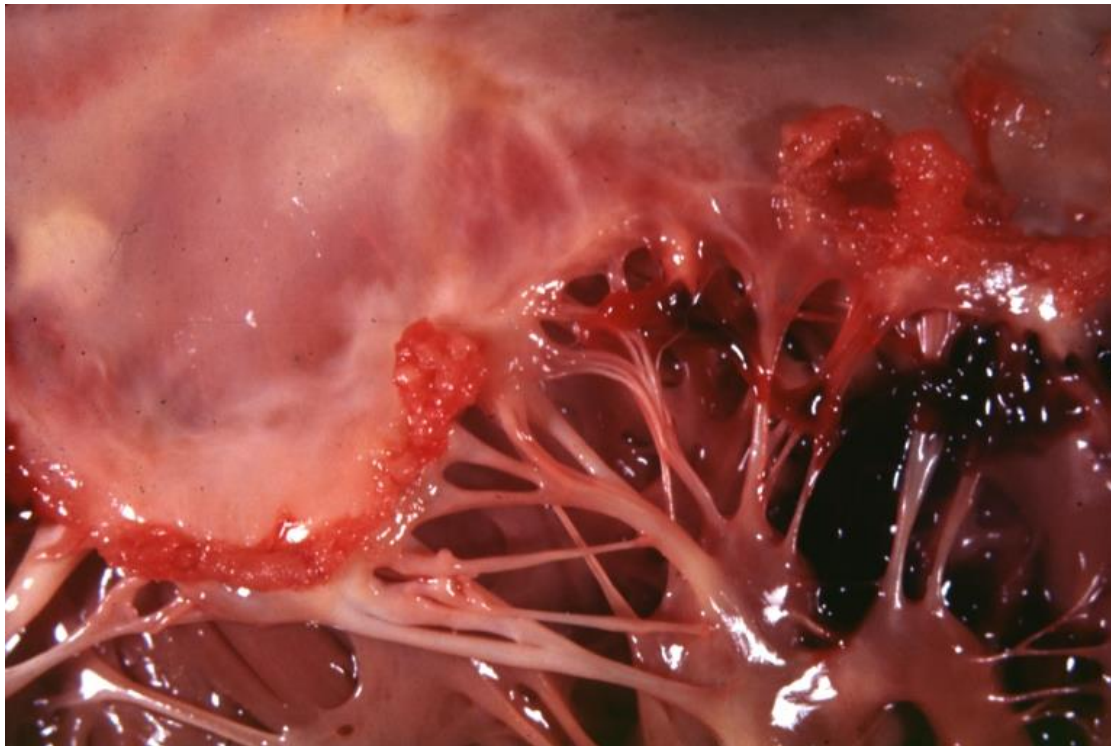
# CVS LAB

SURA AL RAWABDEH MD

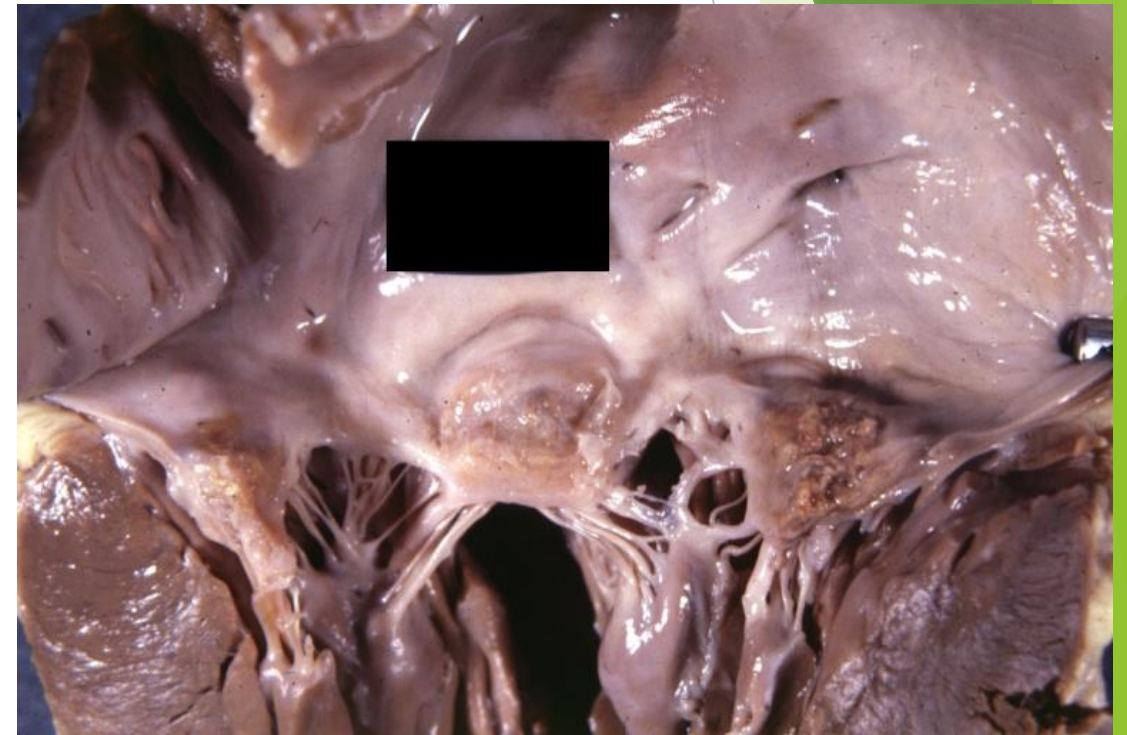
20-11-2024

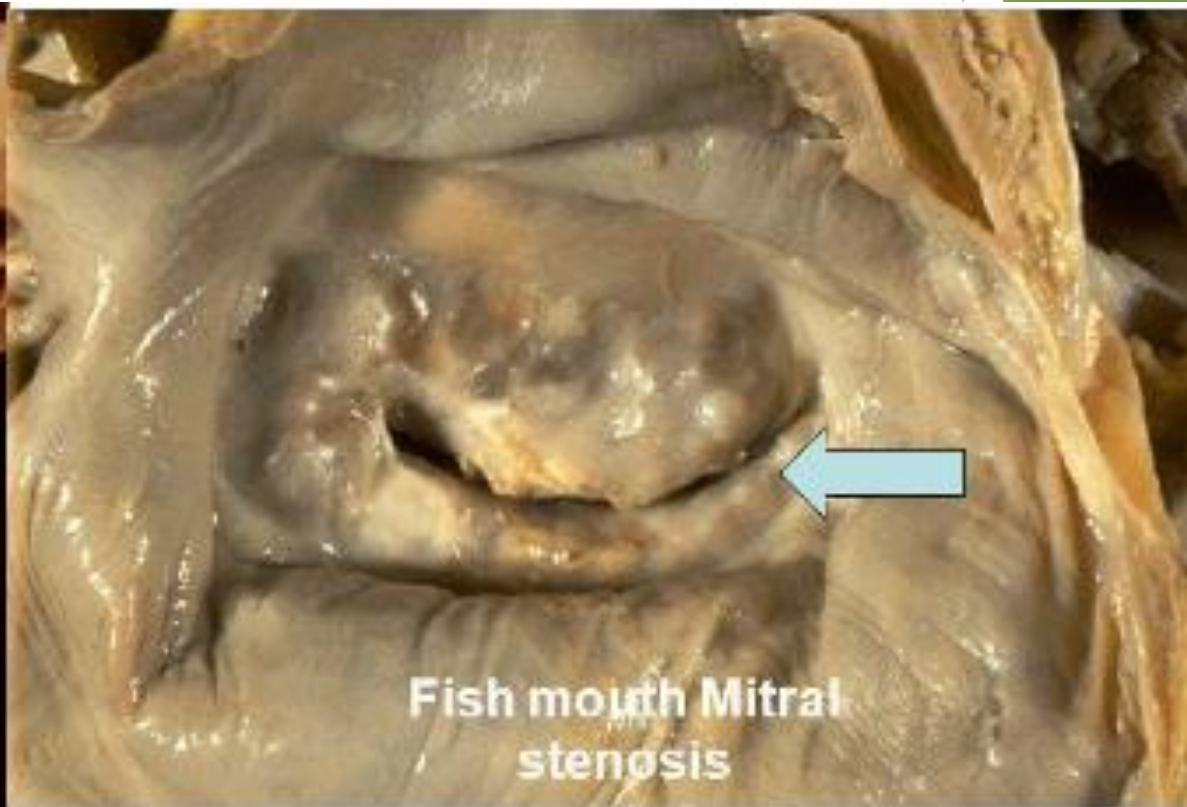
# Grossing

MITRAL VALVULITIS



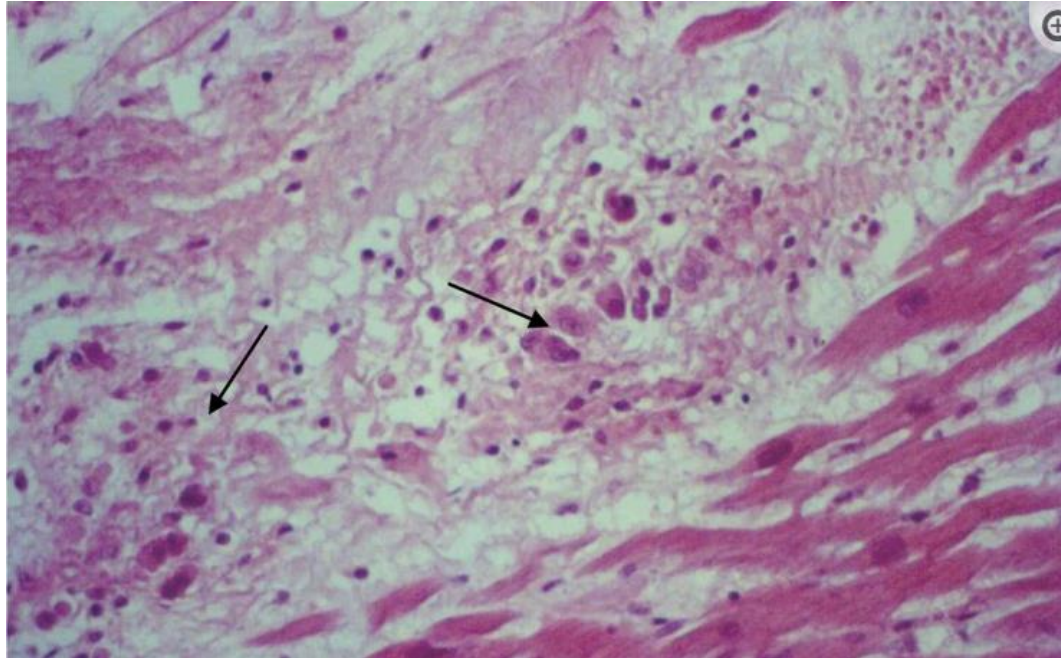
MITRAL SCARRING



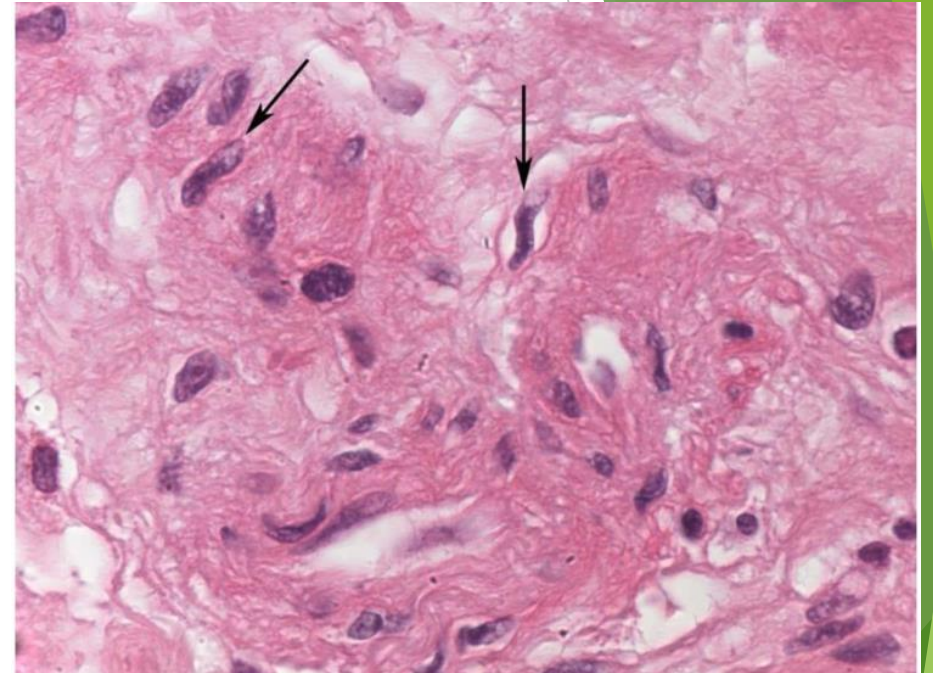


The pericardium may exhibit a fibrinous exudate, which generally resolves without sequelae.

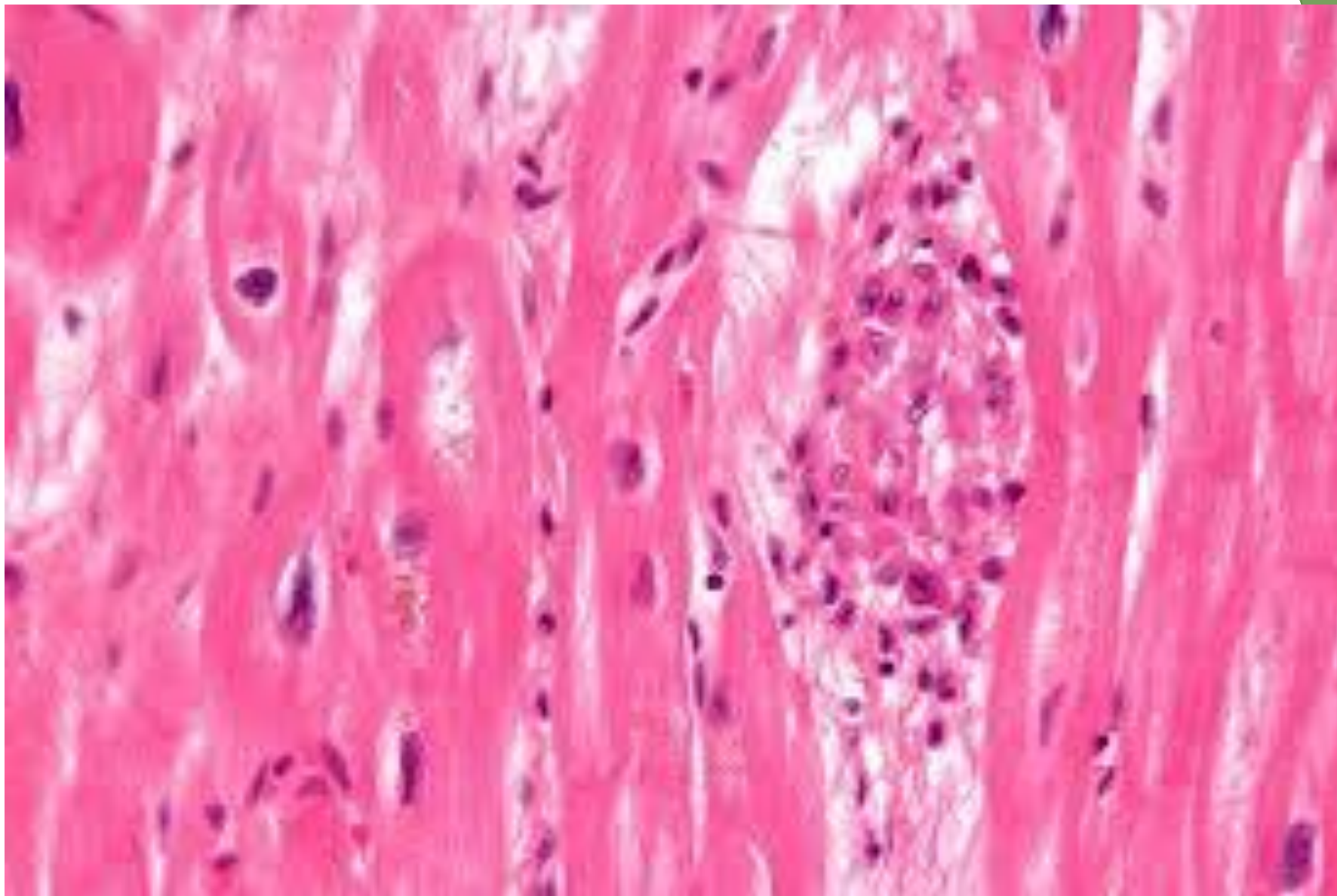




**Aschoff nodules**



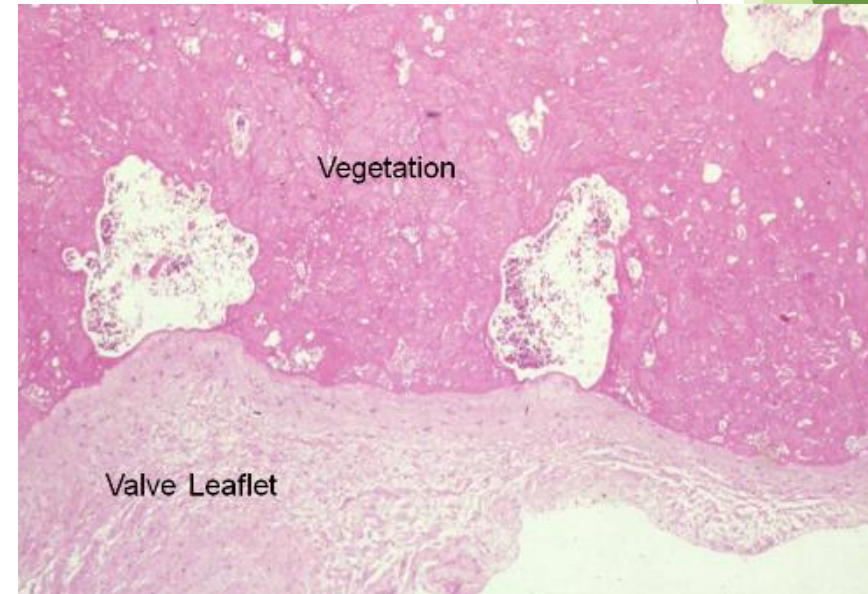
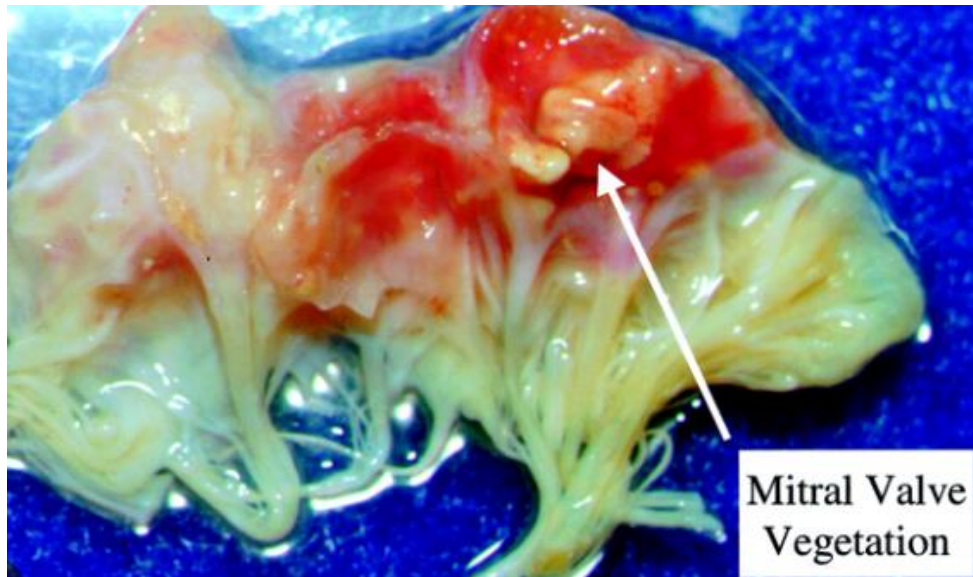
**Anitschkow cells.**



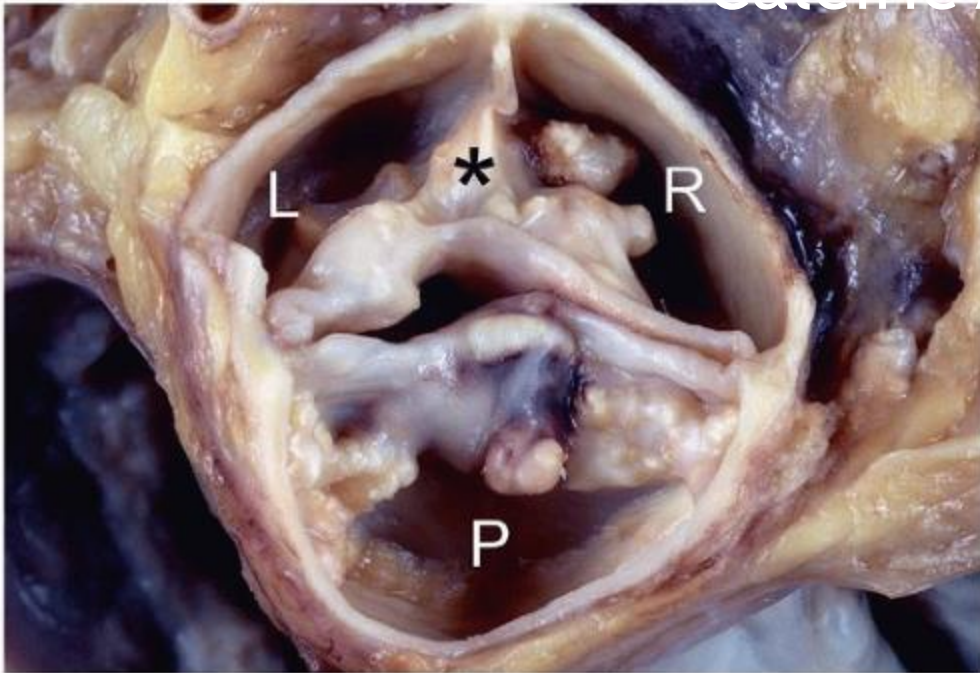
**Aschoff nodules**

## Histology cont.:

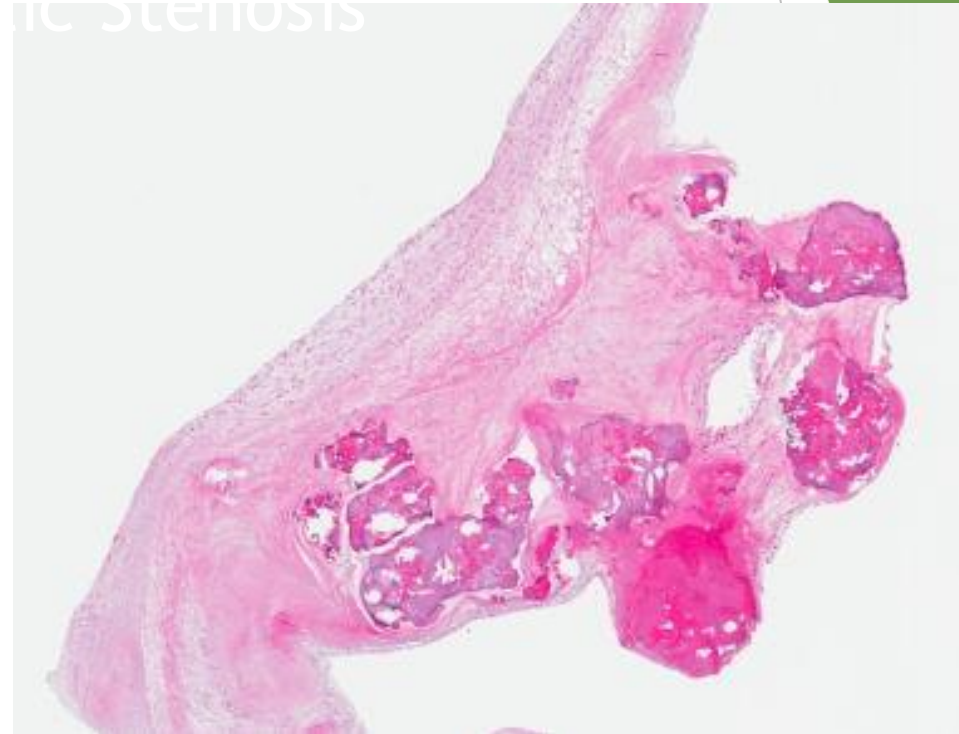
- Valve involvement results in fibrinoid necrosis and fibrin deposition along the lines of closure forming 1- to 2-mm vegetations—verrucae—that cause little disturbance in cardiac function.



## Calcific Aortic Stenosis



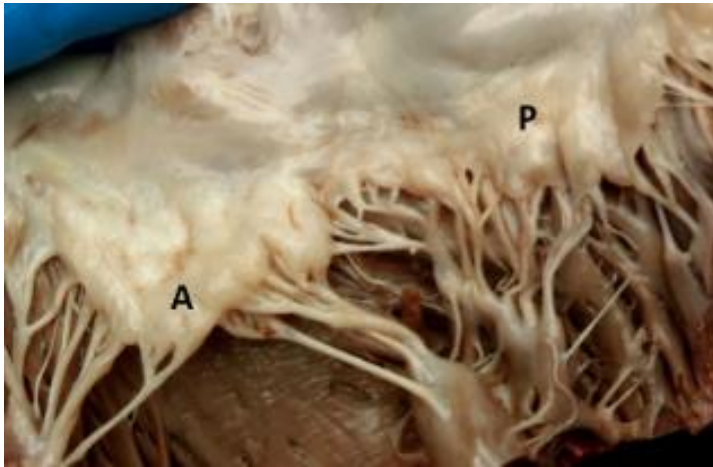
Nodular calcifications fill the cusp pockets



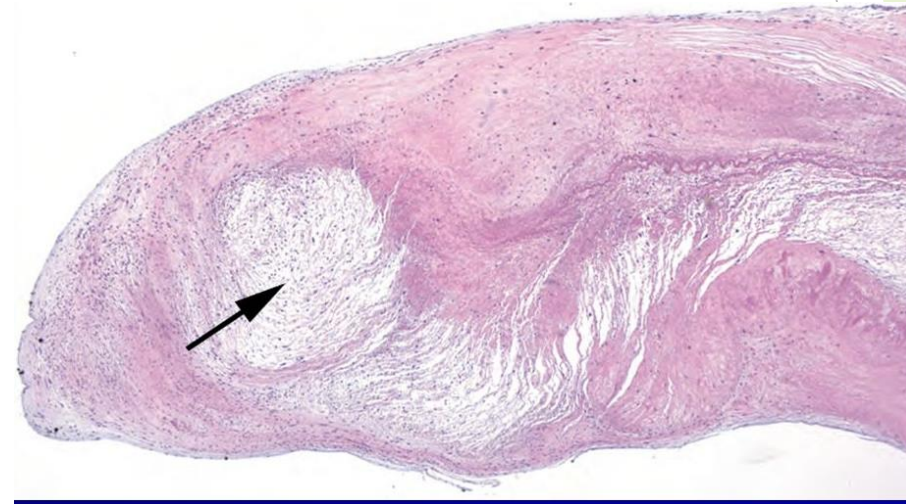
Large nodular calcific deposits in the wall



# Myxomatous Mitral Valve



Voluminous and thickened leaflets

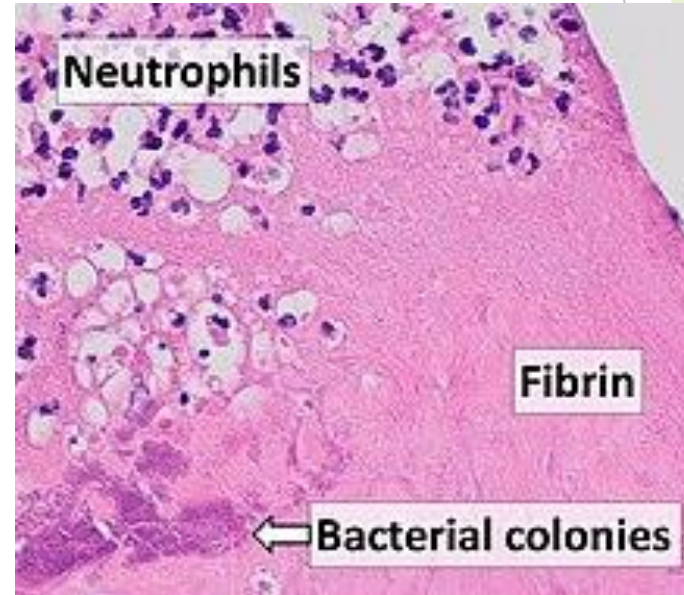


Thickening and proliferation of the spongiosa with pooling of glycosaminoglycan that expands to the fibrosa.

# Morphology



Large vegetation on atrial aspect of valve



- Fresh vegetations contain platelets and fibrin with a rich infiltrate of neutrophils

\* In chronic lesions, vegetations may show varying degrees of organization, vascularization and calcification

## Clinical features. cont.



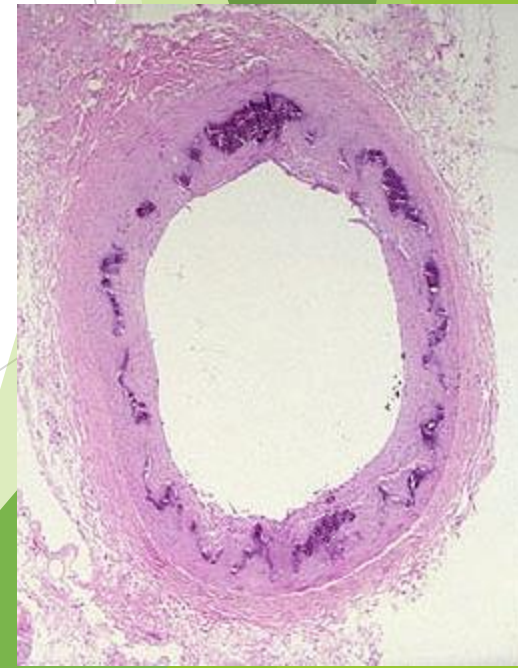
**Osler nodes:** tender lesions found on finger pulps and thenar / hypothenar eminences



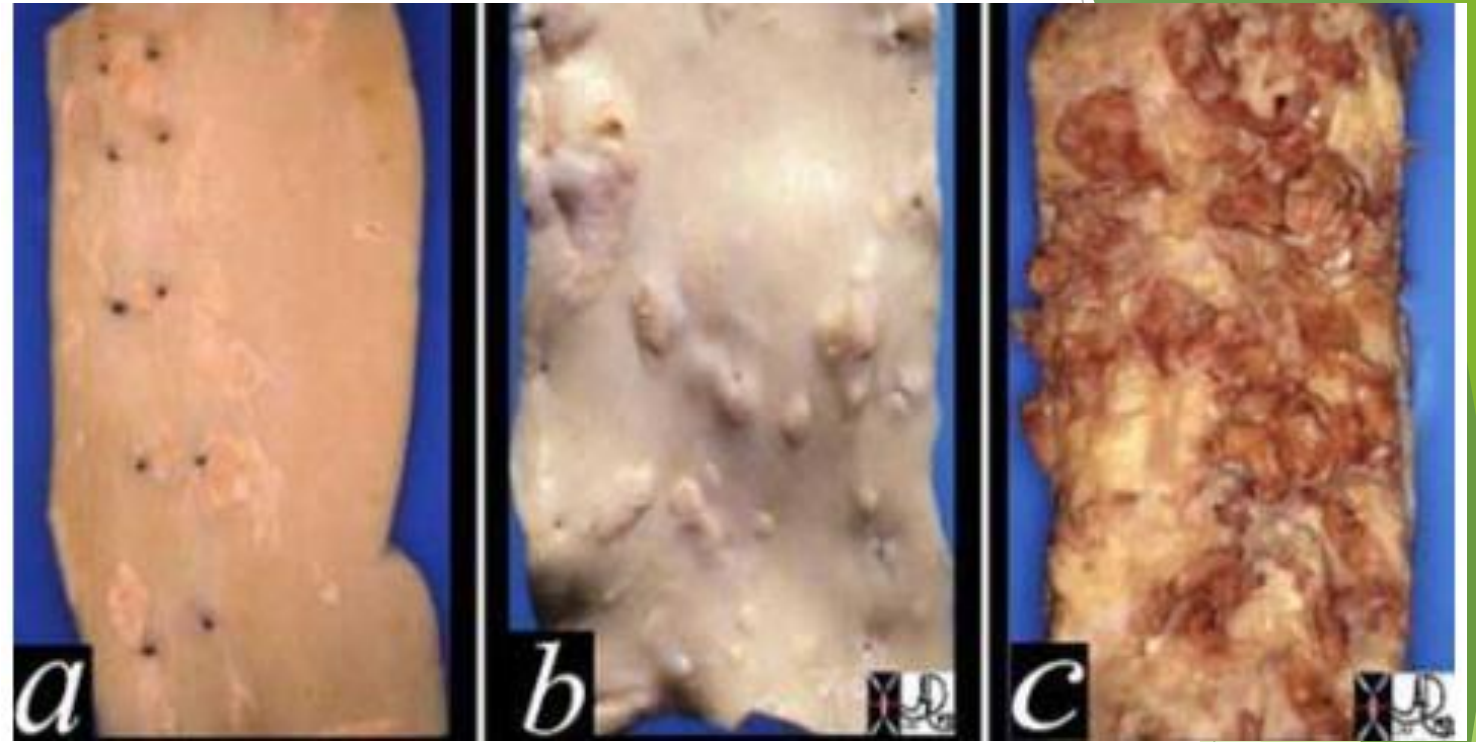
**Eyes: Roth spots** (boat shaped hemorrhages with pale centers, in retina) .

## 2. Mönckeberg's medial calcific sclerosis.

- Its characterized by the presence of calcific deposits in muscular arteries, usually centered on the internal elastic lamina, and typically in individuals older than 50 years of age.
- ▶ The lesions do not encroach on the vessel lumen and usually are not clinically significant.



# Grossing

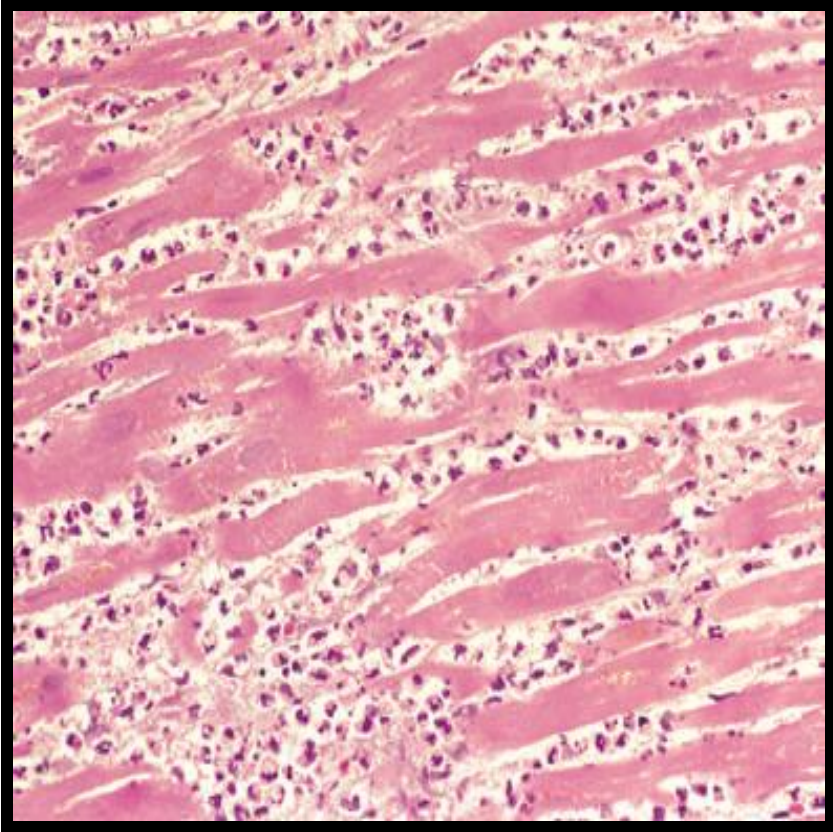


**A. Raised fatty streaks.**

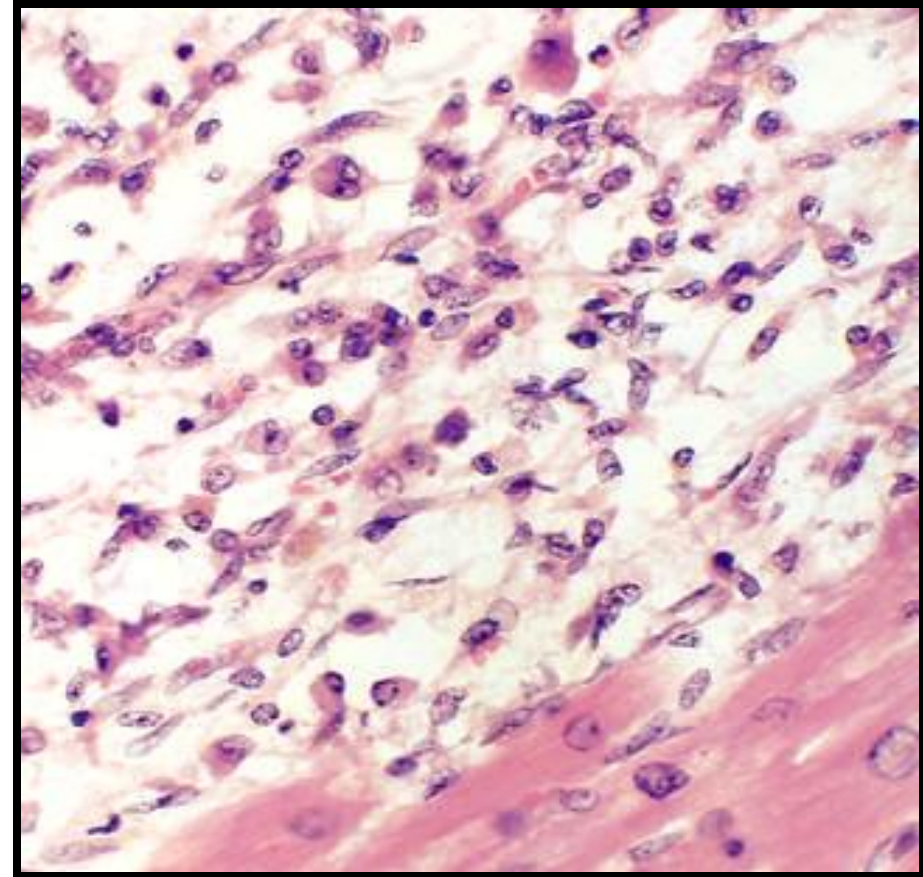
**B. Raised fibrofatty nodules**

**C. Rupture plaque**

# Histopathological features

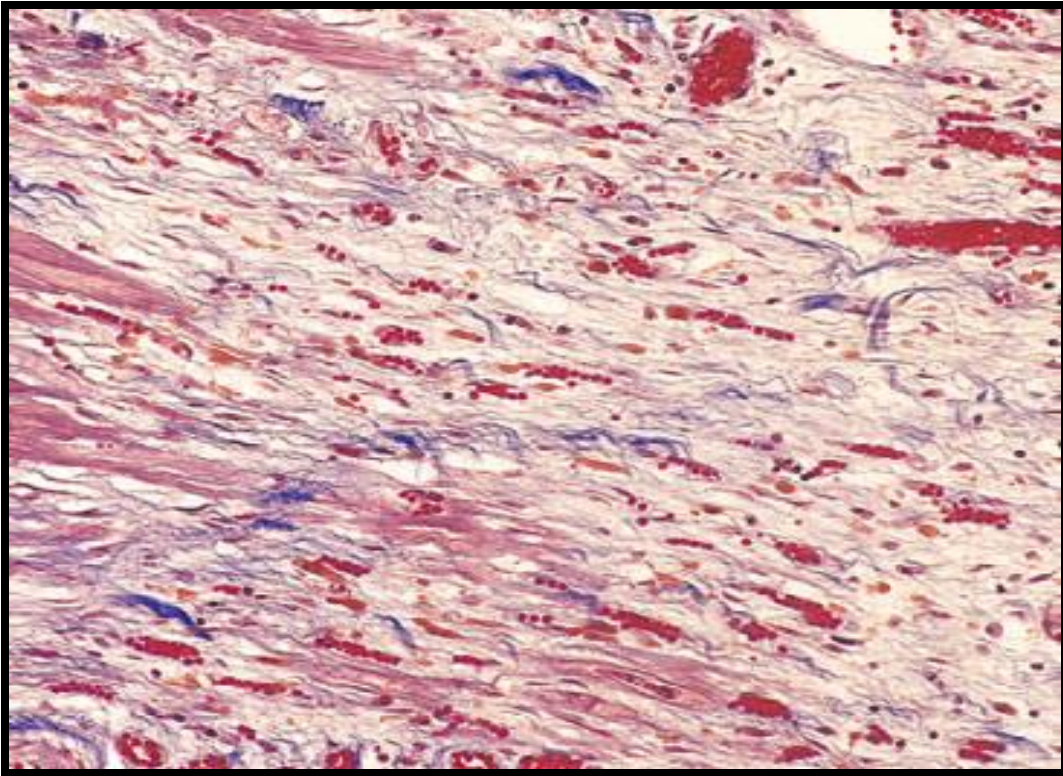


Coagulation necrosis with loss of nuclei and striations; interstitial infiltrate of neutrophils

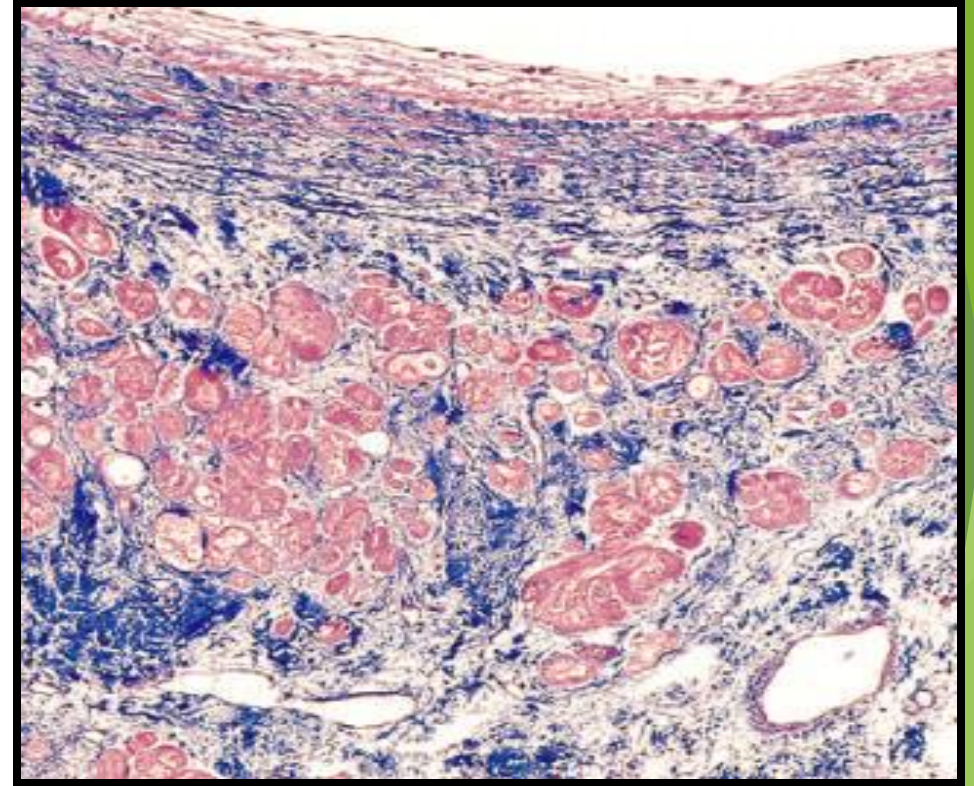


Complete removal of necrotic myocytes by phagocytic macrophages

## Histopathological features cont.



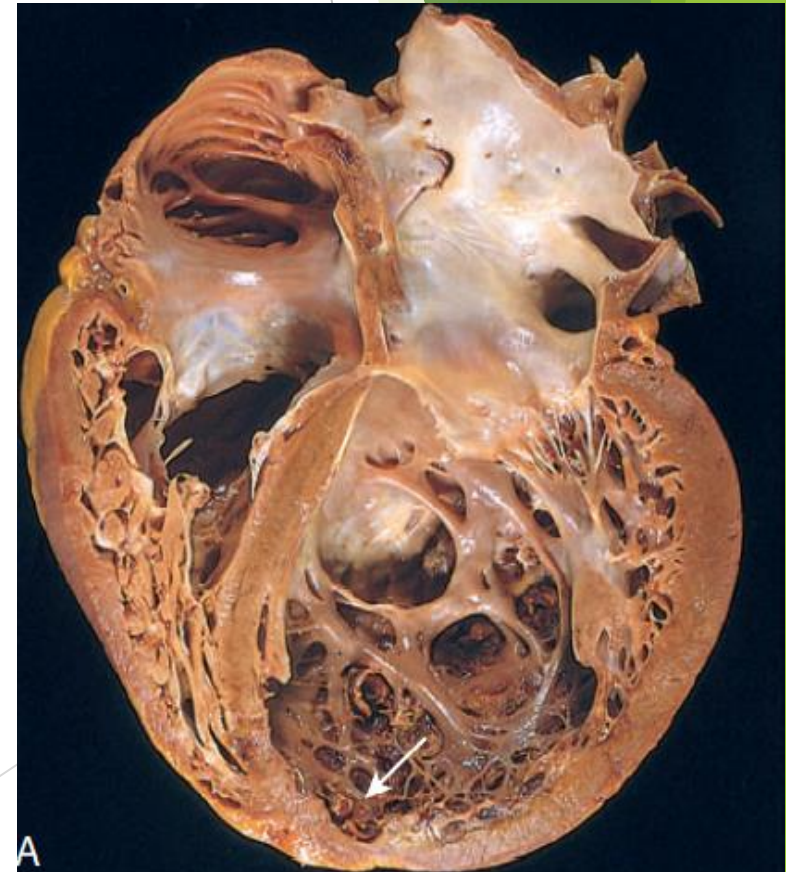
well established granulation tissue  
with new blood vessels & collagen  
deposition.



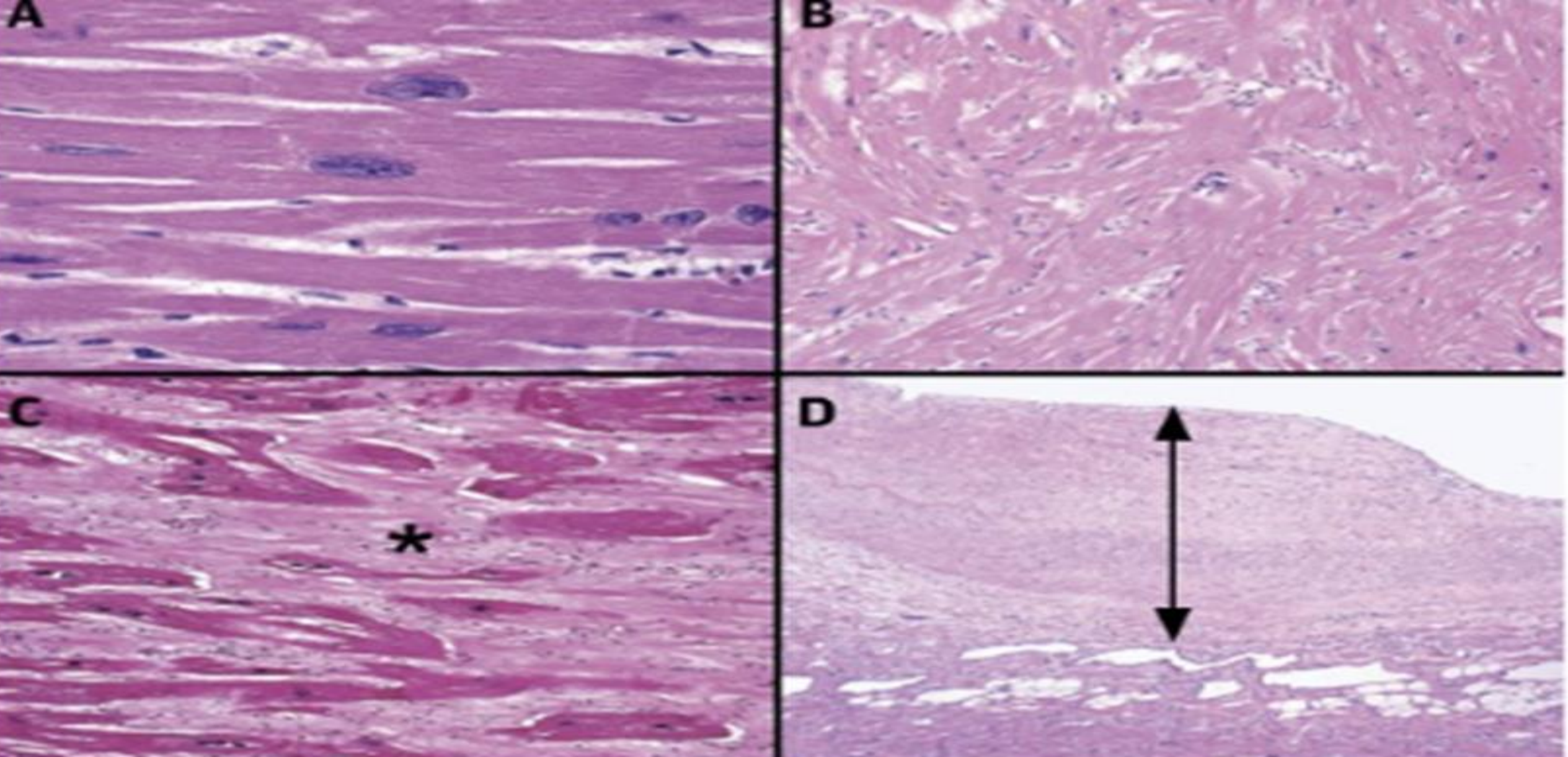
Dense collagenous scar

# Gross Morphology

- ▶ The heart assumes a globular shape.
- ▶ Ventricular chamber dilatation.
- ▶ Atrial enlargement.
- ▶ Mural thrombi are often present and may be a source of thromboemboli.



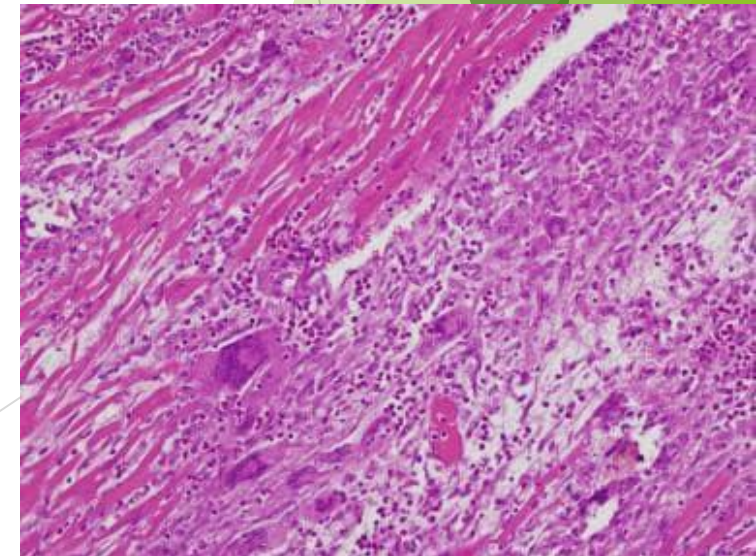
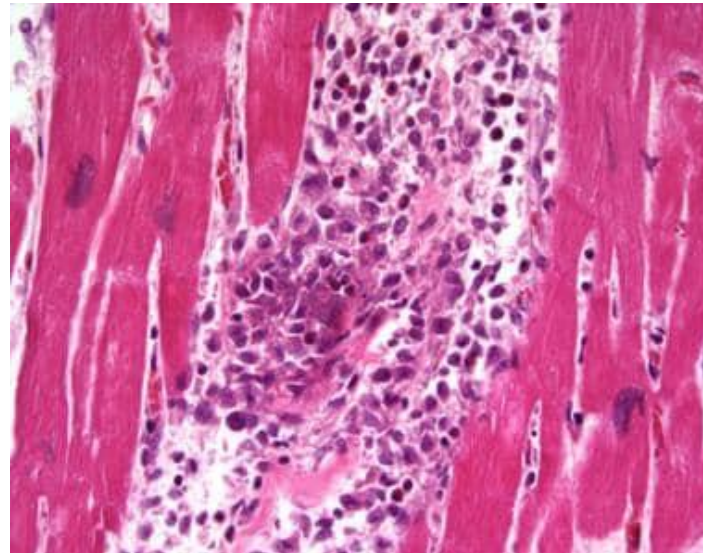
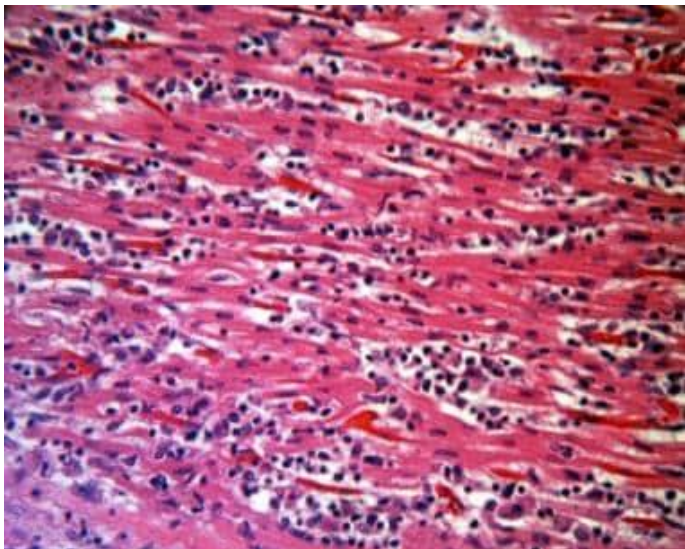




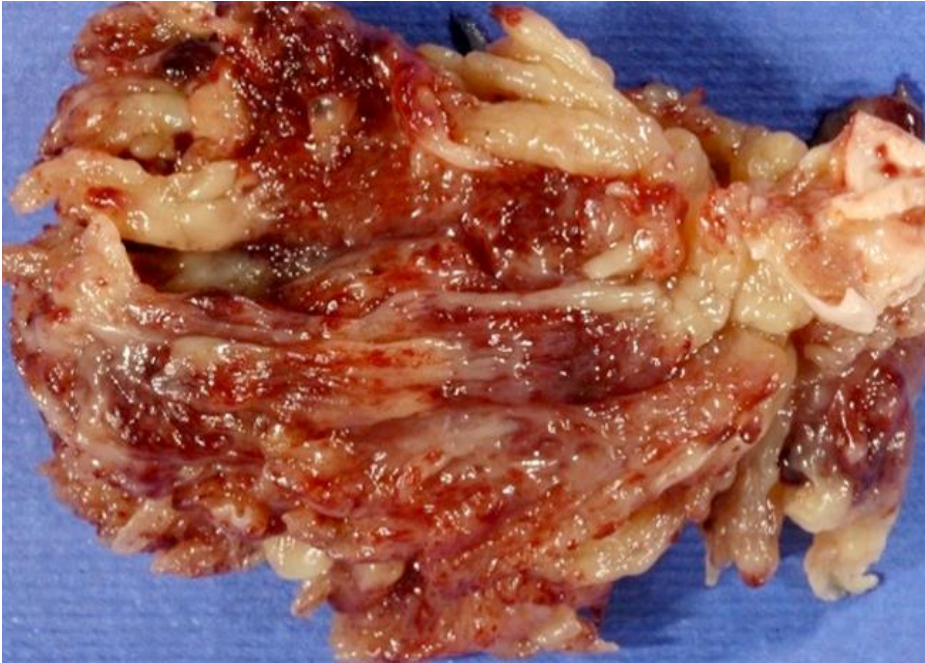
A) Myocyte hypertrophy.  
B) myocyte disarray.  
C) interstitial (pericellular-type) fibrosis (asterisk).  
D) endocardial fibrosis (double-headed arrow)

# Histological features myocarditis is characterized by:

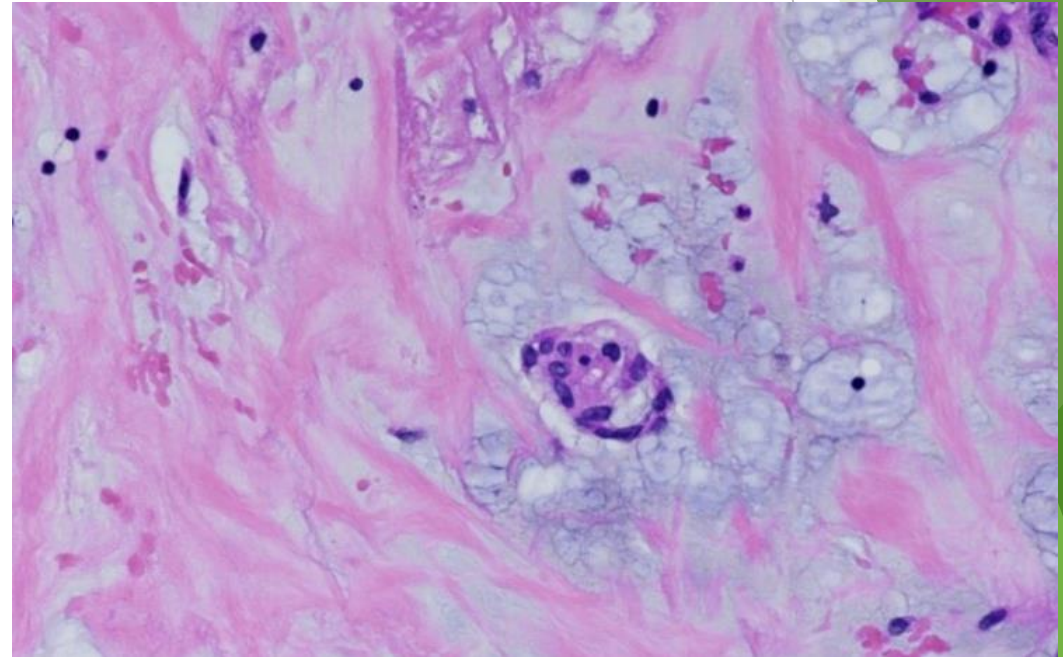
- ▶ Edema and myocyte injury.
- ▶ Interstitial inflammatory infiltrates:
  - Lymphocytic type: numerous lymphocytes.
  - Hypersensitivity myocarditis: abundant eosinophils.
  - Giant cell myocarditis: containing multinucleate giant cells



# Morphology



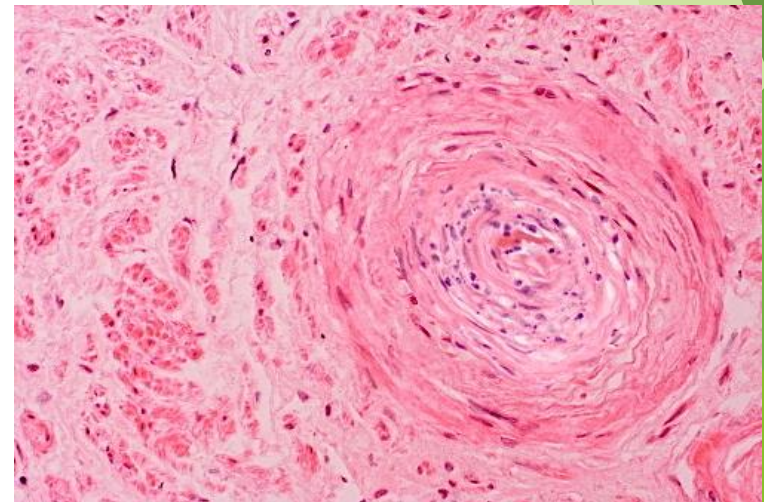
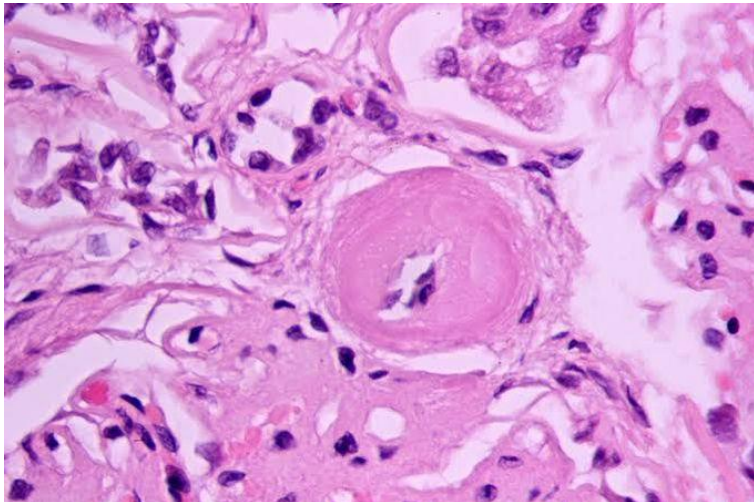
Grossly : appear as sessile or pedunculated mass.



Microscopic: neoplastic cells within myxoid stroma

# Hypertension-related small blood vessel disease

- ▶ 1-Hyaline arteriosclerosis: associated with benign hypertension.
- ▶ It is marked by homogeneous, pink hyaline thickening of the arteriolar walls, with loss of underlying structural detail, and luminal narrowing.
- ▶ 2. Hyperplastic arteriosclerosis: Associated with severe hypertension.
- ▶ Vessels exhibit “onionskin,” concentric, laminated thickening of arteriolar walls and luminal narrowing.
- ▶ The laminations consist of smooth muscle cells and thickened, reduplicated basement membrane.



The background features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the right side of the frame, creating a modern, layered effect. The rest of the background is plain white.

**GOOD LUCK**

**THANK YOU**