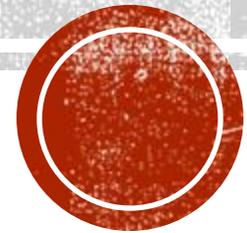


# **CVS MODULE PATHOLOGY LAB**

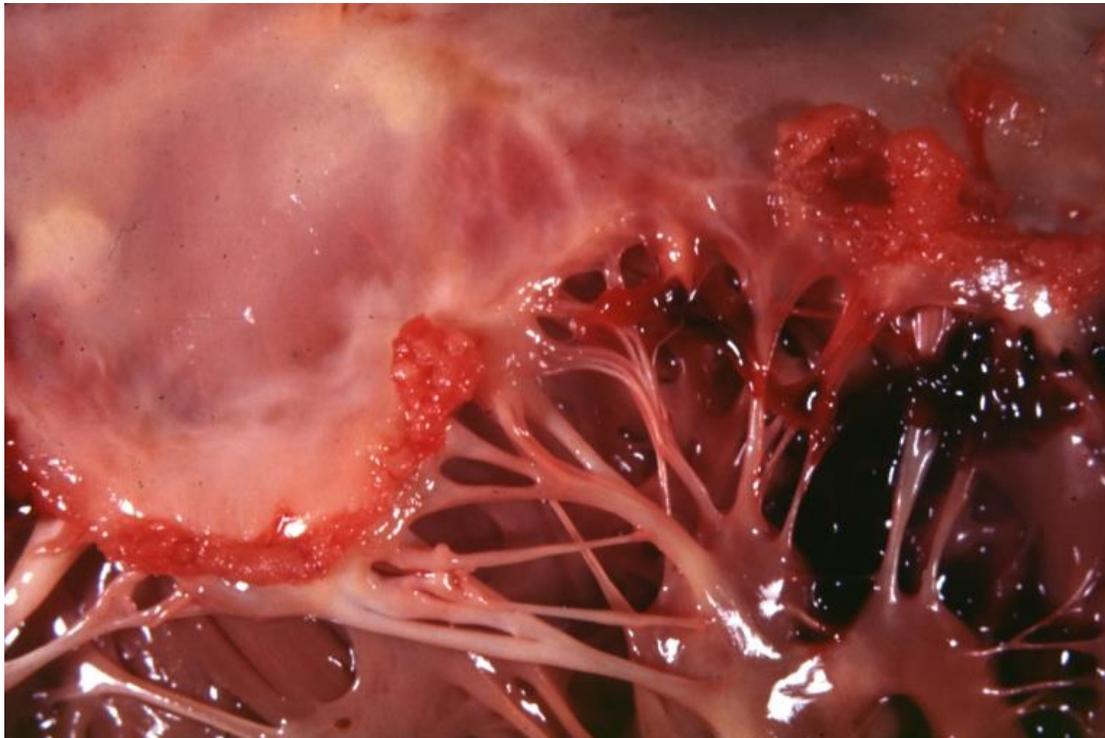


**Dr.Eman Kreishan, M.D.**

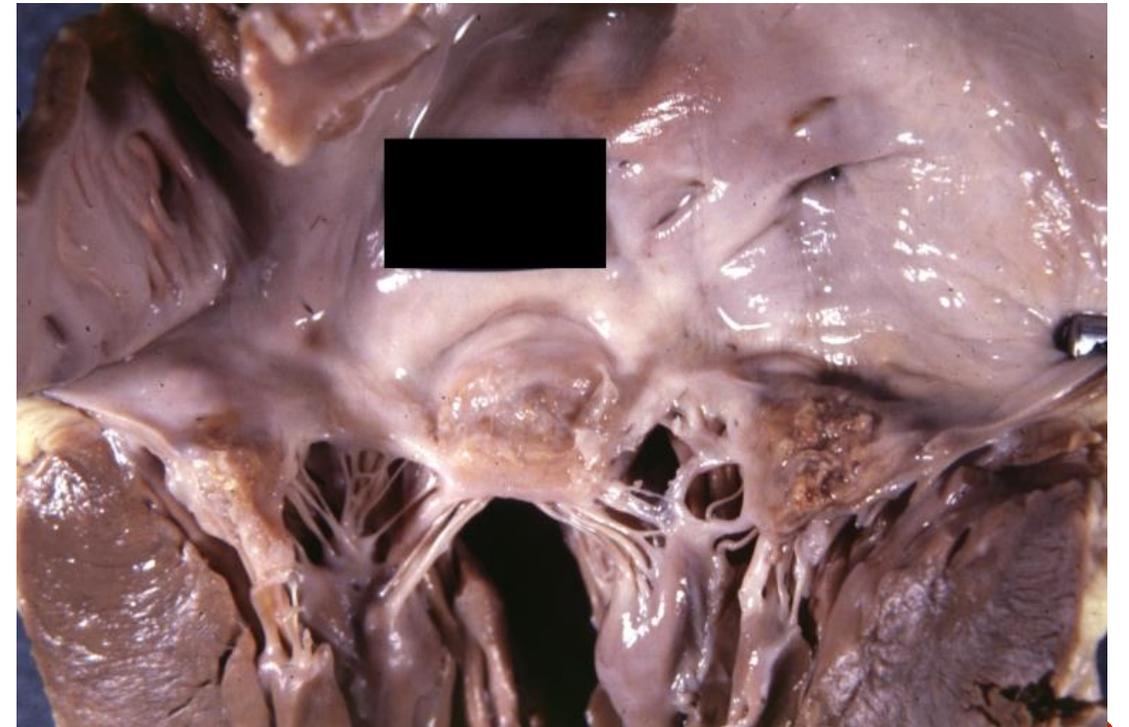
**26-11-2025**

# RHEUMATIC HEART DISEASE

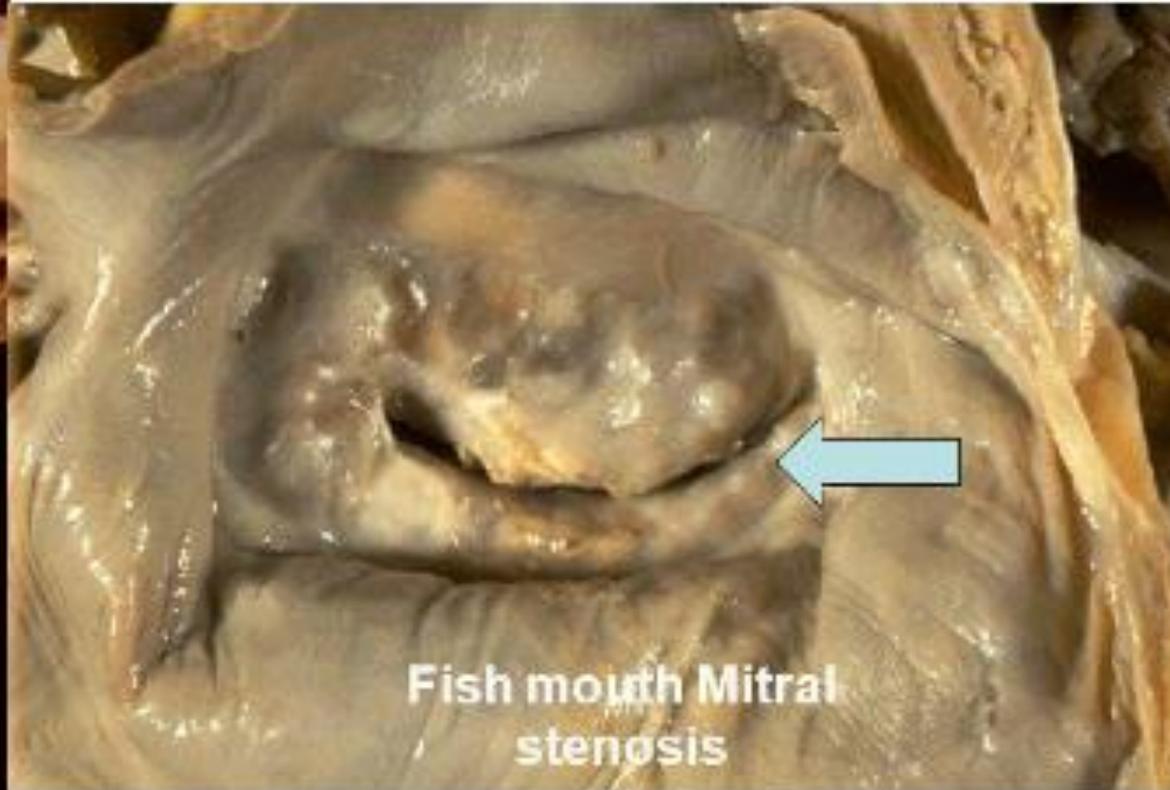
## MITRAL VALVULITIS



## MITRAL SCARRING



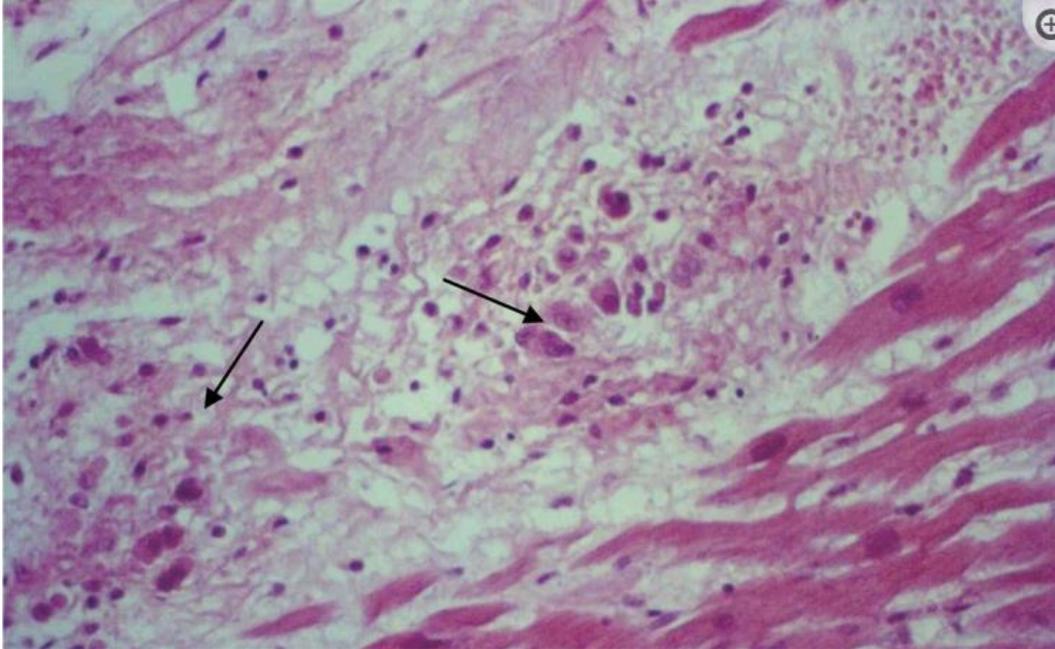
# RHEUMATIC HEART DISEASE



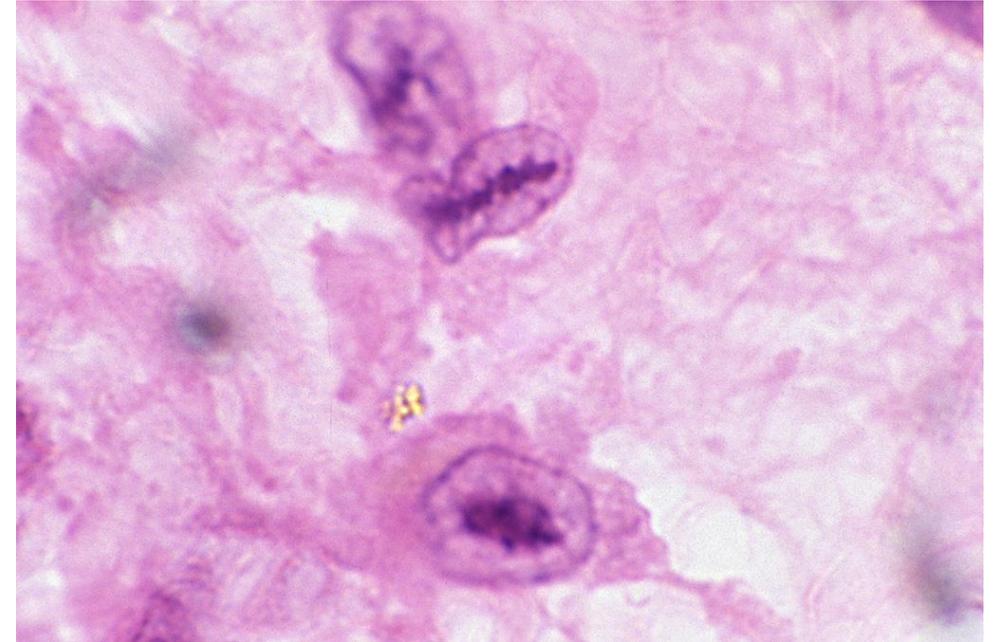
# The pericardium with fibrinous exudate, seen in RHEUMATIC HEART DISEASE



# Rheumatic heart disease



**Aschoff nodules**

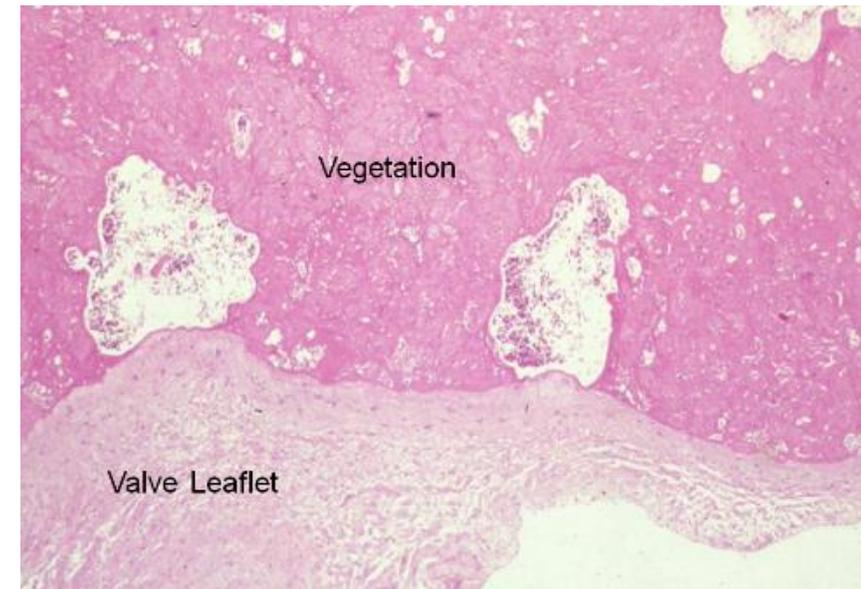
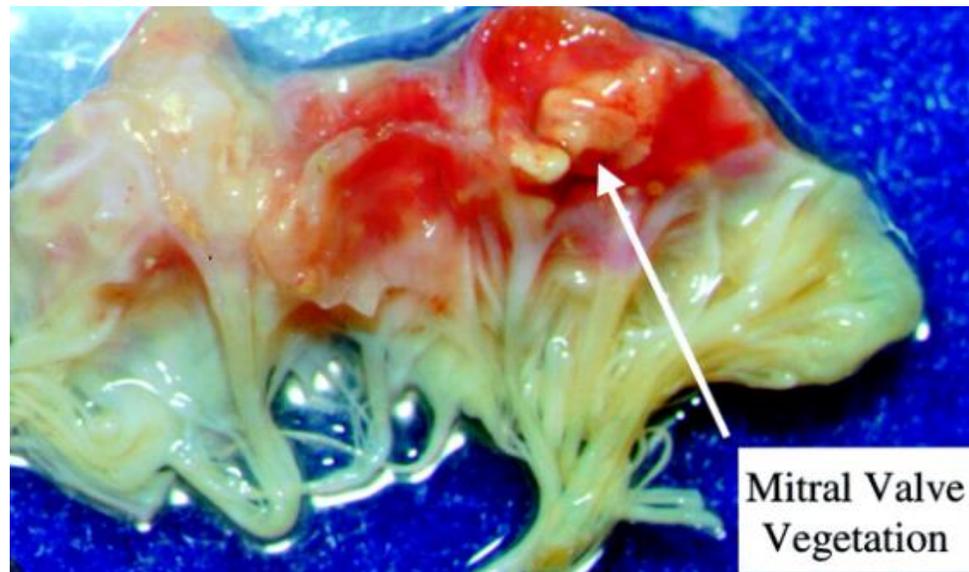


**Anitschkow cells.**



# RHEUMATIC HEART DISEASE

- 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.

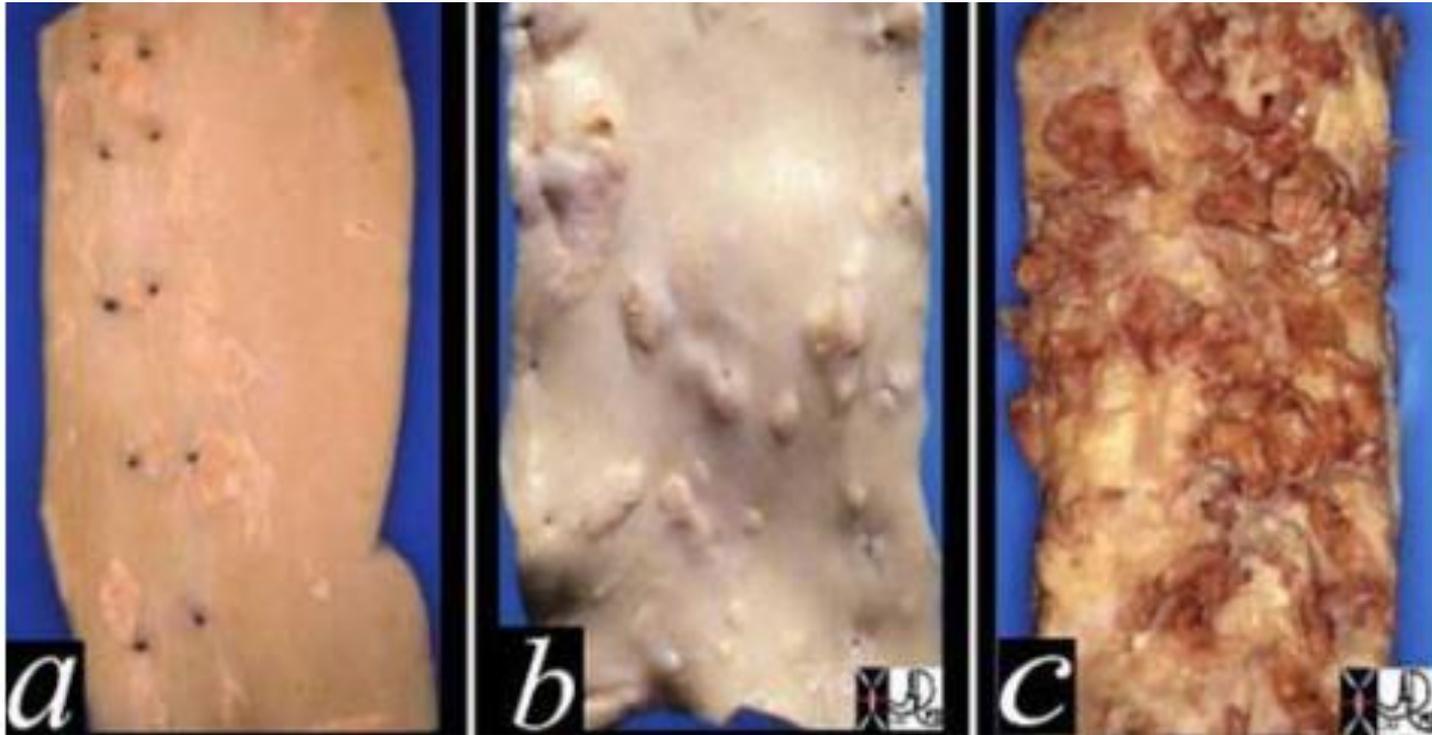


# Rheumatic heart disease

## Erythema Marginatum



# ATHEROSCLEROSIS



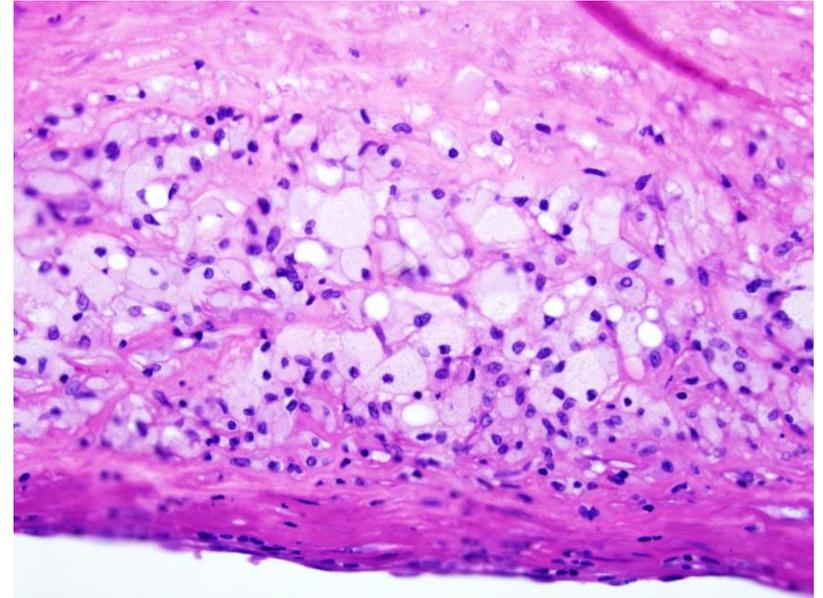
- a. raised fatty streaks.**
- b. raised fibrofatty nodules**
- c. Rupture plaque**



# ATHEROSCLEROSIS HISTOLOGY

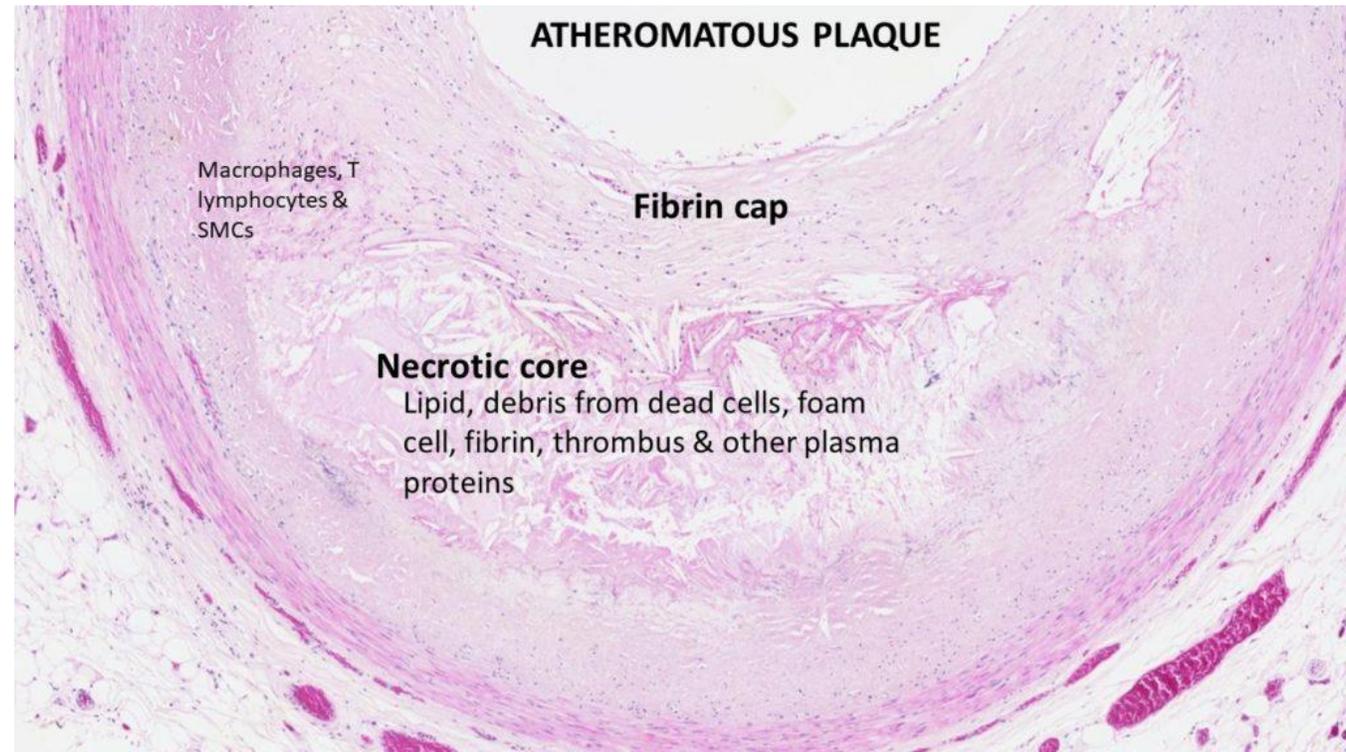
\* The earliest lesion is the fatty streak:

They consist of many lipid-laden foam cells that contain cholesteryl esters and a variable amount of extracellular lipid



# ATHEROSCLEROSIS HISTOLOGY

- Atherosclerotic plaques: have three principal components:
  - ❖ cells, including SMCs, macrophages, and T cells.
  - ❖ ECM, including collagen, elastic fibers, and proteoglycans.
  - ❖ intracellular and extracellular lipid.



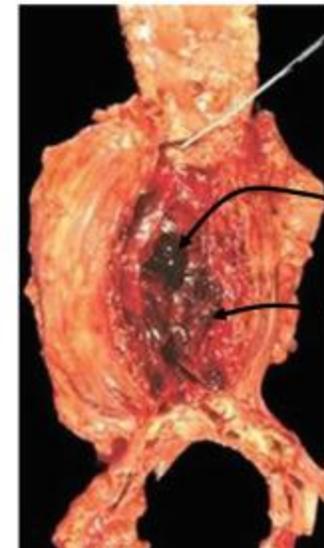
# CLINICAL EXAMPLES

- Marfan syndrome result from defective synthesis of the scaffolding protein fibrillin and progressive loss of elastic tissue leading to dilation.
- Ehlers Danlos syndrome result from defective in type III collagen synthesis leading to aneurysm formation.



# ANEURYSMS MORPHOLOGY

- The aneurysm sac usually contains bland, laminated, poorly organized mural thrombus, which can fill much of the dilated segment, usually extensive atherosclerosis is present.



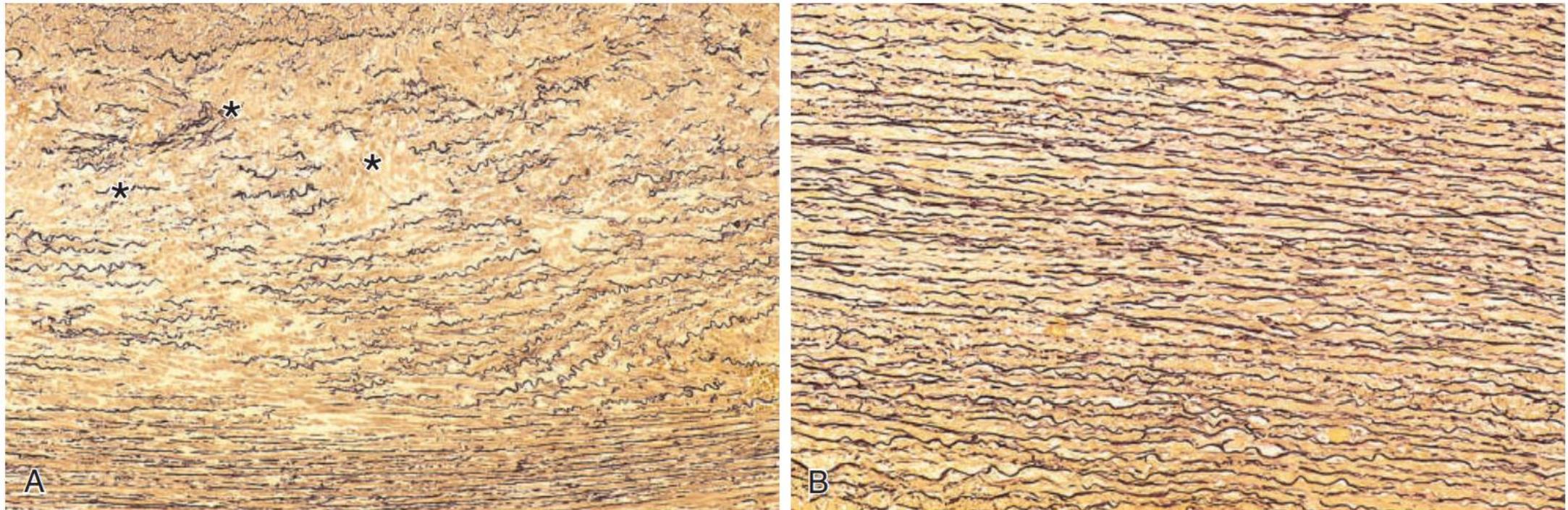
deposited  
thrombus

lumen



# Aneurysms

**Histologically, these changes are collectively called cystic medial degeneration, although no true cysts are formed**



**Fig. 10.18** Cystic medial degeneration. (A) Cross-section of aortic media from a patient with Marfan syndrome, showing marked elastin fragmentation and areas devoid of elastin that resemble cystic spaces (*asterisks*). (B) Normal media for comparison, showing the regular layered pattern of elastic tissue. In both (A) and (B), elastin is stained black.



# DVT

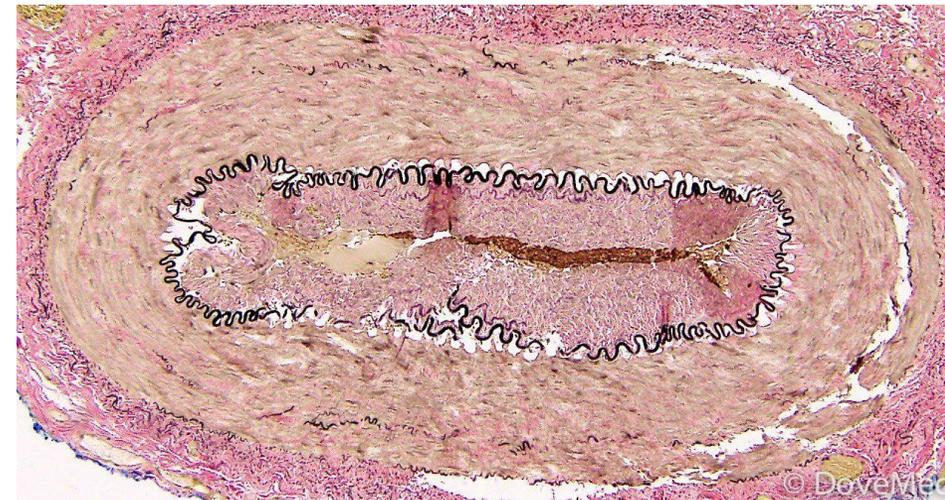


# VARICOSE VEIN

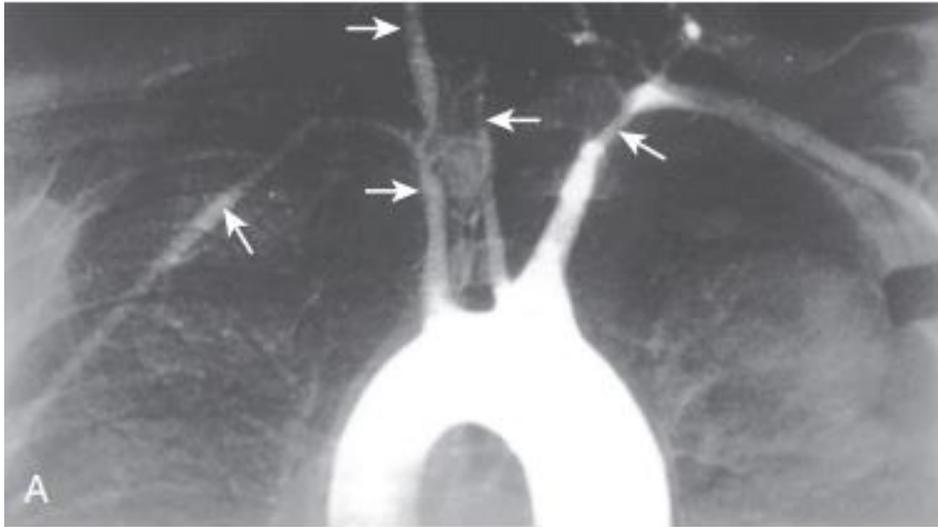


# GIANT CELL (TEMPORAL) ARTERITIS

- Transmural inflammation pattern with lymphocytes, giant cells and macrophages arranged in concentric rings, surrounding the external and internal elastic lamina, the later is disrupted as viewed by- an elastic stain.



# MORPHOLOGY OF TAKAYASU ARTERITIS (PULSELESS DISEASE).



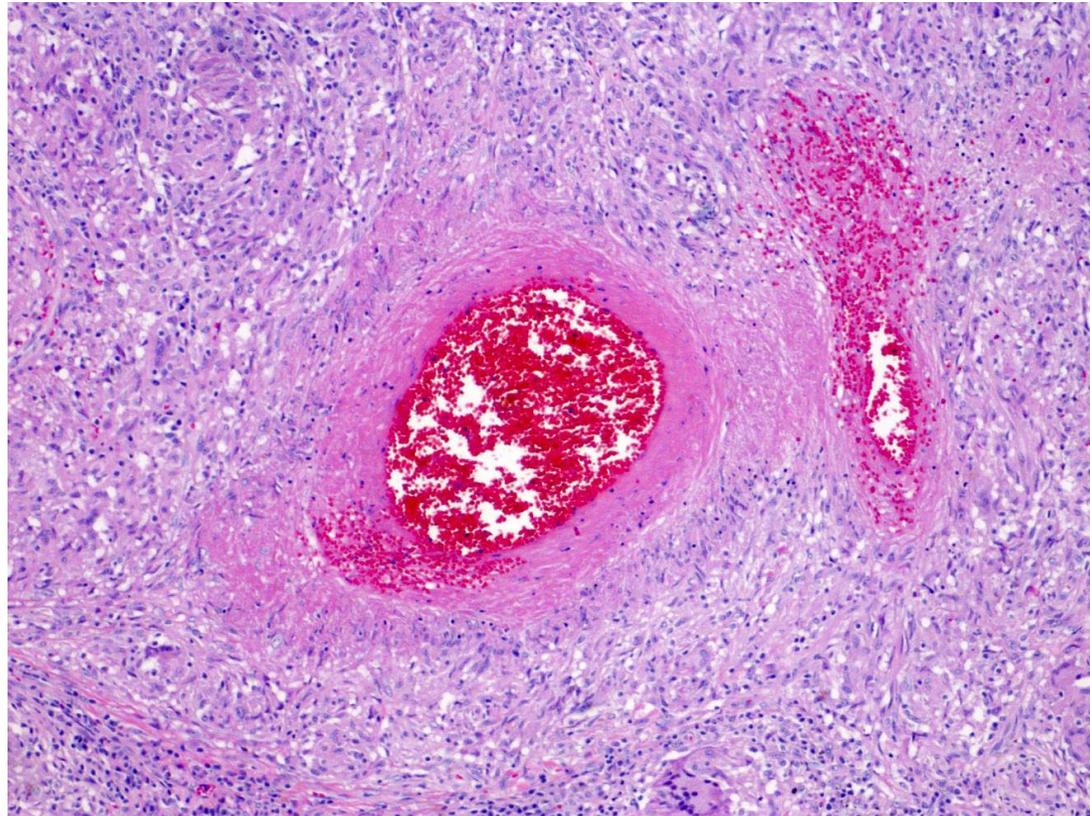
Aortic arch angiogram showing reduced flow of contrast material into the great vessels



intimal thickening and luminal narrowing



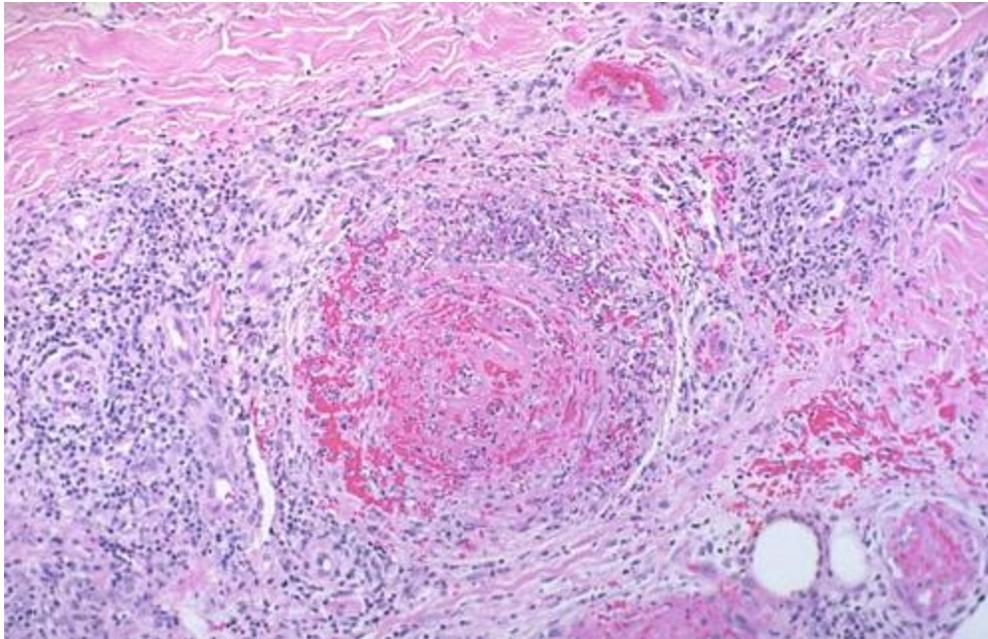
# TAKAYASU ARTERITIS (PULSELESS DISEASE).



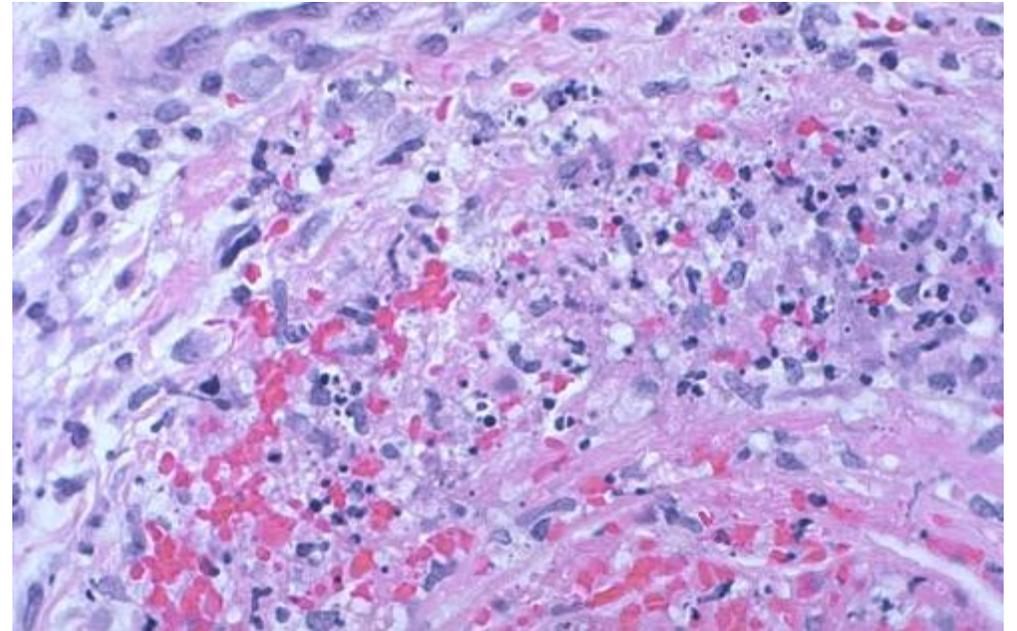
transmural ( including the adventitia)  
mononuclear inflammation



# PAN MORPHOLOGY



transmural necrotizing inflammation



necrosis of the vascular wall.

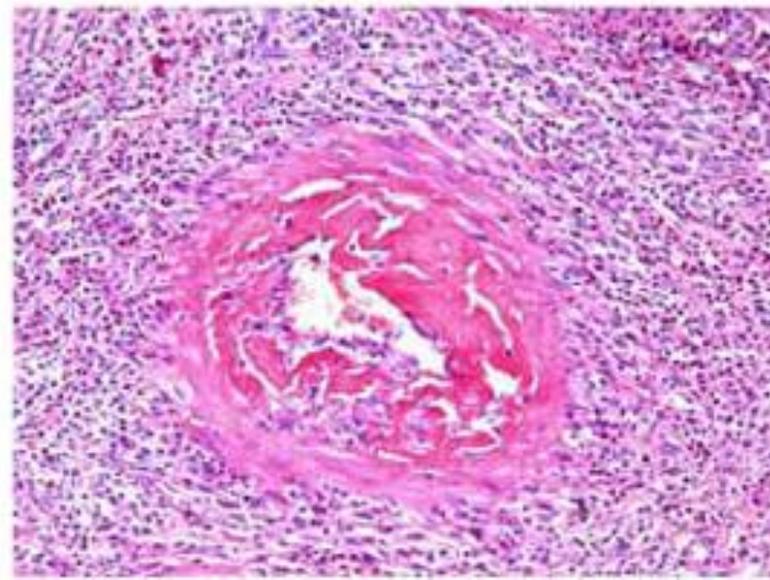
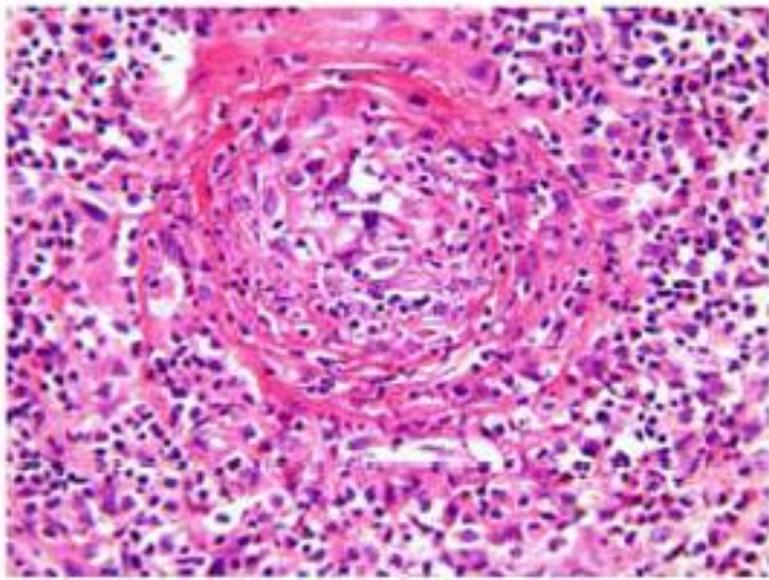


# KAWASAKI DISEASE



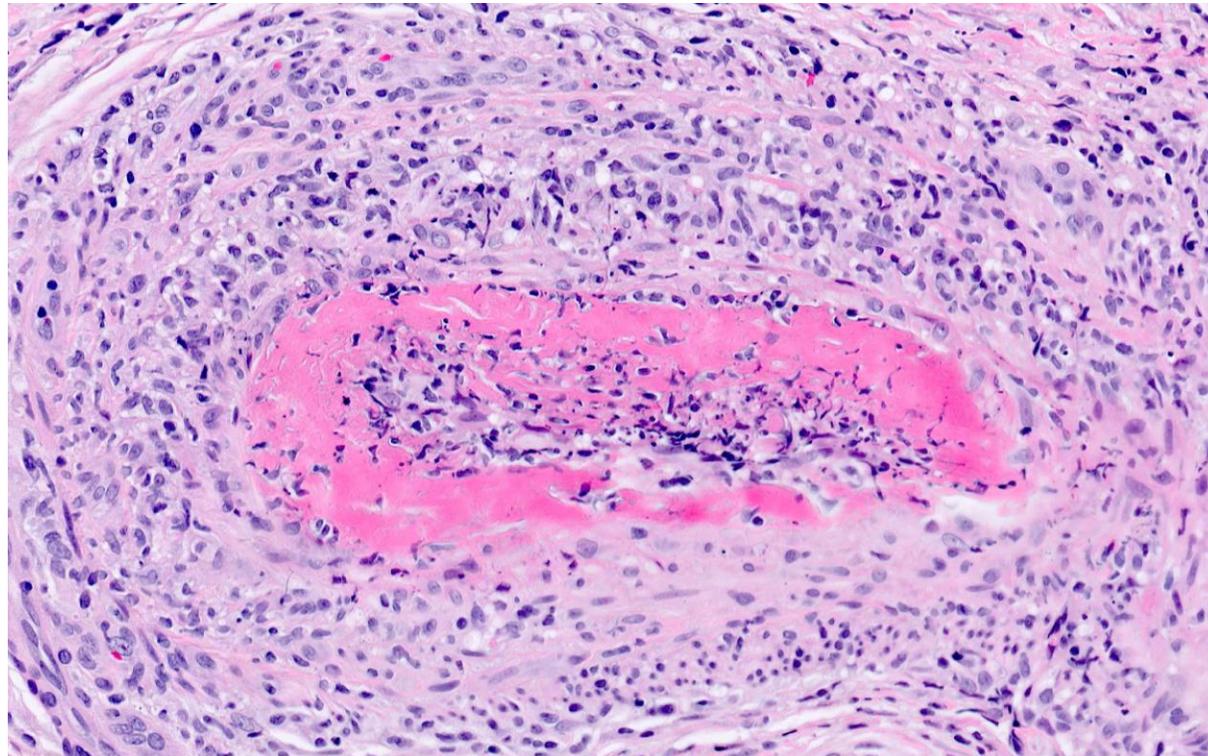
# MORPHOLOGY OF KAWASAKI DISEASE

- Histological features resembles that seen in polyarteritis nodosa.
- There is a dense transmural inflammatory infiltrate, but less prominent fibrinoid necrosis.



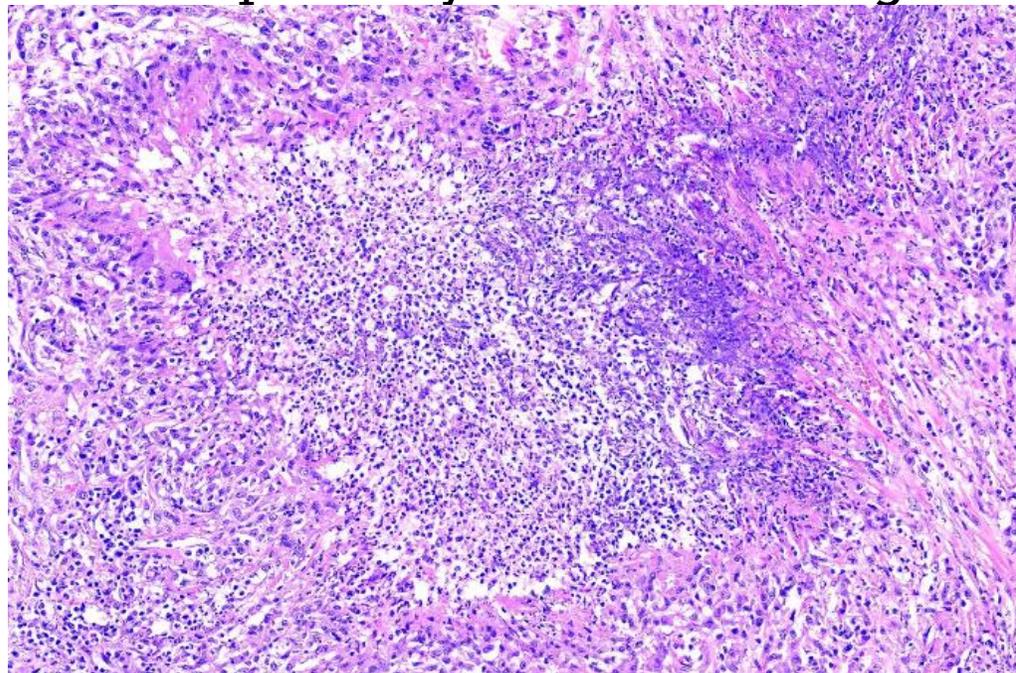
# LEUKOCYTOCLASTIC VASCULITIS

Characterized by segmental fibrinoid necrosis of the media with focal transmural necrotizing lesions; granulomatous inflammation is absent.



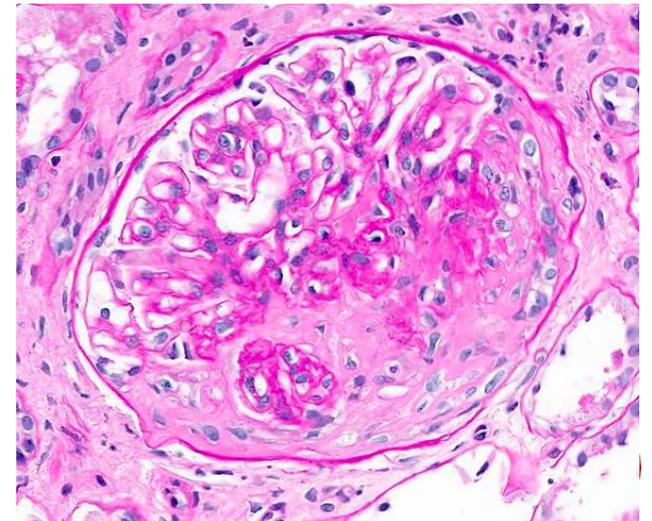
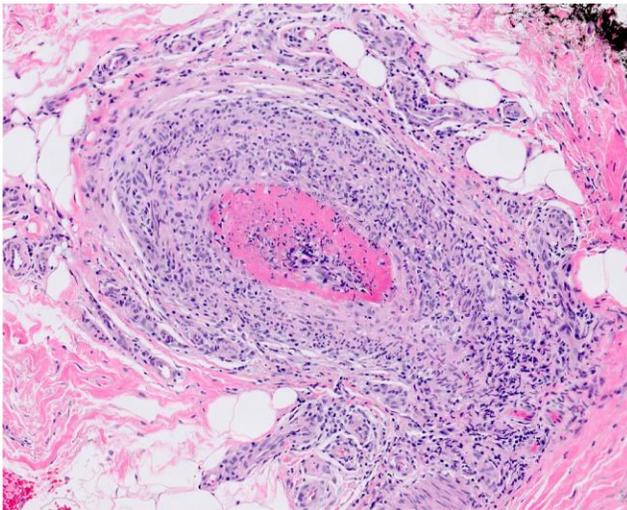
# MORPHOLOGY OF GRANULOMATOSIS WITH POLYANGIITIS

- 1. Respiratory :
- Upper respiratory tract lesions range from granulomatous sinusitis to ulcerative lesions of the nose, palate, or pharynx.
- lung findings ranging from diffuse parenchymal infiltrates to granulomatous nodules.

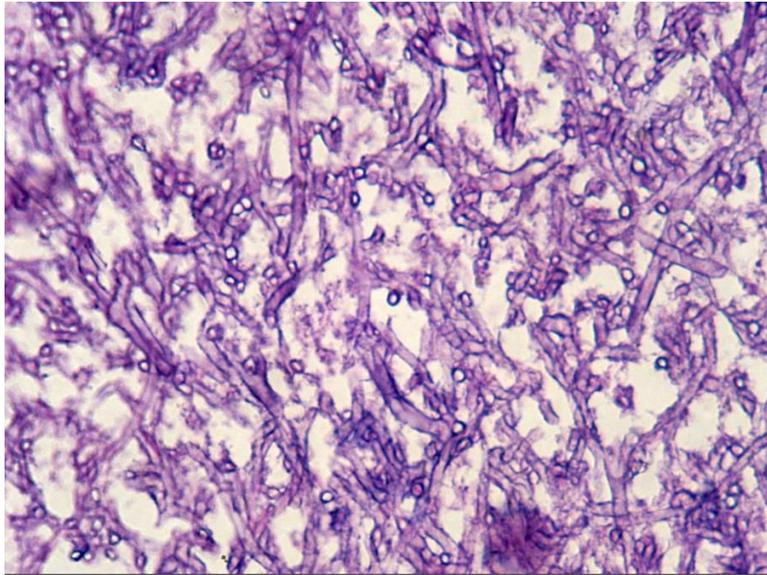


# MORPHOLOGY CONT.

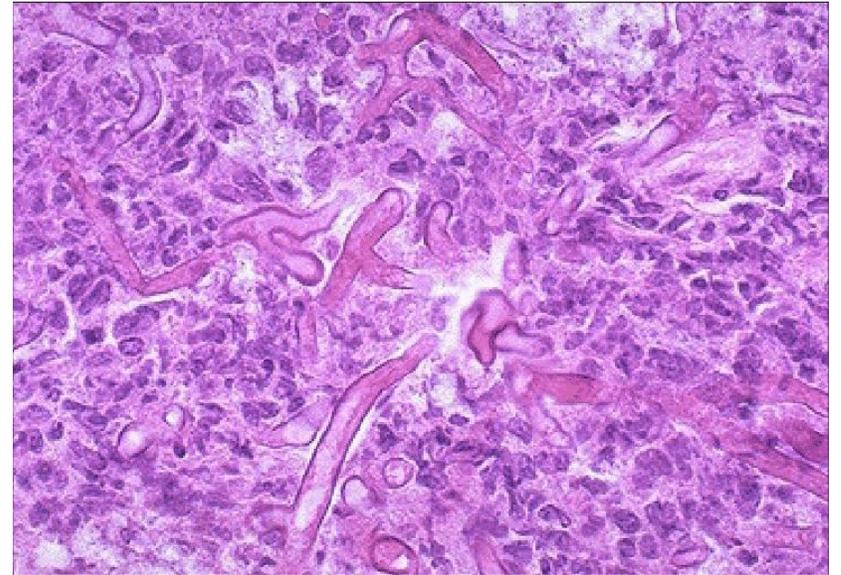
- 2. Multifocal necrotizing granulomatous vasculitis with a surrounding fibroblastic proliferation.
- 3. kidney:
  - focal glomerular necrosis associated with thrombosis (focal and segmental necrotizing glomerulonephritis).
  - crescentic glomerulonephritis.



# INFECTIOUS VASCULITIS



Aspergillus



Mucor mycosis

