

Ospe block G pathology

# Malaria parasite

1. Plasmodium 4 types

- Vivax , falciparum, malariae , ovale.

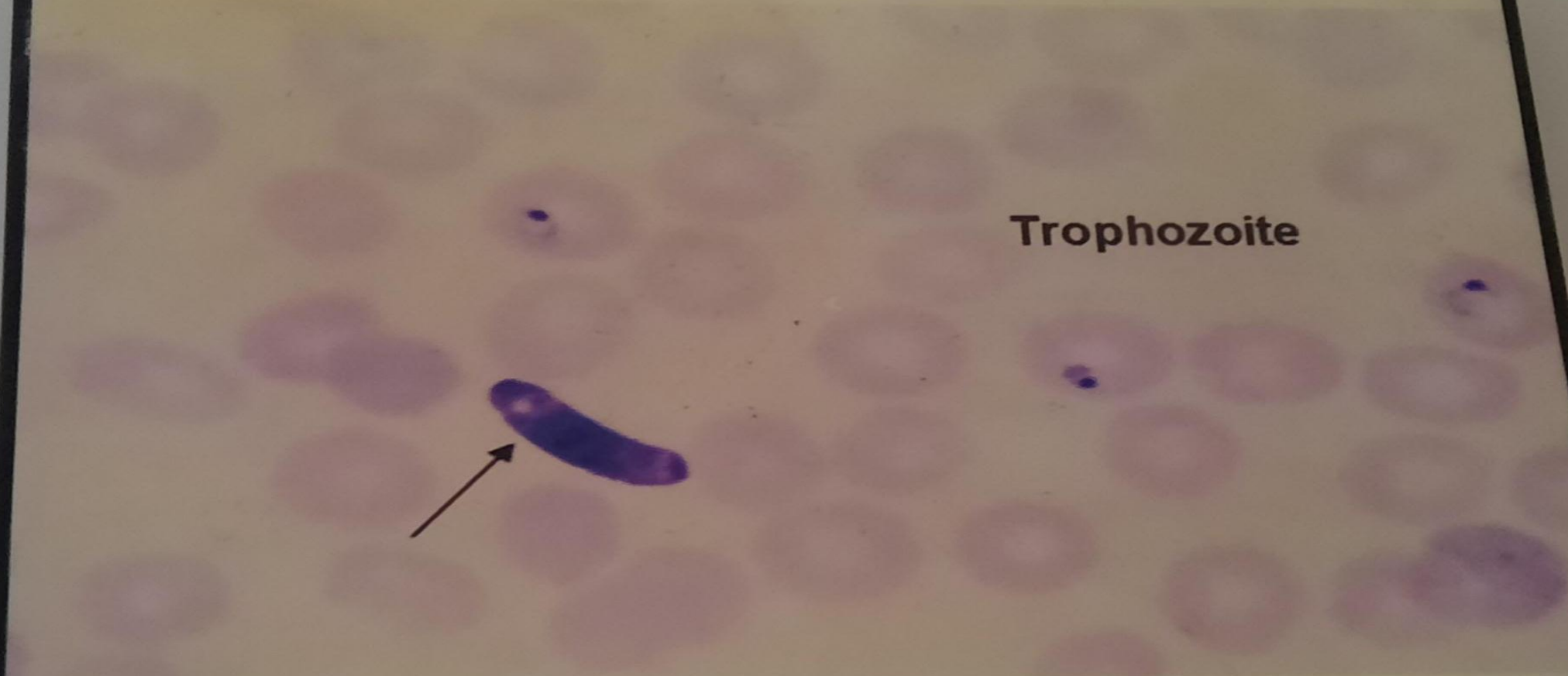
1. Patient presented with high grade fever recurrent in nature after 24 hrs., vomiting, nausea, headache, blood test showed Plasmodium parasite.
2. Spread by female anopheles mosquito.

plasmodium vivax  
circular gametocyte



lymphocyte

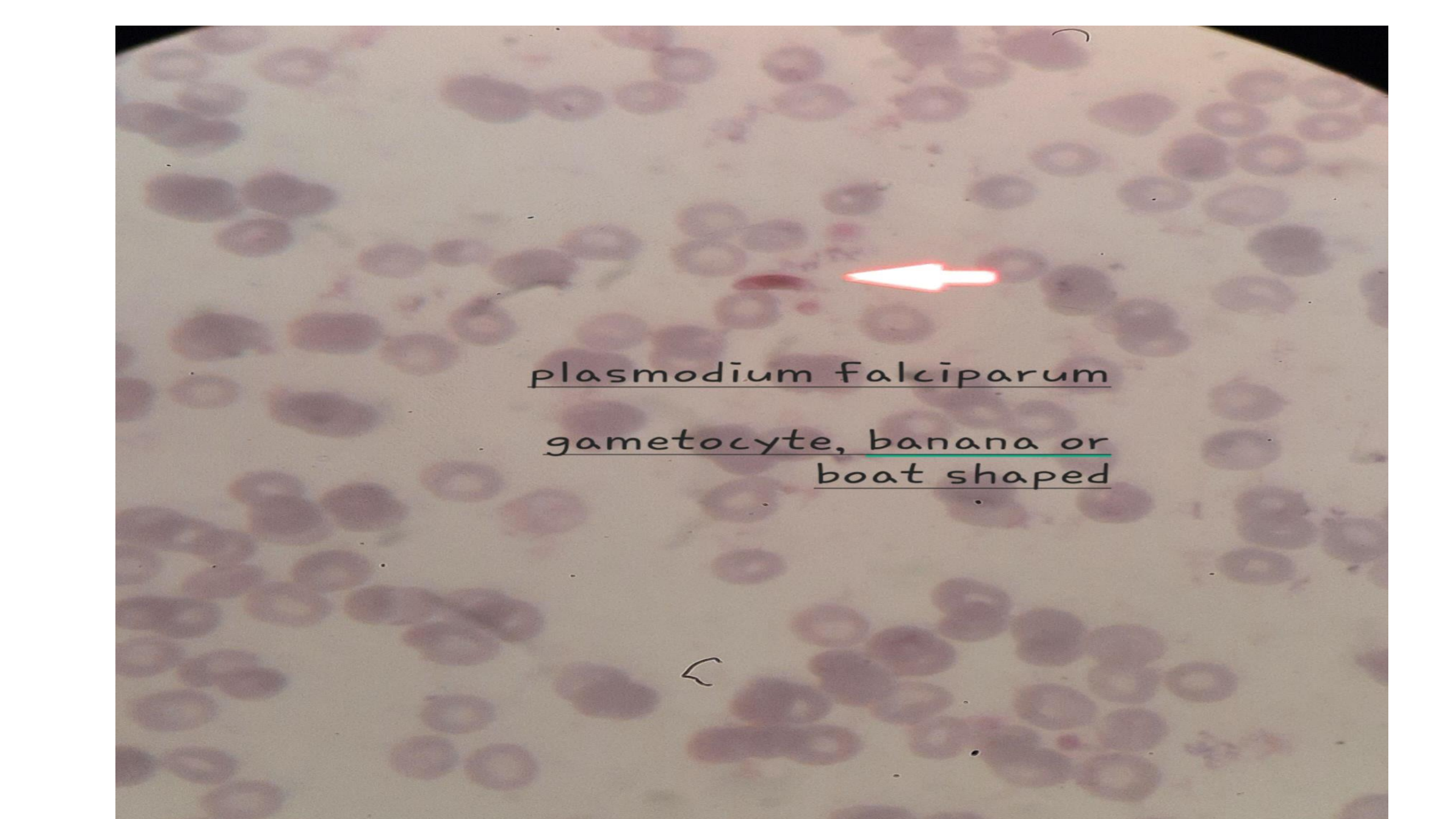
# PLASMODIUM FALCIPARUM



Trophozoite

Gametocyte and Trophozoites. Arrow points to a "banana-shaped" gametocyte of Plasmodium falciparum

*Sania Nosheen*



plasmodium falciparum

gametocyte, banana or  
boat shaped

# LEISHMANIA

- Caused by phlebotomine sand fly.

- Old world leishmaniasis

L. Donovanii, tropica, infantum, major, aethiopica.

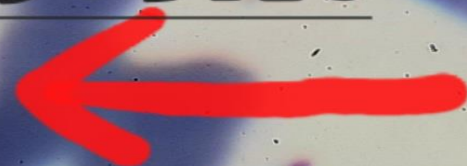
- New world leishmaniasis

L. Perivana, chagasi, mexicana complex, brazilliniensis complex. present in reticuloendothelium system cells (macrophages, monocytes, neutrophils).

Amastigote form in humans. Non mobile, round, kinetoplast and nucleus, cytoplasm stains blue.

- Patient present with fever, weightless, hepatosplenomegaly, anemia, thrombocytopenia, leukaemia.

leishmania donovani  
LD BODIES

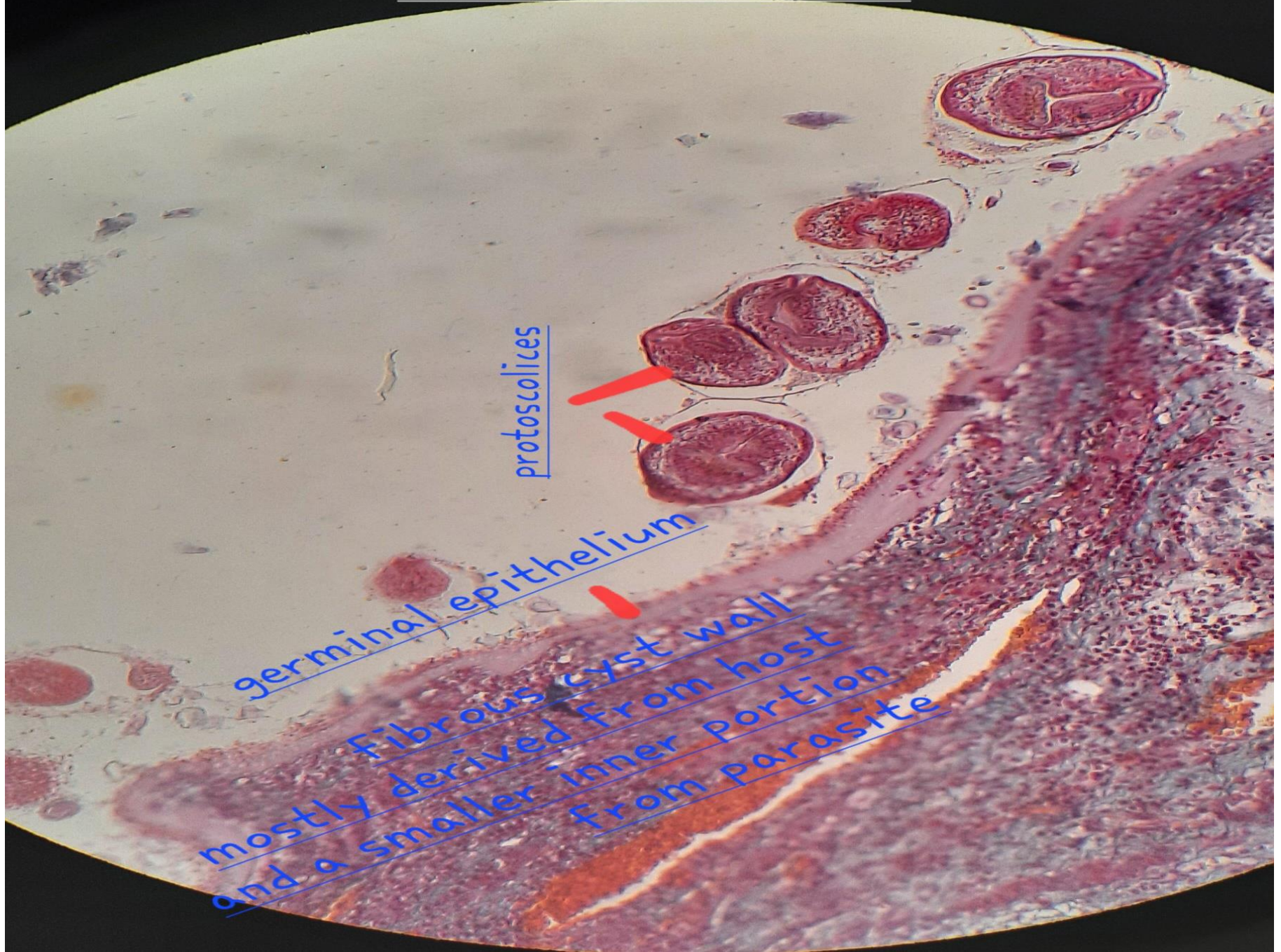


# Hydatid cyst.

- Caused by larva of echinococcus granulosus( tapeworm)
- Definitive host is dog's
- Intermediate host is cattle, sheep, goats and pigs.
- Accidental host is human.
  
- Patient with abdominal pain, nausea vomiting in case of liver cyst.
  
- Patient with chronic cough, chest pain, shortness of breath in lungs cyst.
- Cyst puts pressure on organs it is present in so patient would show different symptoms accordingly
- Fibrous wall mostly made of host cells, germinal epithelium on the inner side, cyst fluid filled cavity, protoscolex .
- Should remove cyst without bursting it.



# HYDATID CYST



protoscolices

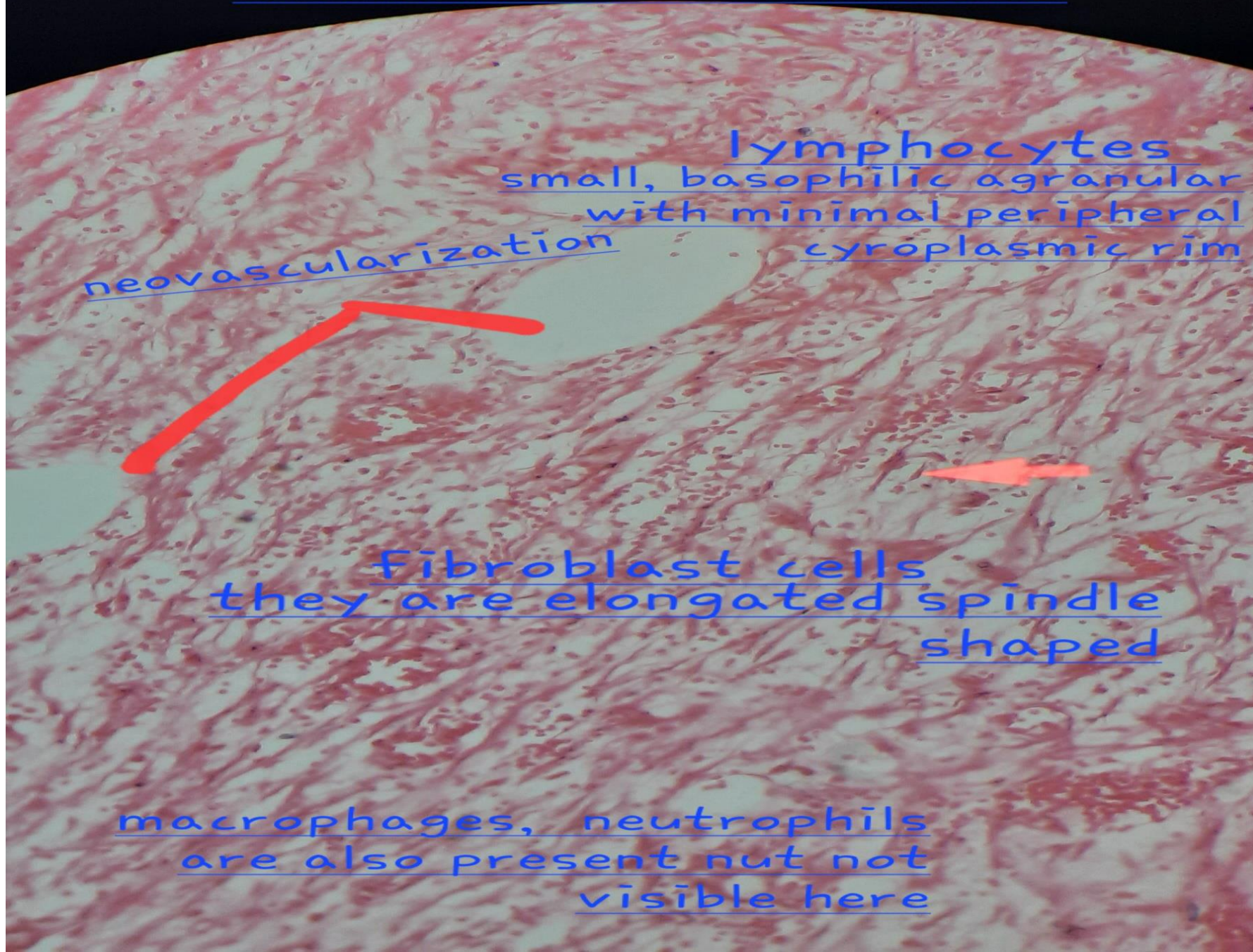
germinal epithelium

Fibrous cyst wall  
mostly derived from host  
and a smaller inner portion  
from parasite

# Granulation tissue.

1. Highly vascularity tissue present during healing containing
  - New capillaries
  - Proliferating fibroblast cells
  - Residual inflammatory cells
1. 2 phases of granulation growth. Angiogenesis(early phase) , fibrogenesis( later stage).
2. Gross morphology is red soft to touch, moist and bumpy, granular appearance.
3. Microscopically contains the above listed 1<sup>st</sup> point.

# GRANULATION TISSUE



neovascularization

lymphocytes

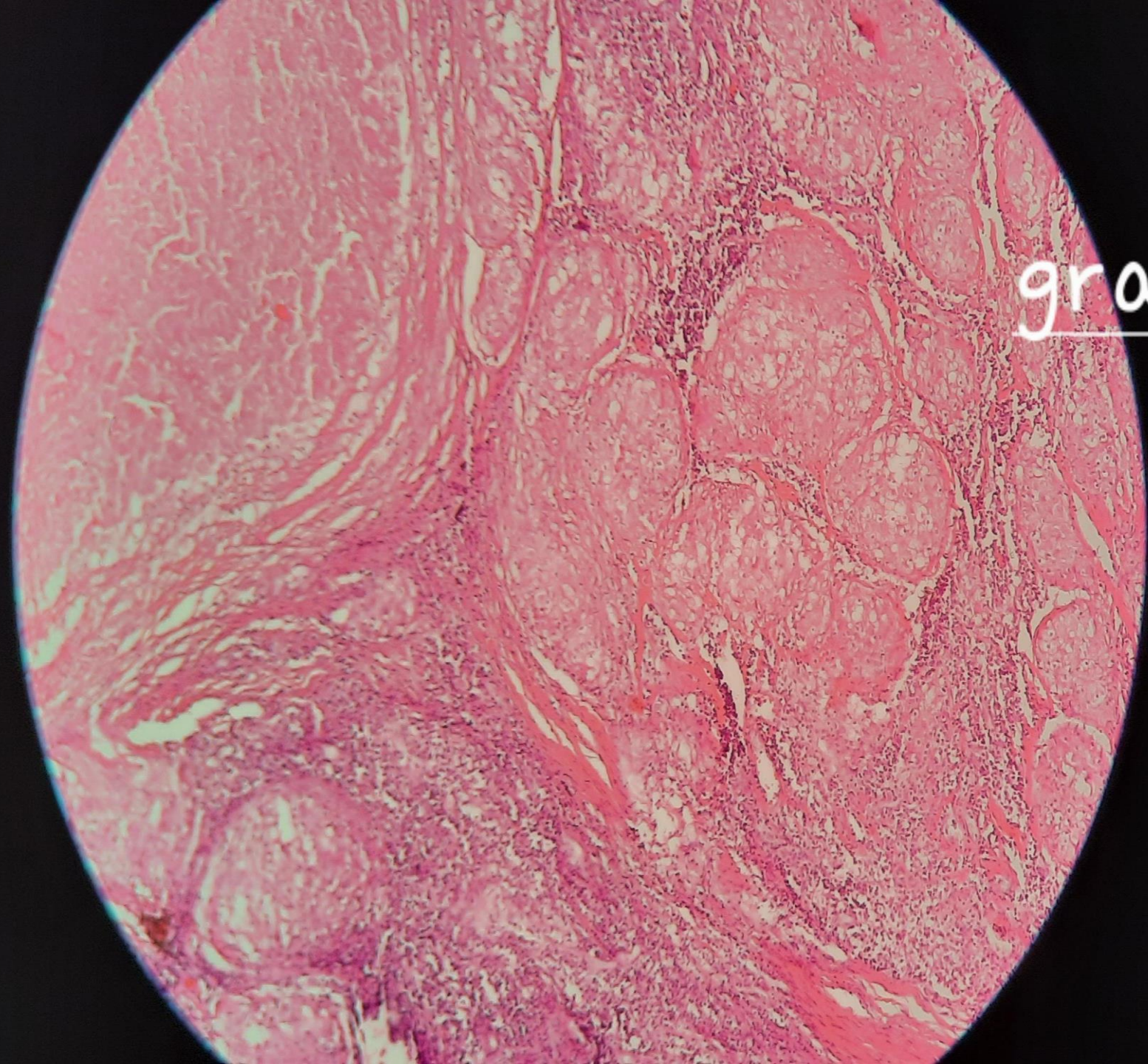
small, basophilic agranular  
with minimal peripheral  
cytoplasmic rim

Fibroblast cells  
they are elongated spindle  
shaped

macrophages, neutrophils  
are also present but not  
visible here

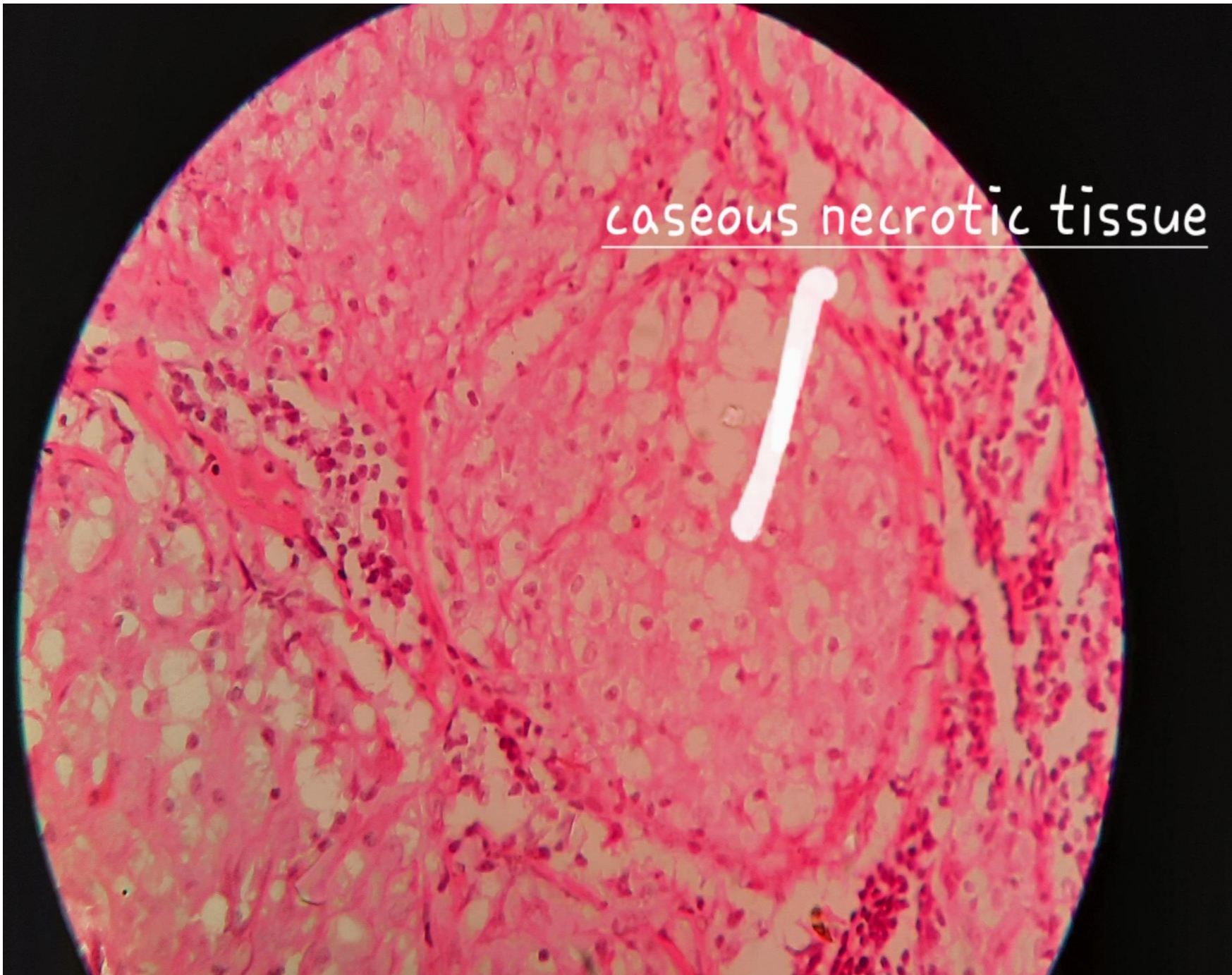
# Granuloma

- Circular mass of caseous necrotic tissue in middle, surround by epithelioid cells( sole shaped macrophages), outer to this is lymphocytes rim, if repaired begins so outer most layer if fibroblast.
- May contain giant cells.
- Formed if chronic inflammation causing agent persists.
- Patient came with case of tuberculosis, as mycobacterium tuberculosis causes granuloma formation in lungs and other organs.



granulomas

caseous necrotic tissue





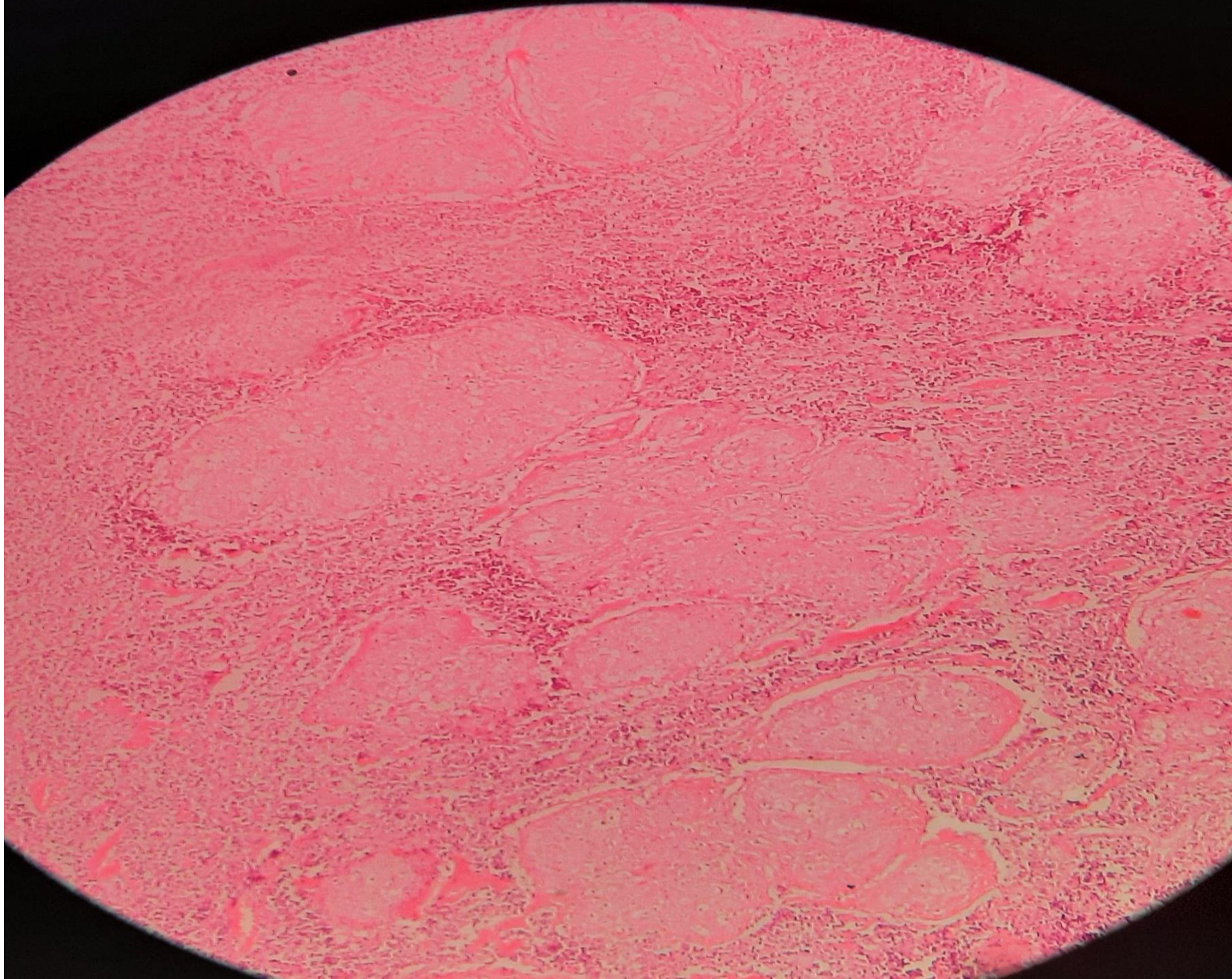
epithelioid cells and  
lymphocytes

multicellular giant cell





granuloma



necrotic tissue

epithiold cells



# Chronic cholecystitis.

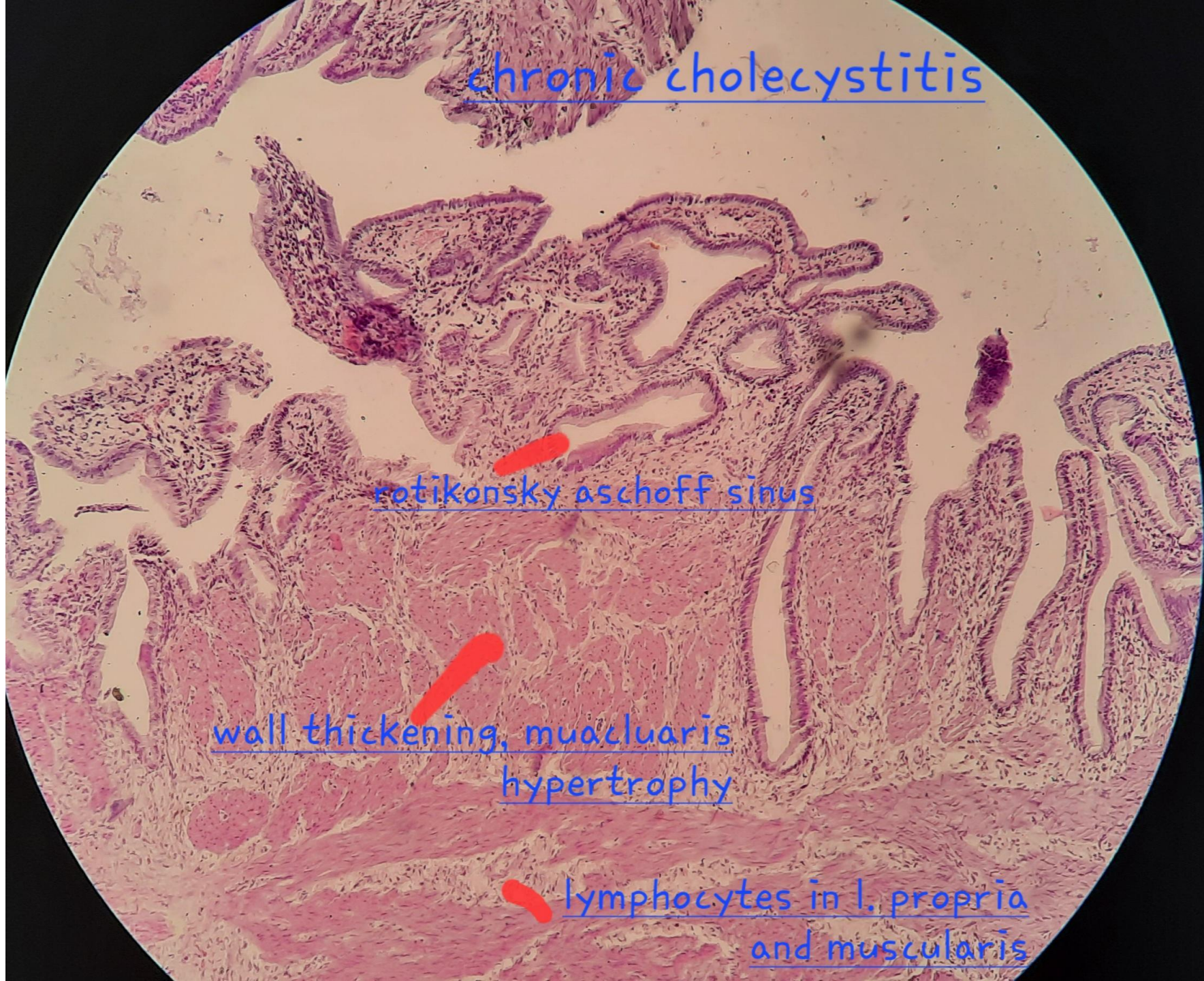
- Gall bladder inflammation.
  - Patient presents with right hypochondriac pain may be sharp or dull pain, abdominal cramps and bloating, pain spreading to Below right shoulder, fever chills, nausea, jaundice light coloured stools.
  - May cause pancreatitis, Gangrene of gall bladder leading to perforation, inflammatory enlargement of g. Bladder, cancer of g. Bladder rarely.
1. Gross morphology is serosa smooth and glistening may may subserosal fibrosis in places where surface seems dull, opaque gray white colour.
  2. Microscopically. Wall thickening sue to fibrosis or muscluar hypertrophy, rotikonsky aschoff sinuses ( secretory epithelial invagination) ,lymphocytes in lamina propria and muscluaris.

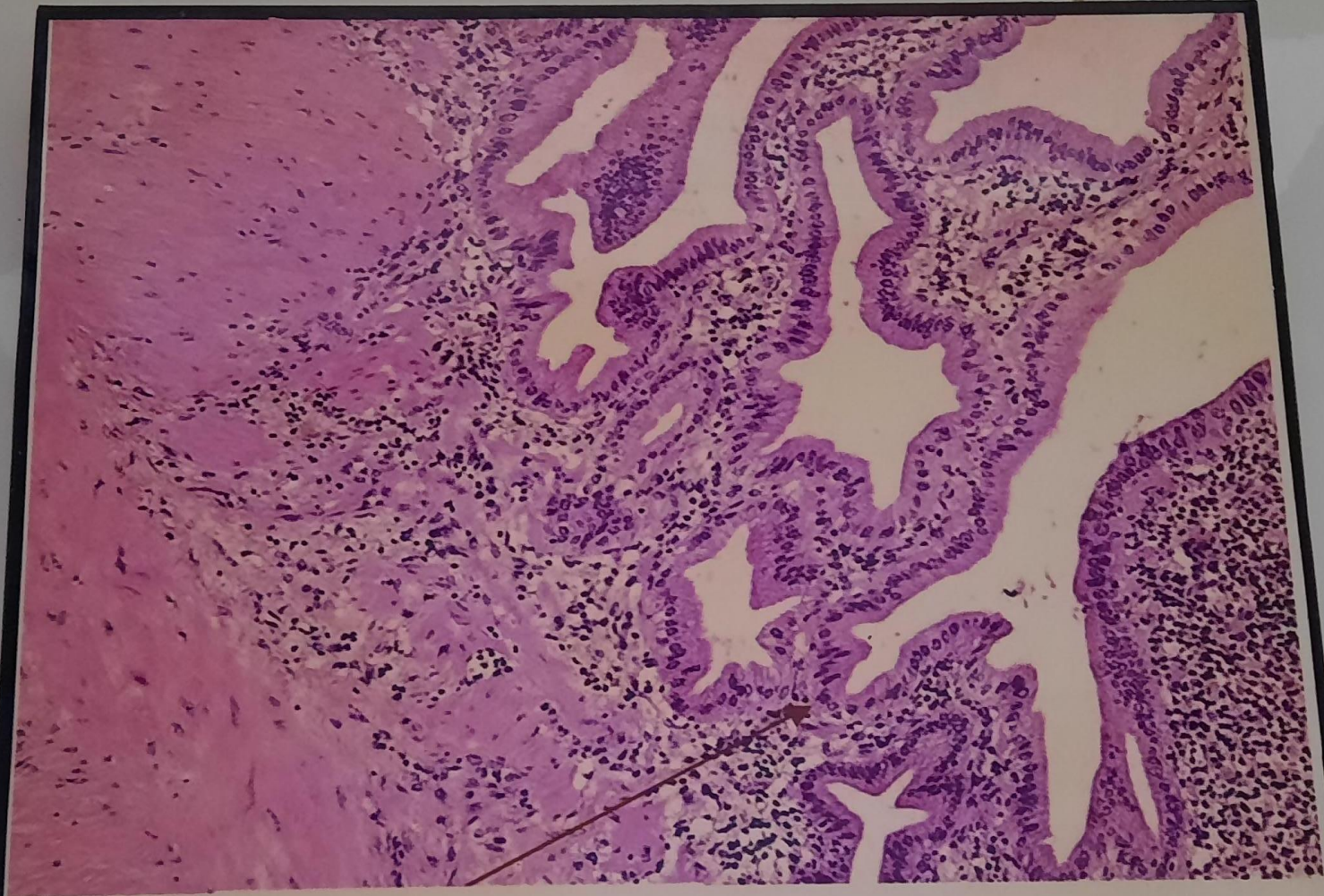
chronic cholecystitis

rotikonsky aschoff sinus

wall thickening, muacularis  
hypertrophy

lymphocytes in l. propria  
and muscularis



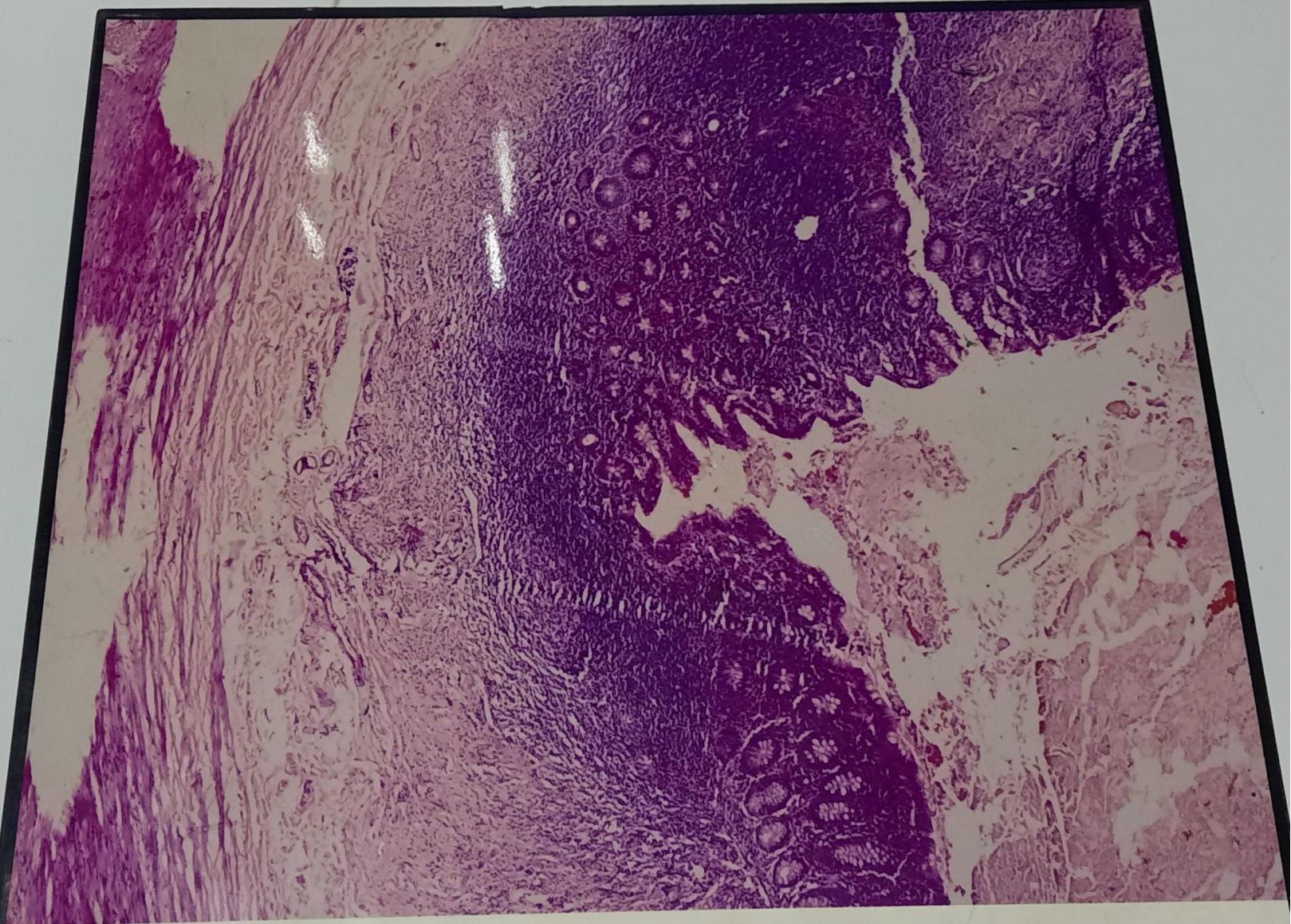


Chronic cholecystitis

# Acute appendicitis

1. Inflammation of appendix due to luminal obstruction by

- Fecolith
- Infective agent
- Lymphoid hyperplasia.
- Parasites.
- Tumors
- Foreign material.
- Gross. Fibrous, purulent serosa exudate, lumen with blood tinged pus, variable perforation, Obstructive agent in lumen.
- Microscopically, neutrophils in mucosa, congestion and Wall Edema in early stage and ulcerated epithelium in later stages , blood vessels thrombosis, fibrosis is prominent,
- Patient presents with pain at mcbourney point , fever .
- Complication include peritonitis, abscess, Gangrene,



*Acute appendicitis microscopic*

# ACUTE APPENDICITIS

luminal cellular debris,

ulcerated or sloughed of  
mucosal epithelium

neutrophils infiltration in  
l. propria

fibrosis

