Organ: Lung

Stain: H & E

Lesion: Serous inflammation

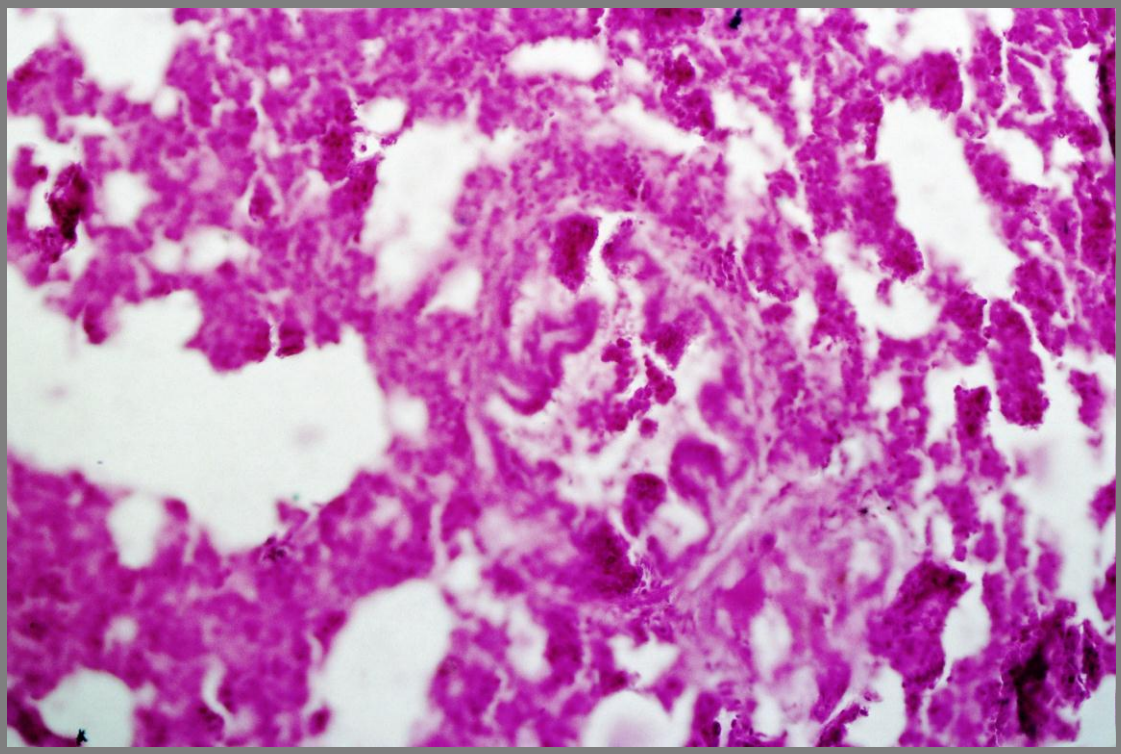
Microscopical findings:

1. The predominant constituent of exudate is albumin.

2. The albumin taken finally granular eosinophilic substances scattered both in the alveoli and in the bronchioles.

3. The pulmonary blood vessels and the interalveolar capillaries are dilated, congested and filled with blood.

4. Presences of leucocytic infiltration particularly of mononuclear types in the pulmonary tissue are seen.



Organ: Lung

Stain: H & E

Lesion: Fibrinous inflammation

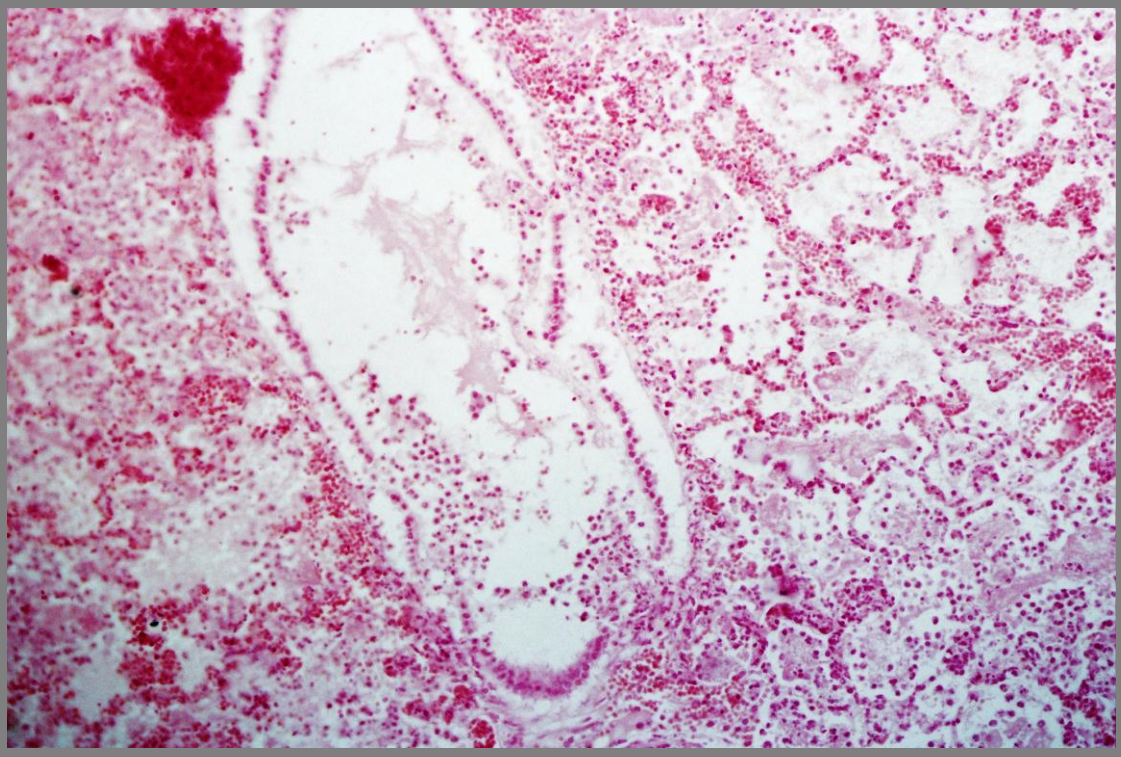
Microscopical findings:

5. The alveoli and bronchioles ducts are packed with fibrinous exudates.

6. These exudates formed from fibrin threads that deposited in the form of network of fine eosinophilic strands.

7. In this meshes of fibrin net , polymorphonuclear leucocytes and lymphocytes with some desquamated alveolar cells are present.

8. The vascular changes represented by severe dilatation and congestion of the pulmonary blood vessels and interalveolar capillaries.



Organ: Lung

Stain: H & E

Lesion: Catarrhal inflammation

Microscopical findings:

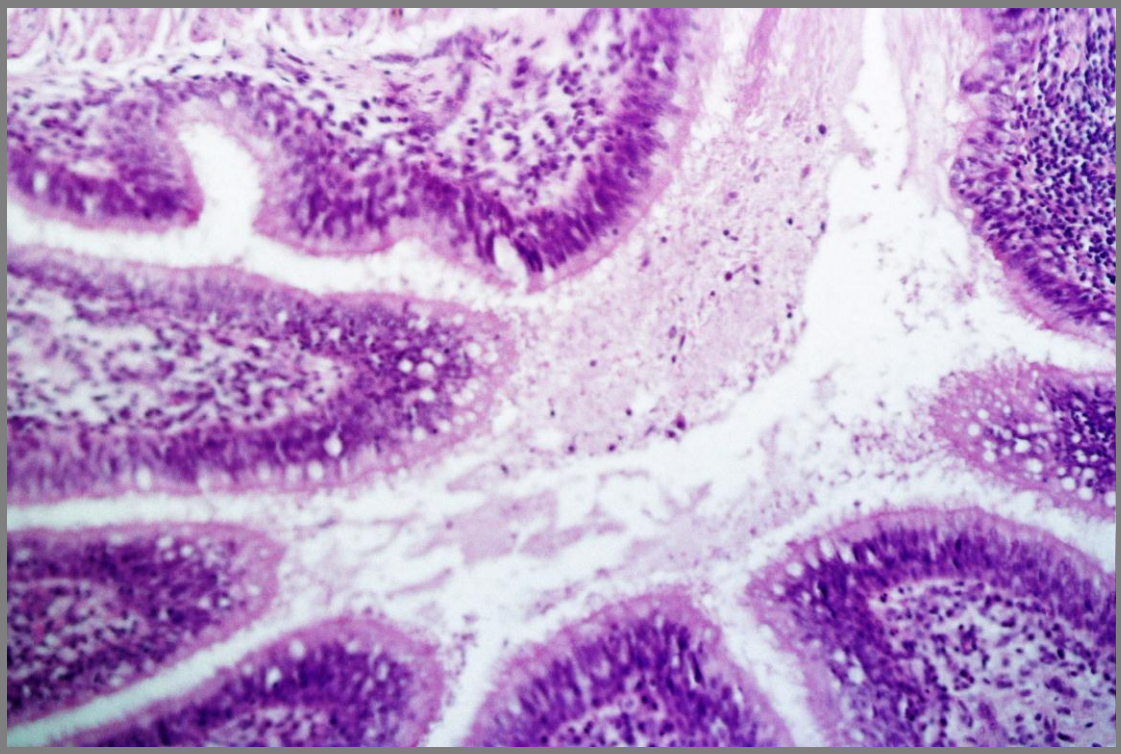
1. The vascular changes represented by hyperemia of the bronchial vessels and interalveolar capillaries are found.

2. The characteristic alternative changes of catarrhal inflammation manifested by desquamation of the lining epithelium of the wall of both bronchi and bronchioles with swelling of the goblet cells and excessive production of mucin (faint blue) are seen.

3. The exudative changes represented by presence of inflammatory exudates in the lumen of the bronchi and bronchioles are see.

4. This exudates formed from
    - Mucin which appears as a fine granules or fiberilles that takes the bluish stain of hematoxylin.
    - Cellular elements composed of leucocytes , desquamated epithelial cells and few red blood cells.

The adjacent alveoli and alveolar ducts are filled with serofibrinous exudates rich in leucocytes.



Organ: Brain

Stain: H & E

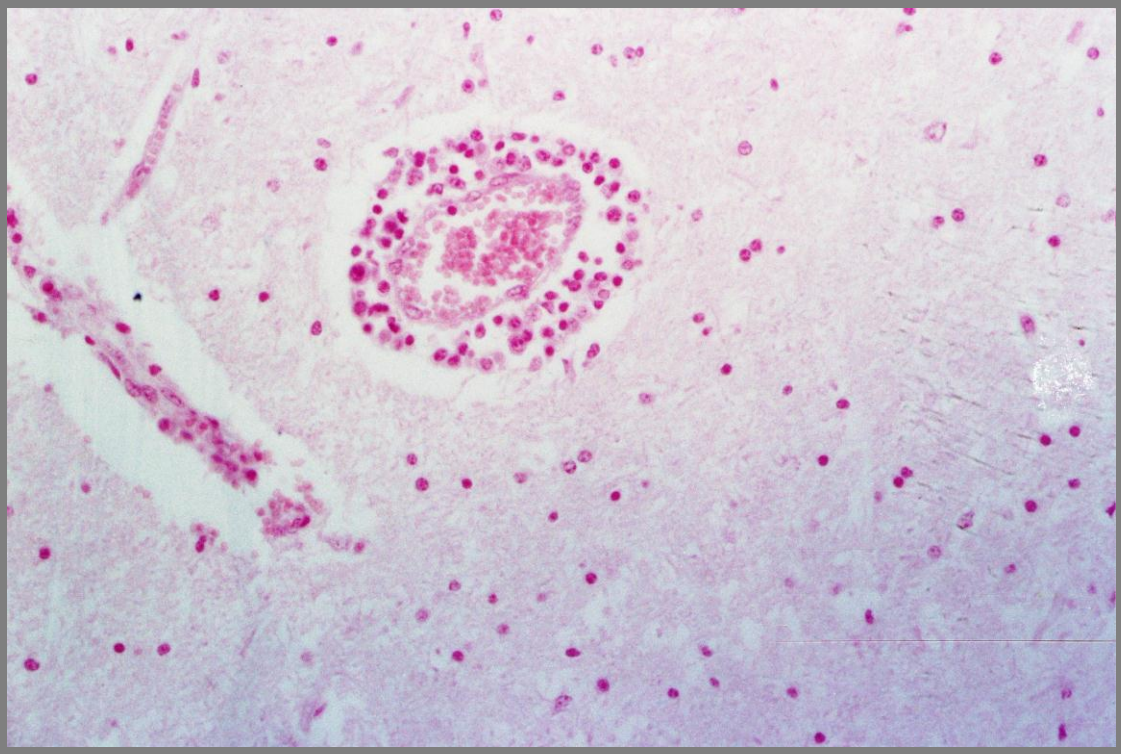
Lesion: Lymphocytic inflammation

Microscopical findings:

1. The lymphocytic inflammation of the brain tissue restricted in the Virchow-Robin space.

2. The mononuclear cells particularly lymphocytes surrounding the blood vessels giving perivascular cuffing or lymphocytic cuffing.

3. Mild changes were seen in the rest of brain.



Organ: Lung

Stain: H & E

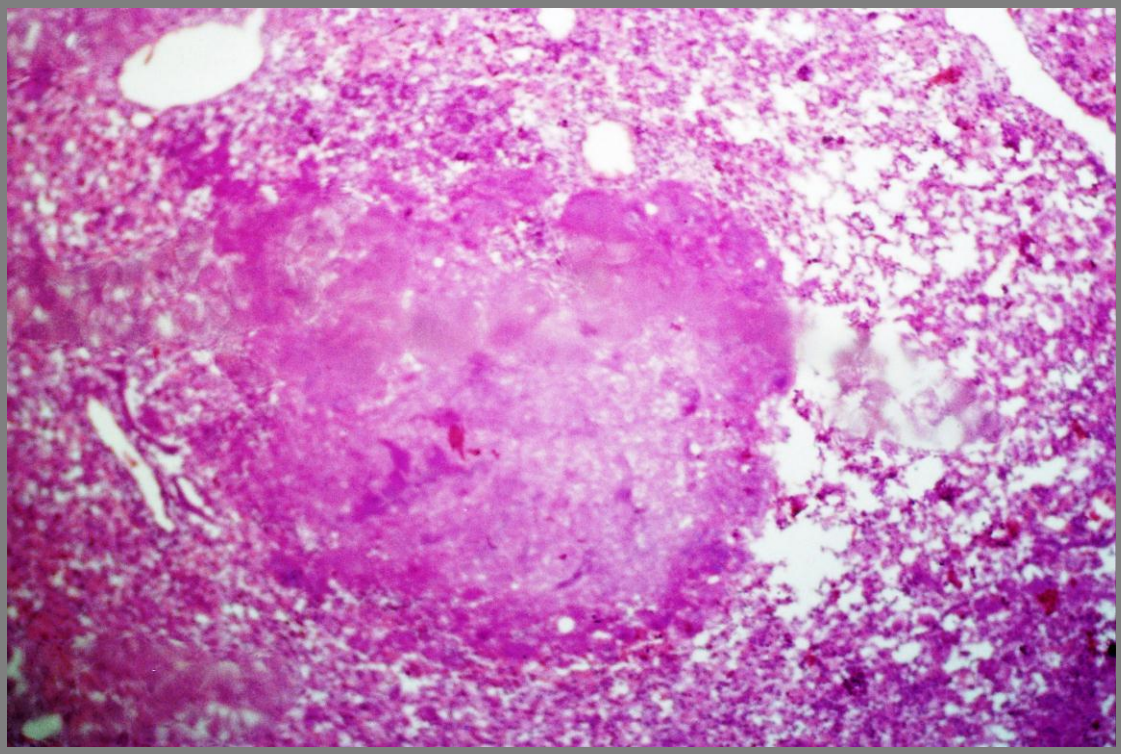
Lesion: Focal suppurative inflammation

Microscopical findings:

4. The characteristic circulatory and cellular alterations of inflammation represented by congestion of pulmonary blood vessels and capillaries with leucocytic cellular infiltration of the pulmonary parenchyma are seen.

5. The principle constituent of the inflammatory exudates is neutrophils in various stages of disintegration.

    1. The suppurative area appears as purplish homogenous sutructurless mass surrounded by dilated capillaries and leucocytic cellular infiltration mainly neutrophils and macrophages.



Organ: Skin

Stain: H & E

Lesion: Focal suppurative inflammation (Pustule)

Microscopical findings:

1. The pustule represented by presence of a space filled with finely granules of necrotic tissues within the malpighian layer of the epidermis.

2. This necrotic area infiltrated with numerous inflammatory cells mainly neutrophils in addition to macrophages and lymphocytes.