



# **BRONCHOPNEUMONIA CATARRHALIS**

- ★ The agents may be hematogenous to the lung.

For example, in the inflammation of the umbilical cord, the causative agent omphalogen spreads to the lung. However, in this case it is mostly metastatic abscess and purulent **BRONCHOPNEUMONIA**.

- ★ Aerogen infection from the upper respiratory tract to the lungs with the infection occurs.

# *General Features*

When primer occurs :

The agent mostly comes from the upper respiratory tract to the lungs with **aerogen transmission and spreads endobronchial!**

Therefore:

The inflammation is localized in alveoli and bronchioles in which one or more bronchiols terminate.

In macroscopic examination, these areas are **located in the lobules of one or more lobes**, and this type of pneumonia is also called **lobular pneumonie**.

**The spread in tissue is discontinuous.**

**The surrounding lobes are normal.**

# General Features

- ★ **Initially**, there is a serous exudate (inflammatory edema fluid) in bronch, bronchiol and alveoli . Alveoli have a few inflammatory cell.
- ★ **Later** in this fluid, desquered epithelial cells with neutrophil leukocytes increase.
- ★ This exudate is mixed with mucus from the bronchial glands. Thus, exudate mucous becomes muco-purulent exudate.
- ★ Therefore, this type of pneumonia is called “catarrhal pneumoni.

## *General Features*

- ★ **The fever is more localized in the cranioventral lobes.**
- ★ **The focus of each pneumonia belongs to a bronch, bronchiole.**
- ★ **In one or several lobes, their sizes are distributed in the same or different foci (lobes).**

# *General Features*

- ✦ The cross-section of the lung is in the granular landscape.
- ✦ It is dark or light red-yellowish-distorted exudate (liquid). Bronchus, there is similar exudate in bronchioles.
- ✦ There are also normal, atelectasis, emphysema fields around the pneumonia area .

 Catarrhal bronchopneumonia NOT complicated by pleuritis.

(Because the endobronchial spreads !!!)



**Lobular spreads**

# *Aetiology*

- ✦ **Primer agent is a bacterial infection.**
- ✦ **In general, ordinary bacteria, or rather facultative pathogens, are activated with the help of predisposing factors and develop this type of pneumonia.**



# *Aetiology*

**Irritative gases**

**Circulatory disorder**

**Fatigue**

**Cachexie**

**Immunity**

**Changes of nutrition and nursing**

**Age (predisposition)**

**Decreasing of elasticity on lung**

**Anesthetic drug**

**Lung edema**

# *Infectious Factors*

- ★ **Streptococcus spp.**
- ★ **Staphylococcus**
- ★ **E.coli**
- ★ **Bordetella bronchiseptica** (especially interstitial pneumonia at canine distemper as secondary agent katılır.)
- ★ **P.multocida**
- ★ **Pneumococcus sp. (calve)**
- ★ **Salmonella (calve)**

# *Infectious Factors*

- ✱ **Brucella sp. (calve)**
- ✱ **E.coli, Pasteurella sp, Corynebacterium pyogenes (pig, sheep)**
- ✱ **Corynebacterium equi**
- ✱ **Chylamidia sp. (rarely pig)**
- ✱ **Hemophilus suis, (rarely pig),**
- ✱ **Salmonella cholera suis (pig)**



## *Infectious Agents*

**Addition of bacteria to  
interstitial pneumonia with  
viral etiology  
develop secondary  
infection!**

# **HISTOPATHOLOGICAL : 3 Types**

- ✱ I. Desquamative catarrhal bronchopneumoni
- ✱ II. Purulent catarrhal bronchopneumoni
- ✱ III. Serous, sero-mucous catarrhal bronchopneumoni

The background is a dark blue field with several large, semi-transparent gears of varying shades of blue. On the left side, there is a vertical strip with a colorful, abstract, and somewhat pixelated texture in shades of orange, yellow, and brown.

## *The end of Catarrhale pneumonia*

- ★ **Upon recovery, the exudate is excreted with bronchi or resorbed with vessels. The damaged alveolar and bronchial bronchiol epithelium are regenerated.**

# *The end of Catarrhale pneumonia*

- ★ **Chronic catarrhal pneumonia is formed.**
- ★ **In the vicinity of bronchi and bronchiol, the connective tissue increases, peribronchitis and peribronchiolitis, or peribronchitis or peribronchiolitis nodosa result in occlusion.**
- ★ **Since bronchial secretion increases, mucous exudate is observed in the bronch lumen.**
- ★ **These regions are marked as the center of the lung cross section (cavity), pinhead size or larger foci, NODOSA.**
- ★ **In interstitial tissue, the connective tissue then increases the collagen fibers. Due to fibrosis, indurative pneumonia occurs in the lung.**

## *The end of Catarrhale pneumonia*

- ✦ It is severe and spread over large areas;
- ✦ As large bronches become clogged, asphyxia becomes a fatal death.
- ✦ Hypoxia, anoxia develops in these areas of the lungs if they are not severe and smaller bronchiols become obstructed and these areas undergo necrosis (necrotic pneumonia).



# *The end of Catarrhale pneumonia*

- ★ If the area of the necrosis is not wide, it will heal with relief (first, the granulation tissue is shaped, since the region takes the consistency of the meat, carnification is mentioned).
- ★ In this case and in chronic events; fibrosis, blood circulation is prevented in the lungs due to scarring, the right heart is also affected. The cor pulmonale is shaped.