

PNEUMOMYCOSE

Obligate, facultative fungi formed by granulomatous, inflammatory changes

In some cases, especially if the agent is spores or hyphae; according to the resistance of the organism, these lesions may be more exudative type.

The factors are hematogenous to the lung, aerogen

Macroscopic views are not specific

They are especially diagnosed by microscopic morphological lesions or cultural (mycological-microbiological) examination,

They're usually opportunists. In case of various factors (such as other infections, prolonged antibiotic treatment), they develop activity and cause illness.

ASPERGILLOSIS

Aspergillose

A. flavus

A. niger

A. nidularis

and the most pathogen

A. fumigatus um tur

It is common in poultry and mammals.

Metastatic hematogenous pathways to the lung from the aerogen or other organs. In mammals, it is also possible to infect the placenta.

Lesions spread to the whole lung starting from the bronchus and the alveoli where the agent first entered.

The lesion where it first enters is usually as a badge shape.

In acute events, necrotic changes are predominant. Melted lentil size up to the size of the muddy - yellowish nodes (nodules) are shaped.

In the microscopic examination, the necrotic region of the necrosis of the conidispores, which is the hypalesis or reproductive form of the conidispores, and the necrotic area, the perifocal edema of edema, leukocyte and hemorrhage in the surrounding alveoli is observed.

Thrombosis occurs in veins

The necrotic tissue spreads to the blood vessels.

In bronchas, inflammatory changes, bronchiectatic caverns are formed.

In chronic events granulomatous change is predominant. Hazelnut, walnut size grows around the capsule nodules develop.

Microscopic examination of the nodules: the agent, macrophage and a few of the areas of the giant power is formed by the fibrous tissue (connective tissue) has been surrounded by.

Aspergillus diagnosis is the main finding. The presence of conidispores encountered in all events.

Conidispores are found mostly in areas where the air is dense, more precisely in areas close to the branches or in the bronches. In the regions where there is little airing, the hyphae that do not have special features are located.



HISTOPLASMOSIS

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The causative agent is *Histoplasma capsulatum*.

It is not infectious, but non-bleeding (it does not pass through the bloodstream to the host)

It spreads to other organs besides the respiratory system. It causes hyperplasia, especially in reticuloendothelial cells.

The host spectrum is large.

In addition to human beings: dogs, cattle, horses, wild animals (eg foxes) and laboratory animals (rat, mouse, guinea pig) are encountered.

It is localized in the lung or causes extensive lesions.

Localized case :

The capsule is formed by later limiting nodules.

Histopathological examination of these nodules: yeast-like active epithelioid cells dried out; It is seen that there is focus around the encapsulated granulomatous inflammation. This is also a common form of localized histopathosis in humans.

Generalised case :

Interstitial tissue includes plasma cells, lymphocytes and epithelioid cells. The active epithelioid cell or other macrophages are round, rounded and encapsulated.

Pneumocystis carinii

Protozoon ?

mycotic agent ?

Pneumocystis carinii ?

Controversy exists among experts whether this is a protozoa or a fungus. Ribosomal and other DNA sequences indicate it is a fungus, not a protozoan.

This is still controversial

• **Induces interstitial pneumonia; Not granulomatous pneumonia**

- (5-7 micrometer cysts) contain 1-4 micrometer **trophozoites**
- Detected in tissue sections with PAS and GMS stains
- Trophozoites attach to pulmonary type 1 alveolar epithelial cells to induce damage

ACTINOBACILLOSE

ACTINOBACILLOSIS

More cattle sometimes cause pyogranulomatous inflammation in the pig.

The causative agent of hematogenous and aerogenic

Aerogen infection

Apical, intermediary lobes are encountered with soft areas containing small abscesses or abscess size.

Hematogenous infection

In all lobes, small (pig) or walnut-sized abscesses are formed.

Microscopic findings

granulomatous; pyogranulomatous type of inflammation

In the middle of the radier is the factor in the landscape; There are epithelioid histiocytes, histiocytes, giant cells and lymphocytes and connective tissue.

Blastomycosis

BLASTOMYCOSE

More dogs are encountered alongside people.
It causes localized skin infection or generalized mycotic infection.
In humans, the skin and lungs are generalized

DOG

It settles in the lung. Tends to be generalized.
Granulomatous, pyogranulomatous property.

Macroscopical findings

In severe cases, white-nodules are seen in pleura in all lobes of the lungs. They combine with each other to form larger nodules.

Sometimes it is liquefaction and it opens to bronches and pleuria. However, it is not complicated by pleuritis.

Granuloma and abscess are encountered in regional lymph nodes.

Generalized shape :

Similar lesions are seen in liver, kidney, spleen and other lymph nodes.

It is characterized by more exudative and more proliferative types than microscopic structures.

The exudative tendency: neutrophil leukocytes, granuloma of macrophages, pyogranuloma.

The proliferative tendency is in the composition of granuloma (granulomatous inflammation) consisting of epithelioid histiocytes and histiocytes.

They are seen in these regions.

Skin shape: Papules are formed. In a short time, abscesses, new abscesses occur in their environment.



COCCIDIOIDOMYCOSE

The factor is *Coccidioides immitis* .

Human and animals (dogs, cattle, sheep) in the respiratory system

(in the nose and lung) constitutes the primary disease.

There are double walled and endospores.

This morphological feature is used in diagnosis. The greater the number of spores or endospores determines the type of inflammatory reaction.



CRYPTOCOCCOSIS

Its effect is Cryptococcus neoformans.

It is rounded ovoid in culture and tissue sections and has a mucinous thick capsule around the mucopolysaccharide structure. In tissue samples stained with hemotoxylin eosin, this capsule is seen as a light colored ring because it does not get good dye. It gives the characteristic of morfological and provides its diagnosis.

Dogs, pigs, cattle, horses, monkeys and people are the main hosts.

It is saprophyte

Not transmitted directly from one host to another

It is taken from the environment by inhalation.