

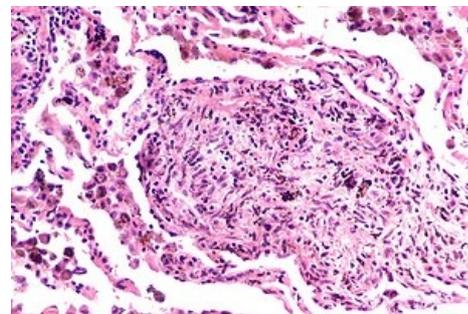
Pneumoconiosis

Pneumoconiosis is a **group of occupational diseases** caused by long-term inhalation of air containing specific **inorganic particles**. The basis of lung changes is the response of immunocompetent cells to these particles, which leads to damage to the lung interstitium.

Types of diseases

Silicosis

- **Silicosis**
- **asbestosis**
- **pneumoconiosis**
- **berylliosis**
- **talcosis**- occurs after exposure to talc dust (during its mining and grinding), possible clinical manifestation of the disease:
 - nodular lesions,
 - diffuse interstitial fibrosis,
 - granulomatous reactions around foreign bodies,
- **pulmonary involvement during inhalation of heavy metals** - cobalt, tungsten, carbide, possible pictures of the disease:
 - chronic diffuse inflammation with pulmonary fibrosis,
 - acute and subacute interstitial disability with EAA or BOOP,
 - obstructive pulmonary disease resembling occupational asthma.



Silicosis

Nowadays, we encounter these diseases rather rarely (the incidence decreased due to prevention in the work environment).

Types of changes

The nature of the inflammatory changes depends on the shape and size of the inhaled particles, the length and intensity of the exposure. Inorganic particles can be divided into **fibrogenic** (silicosis, asbestosis) and **non-fibrogenic** (other) particles in terms of shape. In general, diseases caused by fibrogenic particles are worse because they do not respond to anti-inflammatory treatment and thus tend to progress permanently and their prognosis is very poor.

Manifestations of the disease

Gradual decrease in lung function, worsening cough, dyspnea, and development of respiratory insufficiency.

Diagnostics

- History - symptoms (cough, shortness of breath), work and social history,
- X-ray of the lungs,
- functional lung examination (spirometry),
- BAL - if we need to identify the inorganic particles,
- biopsies are usually no longer performed.

Therapy

- Disease prevention (protective equipment, work environment limits),
- elimination of additional exposure,
- therapy of onset infections,
- long-term home oxygen therapy (DDOT),
- respiratory rehabilitation,
- lung transplantation (in indicated cases).^[1]

References

Related articles

- Chronic lung diseases • Interstitial lung processes
- Silicosis • Asbestosis • Carbon monoxide pneumoconiosis • Anthracosis

Source

1. ČEŠKA, Richard, et al. *Internal*. 1st edition. Prague: Triton, 2010. 855 pp. 460-465. ISBN 978-80-7387-423-0.

