

Asbestosis (lung disease)

Asbestosis is **interstitial pulmonary fibrosis** caused by long-term exposure to dust-containing asbestos.

Etiopathogenesis

The fibers reach the alveolus, activate macrophages, and develop an inflammatory and fibrotic process. The mechanism is not precisely clarified, the shape of the fibers and their „indestructibility“ play a role. The fibers are long and therefore cannot be eaten by a single macrophage. One fiber thus activates many cells, which creates an inflammatory reaction – ROS, cytokines, etc. Fibers longer than 5 µm are especially dangerous. Long latency, progressing *20 or more years*.

Pathology

Histology corresponds to other types of interstitial fibrosis. In the advanced stage, a honeycomb lung structure develops. A typical finding is an asbestos body – axial asbestos fiber coated with mucopolysaccharides, containing hemosiderin (as beads on a thread). They can also be found in healthy individuals (they are considered evidence of exposure).

Clinical picture

Initially, there is small exertional dyspnea, which gradually progresses to rest. A cough with a small expectoration is present. It progresses slowly (even after being eliminated from risk). The main complication – Chronic obstructive pulmonary disease (COPD). Physical examination – crepitus on the lung bases (may not be present). Hypoxemia, respiratory insufficiency, cor pulmonale occur in the advanced stage. With long latency, there is a high risk of developing mesothelioma.

Investigation methods

Lung-X ray – symmetrical shading of *irregular opacities* basally (finding in the upper fields is small). Usually, there is emphysema in the upper fields.

ILO classification

Fine striping, mesh (s), medium-coarse (t), coarse, irregular shadows (u) CT, HRCT. Pulmonary function examination – restrictive disorder, reduced compliance, diffusion capacity for CO.

Links

Related articles

- Asbestos
- Asbestos diseases
- Mesothelioma
- Carboniferous pneumoconiosis
- Pneumoconiosis

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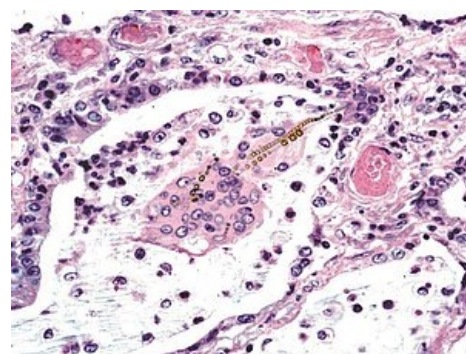
- BENEŠ, Jiří. *Studijní materiály* [online]. [cit. 24.02.2010]. <<https://jirben.wz.cz>>.

References

- PELCLOVÁ, Daniela. *Nemoci z povolání a intoxikace*. 2. edition. Karolinum, 2006. 207 pp. ISBN 80-246-1183-X.



Asbestosis – fibrous plaques on the diaphragm caused by asbestos



Asbestosis – enlarged interstitium containing asbestos bodies



Asbestosis – basal X-ray shading

