

and after treatment. It improved in 62% of the miners on an average of 204 cc. The improvement of neurotic conditions present in the majority of silicotics is an essential part of treatment. Rehabilitation as such is only possible in the early stages of the disease. It will be possible to consider the rehabilitation of patients no longer suitable for work in the mines only when they have been retrained for other work.

-- Cond. from Arch. Ind. Hyg. & Occ. Med.

- 77 Investigation of Silicotic Lungs with the Electron Microscope. Hl. Kneig-Staub No. 28, 31-38 (Mar. 15, 1952) German,

The lower limit of visibility, which is of the order of 0.3 micron for the light microscope, can be extended to particles 100 times smaller by the electron microscope. Electron diffraction patterns and chemical tests should be used to identify the components of dusts. Digestion of lung tissue containing silicotic nodules with concentrated sulfuric acid and potassium nitrate yielded platelets showing signs of chemical attack. On the other hand, when the tissues were treated with hydrogen peroxide, or washing the tissue below 300° C and digestion with potassium chlorate the particles were less attacked and gave the electron diffraction pattern of montmorillonite. Whether the montmorillonite was formed in the lung by weathering of mica or whether it already occurred in the airborne dust remains to be studied. Identical lung residue shows quartz by x-ray diffraction but montmorillonite under the electron microscope. This is explained by the fact that these minerals occur in different size classes. Both methods should be used.

-- Cond. from Bull. Hyg.

- 78 Silicatosi: Etiology, Pathogenesis, and Clinical Treatment. M. A. Kovnatskii and others. Gigiena i Sanit. No. 8, 28-32 (1952). Russian.

A review is given of the disease caused by particles of silicates, rather than those of the type producing silicosis proper. A study of the disease caused by asbestos particles showed that the chemical and biological features are increased rate of respiration (compensatory) and in stages the level of blood saturation with oxygen is essentially normal, although changes in the myocardium are evident on the electrocardiogram. The tone of the veins is reduced, and the permeability of capillary walls suffers a decline in a considerable number of cases. This affects the oxidative processes as shown by the increase of oxidized glutathione and a decrease of total glutathione.

-- Chem. Abstr.