

- 494 A Critical Review of the Chemical Theory of Silicosis. Luise Holzapfel. Beitr. Silikose-Forsch. No. 15, 1-19 (1952) German.

The solubility theory is first reviewed and reasons are given why it cannot be maintained in its original form, which says that silicosis is due to dissolved silica. The main argument is that silicosis requires years to develop, while the solubility of quartz drops in the course of days or weeks. A modified solubility theory is suggested by the author's published work and on her recent results with carbohydrates. From plant extracts, a fraction containing carbohydrate and silica could be isolated, and experiments with blood and quartz showed specific adsorption of a galactose complex. The galactose adsorbed on quartz still reacts with hydrazine, demonstrating that the aldehyde group does not take part in the reaction with quartz. Next follows a very speculative chapter dealing with the structure of silica-galactose complexes. Collagen is said to contain galactose but there is no evidence on its structure. The osazone reaction can be used to demonstrate quartz in human silicotic lesions, as well as to demonstrate galactose adsorption on quartz, and a number of colored illustrations of this effect are shown. Electron micrographs of serpentine asbestos after disintegration in water are also shown.

-- Cond. from Bull. Hyg.

- 495 Considerations on a Case of Progressive Massive Silicosis Following Past Limited Exposure. M. Bodo and L. Briccarello. Rass. med. ind. 21, 233-238 (May-June 1952) Italian.

The authors discuss a case of progressive massive silicosis of the lungs which was seen by them in April, 1951. The patient was a metal worker, aged 28, who had been employed, for 2 years only, at chiseling grindstones in 1939-40. Signs and symptoms of silicosis, which are described, appeared in November, 1950. At the time of the examination, signs and symptoms were said to be stationary. Tuberculosis was absent. X-rays showed a generalized deep and confluent shadow on the lungs, except for clear areas which may have been due to spontaneous pneumothorax or to localized emphysema. In the light of this case the authors question the statement that simple pneumoconiosis can be arrested by removing the patient from exposure to dust. The tendency to progress varies with the physico-chemical properties of the dust and the individual tissue reactivity. As in the case of hepatic cirrhosis, the causative agent may start a chain reaction which does not stop progressing after the cause has been removed.

-- Cond. from Bull. Hyg.

- 496 Usefulness of the Photoroentgen Method in Silicosis and Asbestosis Investigations of Workers. E. Zanetti. Rass. med. ind. 21, 130-132 (1952) Italian.

A comparative study of several tens of thousands of photoroentgen films and roentgenograms has produced several interesting conclusions concerning investigations of silicosis and asbestosis among workers. 33 mm. photoroentgen films were found to represent clearly massive silicosis, advanced