

material and in making similar determinations on air samples. The major difficulties experienced lie in the need for delicate microscope adjustments and in the preparation of microscopic samples from air samples collected in isopropyl alcohol. -- Author's conclusions

- 157 Silicosis of the Bone Marrow. J. L. Nicod and D. Gardiol.
Arch. Gewerbepathol. Gewerbehyg. 18, 79-90 (1960). French.

Silica dust in the lung produces lesions which always start as an accumulation of histiocytes round little blood vessels. Some particles are carried via the reticuloendothelial system, to other organs, and such particles retain their pathogenicity. The presence of silicotic nodules in the liver and spleen is a common finding in the silicosis of miners and industrial workers in Switzerland, but the presence of silicotic changes in the bone marrow has not so far been clearly demonstrated. The authors think that the reason for this is that the morphological study has not been sufficiently complete. They have therefore examined the vertebral and femoral bone marrow from all silicotic cases examined post-mortem over a period of years, and have traced the progress of lesions caused by silica. The first reaction is an accumulation of histiocytes, at first fluffy, then more discrete. Silver staining shows up a close meshed network of fibers. Although such lesions become more sharply defined they for the most part do not progress further. At this stage they are indistinguishable from those produced by infections such as tuberculosis. That is why they have been ignored by others interested in silicosis. It is concluded that the presence of silicotic nodules in the bone marrow shows that silica retains its toxicity even when it leaves the lung. Silicotic lesions should therefore be found in still more organs. Finally, a morphological study does not give any lead as regards functional damage.

-- Cond. from Bull. Hyg.

- 158 Serum Lipoprotein and Protein Content in Silicosis. H. Valentin, N. Lichius and G. Zerlett.
Arch. Gewerbepathol. Gewerbehyg. 17, 227-237 (1959). German.

The authors made a detailed study of the serum protein and serum lipoprotein electrophoretic patterns of 56 silicotic patients. The results confirmed those of previous workers in that serum albumin was in the main decreased whereas gamma-globulin was increased; lipid fraction I levels were on the whole lower than those found in healthy subjects. There was no relation of serum lipoprotein content to grade of severity of silicosis.

-- Bull. Hyg.

- 159 The Varieties of Asbestos, their Study by Optical Methods and their Pathogenic Action.
K. G. Schmidt. Staub 20, 173-180 (June 1, 1960). German.

Asbestos is usually classified rather unscientifically by the characteristics which make it technically useful, by its place of origin, its color and so on. With modern methods, however, including an elaborate microscopical technique, 11 well-defined varieties of asbestos can be distinguished, the most important of which are chrysolite, amosite, crocidolite, tremolite and anthophyllite. In discussing the pathogenic action, the author states that asbestos may possibly undergo changes in the lung. However, it is doubtful how far the different varieties can be recognized in the lung dust. In speaking of the formation of asbestos bodies as a reaction intended to get rid of asbestos in the lung, he suggests that varieties susceptible to chemicals will form these readily. Chrysolite and possibly amosite may do so rather than the kinds of asbestos which are very resistant. Warning is given that the formation of bodies is not necessarily a disease. A considerable controversy has raged over the question as to whether chrysolite or hornblend is capable of producing bodies in the lungs. The literature as regards this and also the question of the action of short-fibered asbestos is reviewed. All forms of asbestos must be regarded as dangerous. It is suggested that chrysolite, crocidolite, and amosite have long, yielding fibers which can penetrate the lung more easily than the stiff brittle fibers of tremolite and anthophyllite. This would produce mechanical damage; chemical effects might result from the more sensitive chrysolite and amosite. The iron and aluminum content of the different types may also influence the pathogenic action.

-- Cond. from Bull. Hyg.