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LITERATURE ABSTRACTS

MEDICAL

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TOXICOLOGICAL

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PLAINTIFF'S EXHIBIT

CHR-301

...minum chloride the quartz dust was less strongly taken up by the phagocytes. During ...agocytosis of corundum dust the percental value of phagocytosis was significantly less influenced by aluminum chloride than in case of quartz phagocytosis. Phagocytosis of rock crystal, coated with trimethylsilyl-hydrate and aluminum oxide hydrate, has also been examined. Here too, rock crystal coated with mono-molecular groups of aluminum oxide hydrate was essentially less strongly phagocytosed. The question whether a variably firm agglomeration of the dusts having been observed after the addition of aluminum chloride as well as with the dusts coated on the surface, will explain the differences observed in the rate of phagocytosis cannot yet be decided. APCA Absts.

Pulmonary Silicotuberculosis in a Potato Farmer. Report of a Case. K.K. Kapur, J.M. Judd, and L. Delli-Pizzi. Diseases of Chest 47, 560-563 (May, 1965).

This is a case report of pulmonary silicotuberculosis in a 66-year-old potato farmer, an unusual situation, which to the authors' knowledge, has never been described. The pathologist's diagnosis of silicotuberculosis of the resected specimen was quite surprising as the patient had denied history of association with known occupations where exposure to silicious dust was possible. The roentgenographic features of the lesions too were inconsistent with those of silicosis (generally bilaterally symmetrical, nodular fibrosis, usually earlier development of hilar lymphadenopathy). Thus the possibility of the lesion being silicotic in nature was least expected. On requestioning he vaguely mentioned that he was exposed to a dusty atmosphere, while grading potatoes by machine, but at that time he gave no specific statement about the duration of exposure. The authors were dubious of the pathologic diagnosis in the absence of history of adequate exposure to crystalline-free silica. In order to substantiate their diagnosis, they submitted a sample of the settled dust from the potato-sorting area, for analysis of total and free silica. An analysis of soil samples submitted revealed (51.1% of total silica, and 43.88% of free silica as SiO_2) significantly high levels of crystalline-free silica. Following the receipt of these results of chemical analysis, the authors were able to elicit a pertinent history of prolonged exposure to the causative agent. The farmer had worked for over 47 years for 7-8 hours a day for 8-9 months in the year, grading potatoes in his cellar. This exposed him to a high concentration of crystalline-free silica from the grading machine. This stresses the importance of the fact that a detailed occupational history is an absolute essential in such cases. Significant pulmonary changes have been seen in the roentgenograms of farmers, but the significance of the silica concentration in the soil has never been appreciated.

Experimental Studies on Asbestos. F.M. Engelbrecht. S. African J. Lab. Clin. Med. 10, 45-48 (June, 1964).

The pathogenicity of pure, very fine crocidolite particles and of a mixture of crocidolite and quartz was investigated after intratracheal injection of 50 mg. of these dusts into the lungs of rats. The proliferation of reticulin due to these two dusts respectively, was found to differ significantly. The crocidolite particles elicited an initial reticulinosis that became slightly more compact, with or without collagen fibers, especially in cases with acute infections. It appeared that exposure only to asbestos dust predisposed to acute respiratory infections. The asbestos-quartz admixture gave a progressive increase in reticulin and collagen, resulting in partially acellular collagenous nodules (grade-3 fibrosis). The histological picture of the pathological changes appeared to be very similar to those observed in human asbestosis. Asbestos dust in combination with a small amount of free silica should be regarded as extremely dangerous. No malignant tumors have been produced in the experimental period by either asbestos or the asbestos-quartz admixture. Some non-malignant pleural changes were observed in animals of the asbestos group with infection, and in animals of the asbestos-quartz group. -- APCA Absts.

Asbestos Bodies in Human Lungs at Autopsy. D. Cauna, R.S. Totten, and P. Gross. J. Am. Med. Assn. 192, 371-373 (May 3, 1965). Reprints Available from Industrial Hygiene Foundation Upon Request.

The incidence of asbestos bodies in the lungs was investigated in 100 autopsies of adults. Smears were taken from the sectioned surfaces of the upper and lower lobes of both lungs. They were dried and mounted without staining, and approximately 400 low-power fields

were examined in each side. Routine histological sections of unexpanded lungs were examined in all cases. Asbestos bodies were found in 41% of the subjects. They were encountered in persons up to 24 years of age. Among males the incidence was 47%, and in females 34%. Although significant microscopic pulmonary fibrosis was encountered in two positive cases, no instance of classical asbestosis was found. Mesothelioma of the pleura was not encountered. Primary lung carcinoma occurred in one patient with asbestos bodies and in one without. -- Authors

687 Benign Asbestos Pleurisy. H.B. Eisenstadt.
J. Am. Med. Assn. 192, 419-421 (May 3, 1965).

The clinical picture of benign asbestos pleurisy differs greatly from that of classic asbestosis. It may occur in the absence of significant pulmonary disease and respiratory dysfunction. This entity must be considered in the differential diagnosis of any form of idiopathic pleurisy. The history of exposure to asbestos will aid in directing the attention to this entity; however, the final diagnosis depends on a lung tissue specimen containing asbestos corpuscles or asbestos fibers. -- Author's summary

688 Asbestos and Cancer. The Report and Recommendations of a Working Group Convened under the Auspices of the Geographical Pathology Committee of the International Union Against Cancer. Can. Med. Assn. J. 92, 1020-1025 (May 8, 1965).

This report is not suitable for abstracting, however the Editor of the Canadian Medical Association Journal summarizes the purpose and work of this international meeting as follows: "In October 1964, the New York Academy of Sciences sponsored an international meeting on the biological effects of asbestos. Following this meeting, some 40 delegates from Australia, Canada, Finland, France, Germany, Great Britain and Ireland, Italy, South Africa and the United States were invited to study the vast amount of information which had been presented with a view to the organization of an international study of asbestos and cancer. The terms of reference of this Working Group covered three major aspects of the problem: epidemiology, pathology and experimental pathology, and physics and chemistry. The findings of the Working Group and their recommendations arising from these studies are recorded, in slightly abridged form." -- Cond. from Editor's summary

PHYSICAL ASPECTS OF THE ENVIRONMENT

689 First US Tests of High Altitude Pressure Suits. C.L. Wilson.
Arch. Environmental Health 10, 805 (May, 1965).

Historical research was conducted to collect and evaluate information on the earliest American high altitude pressure suit research program. Mr. Post, the first aviator in the world to fly in a high altitude pressure suit, attempted to break the existing world's altitude record. There were three prototype suits. The third, which was successful, was tested in Army Air Force altitude chamber. These were the first US altitude chamber tests of pressure suits. His stimulus as a private citizen greatly contributed to American pressure suit technological superiority and directly influenced the design of the Project Mercury astronaut US Navy and Air Force pressure suits. It is surprising that development was even partially successful without the guidance of high altitude physiologists and diving suit specialists. Each of six major nations enlisted these specialists as crucial team members.
-- J. Am. Med. Assn. References & Re...