Stacks-After Current Table

RECEIVED
FEB 11
DIVISION OF
HEALTH AFFAIRS LIBRARY



Industrial Hygiene Digest

INDUSTRIAL HEALTH NEWS

LITERATURE ABSTRACTS

MEDICAL

ENGINEERING

CHEMICAL

TOXICOLOGICAL

LEGAL

Stacks-After Current Table

JANUARY, 1969
(Vol. 33, No. 1)

INDUSTRIAL HYGIENE FOUNDATION
5231 CENTRE AVENUE -:- PITTSBURGH, PA. 15232

SCF-ALLF-03100

PLAINTIFF'S EXHIBIT
CHR-316

...s After Current Table

Bagassosis: An Epidemiological, Environmental, and Clinical Survey. C. E. D. Hearn. Brit. J. Ind. Med. 25. 287-292 (Oct., 1968).

An epidemiological and environmental survey of 172 bagasse workers employed by a raw sugar producing company in Trinidad was carried out in order to assess the prevalance of respiratory symptoms and to determine if exposure to bagasse was associated with alterations in ventilatory capacity. The epidemiological surgey failed to reveal a significantly increased prevalence of respiratory symptoms in the more exposed group but showed that the group of Indian workers who were regularly and continuously exposed to bagasse had a significantly lower ventilatory capacity than the control group. This diminished ventilatory capacity was demonstrated despite negligible dust concentrations in the plant. However, the possibility that persistent exposure to low concentrations of bagasse may be the cause must be considered. During a five-year period, 17 patients with bagassosis were seen, the clinical picture being similar to that described in extrinsic allergic alveolitis from other causes. The systematic variations demonstrated in some indices of ventilatory function in different racial groups are discussed. --Author's abst.

Immunological Aspects of Bagassosis. C. E. D. Hearn and V. Holford-Strevens. Brit. J. Ind. Med. 25. 283-292 (Oct., 1968).

Immunological investigations of 37 patients with bagassosis, 92 unaffected bagasse workers, and 150 non-exposed controls showed that precipitins against extracts of bagasse could be demonstrated just as frequently in the unaffected and the non-exposed as in the affected. However, there was a general tendency for the precipitin levels of patients with bagassosis to fall slightly with increasing time after recovery from the clinical episode. The presence of the precipitins so far demonstrated in the sera of bagasse workers therefore appears to be of no clinical significance. Inhalation tests with an extract of bagasse, in a group of 16 patients who had had bagassosis, produced late, systemic reactions in 15 similar to those described in farmer's lung and bird fancier's lung, so supporting the hypothesis that a similar type of hypersensitivity is the cause of bagassosis. Inhalation of extracts of Thermoactinomyces vulgaris also produced typical, late reactions in 12 out of 15 subjects, whereas extracts of Micropolyspora faeni failed to produce reactions in any of 16 subjects. The specific reactions to inhalation tests with Thermoactinomyces vulgaris were typical of a precipitin-mediated type of hypersensitivity reaction and support the view that this actinomycete may be important in the aetiology of bagassosis. --Authors' abst.

Pleural Fibrocalcific Plaques and Asbestos Exposure. L. O. Meurman. Environ. Research 2. 30-46 (Sept., 1968).

In a number of serial investigations an association has been demonstrated between the development of benign calcific pleural plaques or malignant diffuse mesothelioma and slight inhalation of asbestos dust, often some 20 or 30 years previously. As the industrial use of asbestos has increased enormously during the last few decades, a rise in the frequency of mesothelioma—which has hitherto been rare—is anticipated in the near future (Thomson, 1962). From the standpoint of epidemiological research concerning asbestos exposure, the demonstration of calcific plaques on roentgenograms has proved a useful criterion. So far, only an association has been disclosed, however, not an obvious causal relationship. Other pathogenetic factors, still unknown, have to be taken into account either as a contributory or the sole cause. The occurrence of bilateral calcific plaques does not yet imply the presence of asbestosis-pneumoconiosis. In the majority of subjects who have not been occupationally exposed to asbestos, pleural calcification is not combined with pulmonary changes or signs of pneumoconiosis. There are 48 references. --Author's abst.

Mortality From Lung Cancer and Other Causes Among Workers in an Asbestos Textile Factory. J. F. Knox, et al. Brit. J. Ind. Med. 25. 293-305 (Oct., 1968).

An account is given of work in an asbestos textile factory and of the steps taken to reduce exposure to dust since the introduction of the Asbestos Industry Regulations in 1931. Measurements of the amount of dust to which men were exposed in the scheduled areas have been made by various methods since 1935. The data obtained by these methods are not directly similar

able. Measurements made since 1930 show that the mean yearly dust levels have been fairly constant from year to year and have varied from place to place between 1 and 5 particles 5 to 100 microns long and at least three times as long as they were wide per c.c. of air. Chrysotile was used predominantly in the factory, but small amounts of crocidolite were also processed at all relevant periods. Death rates have been recorded for all the 256 men who were employed for at least 20 years in the scheduled areas since the first man completed 20 years' exposure in 1916, and for the 558 men and 220 women who were employed for at least 10 years in the scheduled areas but were never employed in these areas before 1933. The results show a substantially increased mortality for men who were exposed for 10 or more years before 1933 (48 deaths from all causes against 17.1 expected). The increased mortality among these men can be accounted for by an increased mortality from cancer of the lung (11 deaths against 1.2 expected) and from diseases of the respiratory and circulatory systems associated with asbestosis. Men employed before 1933, but for less than 10 years, showed an increased mortality from lung cancer (5 deaths against 2.6 expected), but no significant increase from other causes. Men and women who were exposed only since January 1, 1933, have had a mortality experience close to the national average. Analysis of the trends in mortality shows (1) a decrease in mortality from lung cancer and other deaths associated with asbestosis with reduction in length of employment before 1933, and (2) an increase in mortality from lung cancer and other deaths without asbestosis with age. Twenty-three cases of lung cancer occurred in men who had been employed in the scheduled areas for at least 20 years. One was regarded as a pleural mesothelioma and the rest (approximately 18 in excess of expected) appear to have been ordinary bronchial carcinomas. Four other mesotheliomas have been diagnosed since 1963, all in men and women with less than 10 years' exposure, one with only seven months' exposure, and one in a man who had been employed in the scheduled areas only since 1937. The results provide grounds for believing that the occupational hazard of bronchial carcinoma has been largely eliminated, but the data are insufficient to estimate the extent of the risk which may remain.

--Authors' abst.

80 Fibrous and Mineral Content of Cosmetic Talcum Products. L. J. Cralley, et al. Am. Ind. Hyg. Assn. J. 29, 350-354 (July-Aug., 1968).

With the exception of 4 of the 22 cosmetic talcum products analyzed, the levels of free silica, cobalt, nickel, chromium, and manganese were generally of a low magnitude and within a narrow range. It is not known whether the four products represent a significant proportion of sales in the industry or to what extent the sources of the talc in these four formulations are the same as sources of talc specified for use in other talcum products in the competitive market. The levels of silica, chromium, and nickel in these four products are sufficiently high, however, to be of concern in their potential to cause disease. All of the 22 talcum products analyzed have an appreciable fiber content, ranging from 8 to 30% by count of the total talcum particulates, and averaging 19%. The fibrous material was predominantly talc but probably contained minor amounts of tremolite, anthophyllite, and chrysotile as these are often present in fibrous talc mineral deposits. Cosmetic talcum products should be included as a source of the fibers, from which may be derived ferruginous bodies observed in the lungs of humans. The meaning of the presence of these ferruginous bodies, however, is uncertain. Industry has the know-how to safely handle fibrous material as well as toxic metals such as nickel, chromium, cobalt, and manganese once adequate criteria have been established. Unknown significant amounts of such materials in products that may be used without precautions may create an unsuspected problem. For this reason continued research and investigations and communication of findings are necessary in this area. There are 24 references. --Authors' conclusions

81 Ferruginous Bodies in Human Lungs. Prevalence at Random Autopsies. M. D. Utidjian, P. Gross, and R. T. P. deTreville. Arch. Environmental Health 17 327-333 (Sept., 1968). Reprints available from Industrial Hygiene Foundation, 5231 Centre Ave., Pittsburgh, Pa., 15232.

Ferruginous bodies in the tracheobronchial central core or pulmonary central tissue were present in 37 of 54 autopsies that were done in 54 of the men [illegible] and in 3 of [illegible] 5.5%. The youngest subject with ferruginous bodies was a 24-year-old woman. The bodies were generally more abundant in the lungs of the men. Thirty-two patients in this series had some form of malignant disease, but there was no apparent association between the malignancies and the relative abundance of ferruginous bodies. There were two cases of primary lung cancer in men