FILE NAME: Talc (TALC)

DATE: 1948

DOC#: TALC108

DOCUMENT DESCRIPTION: Journal Abstract - Pneumoconiosis Due to Talc in the Cosmetic Industry

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BJIM v. 5 (1948)

Estimation of the respiratory capacity, especially during work under a load, gave valuable information about the amount of damage caused by the dust. But even at rest the diminished respiratory reserve is often noted long before there are any radiological changes. The morbid changes do not occur in any clearly defined order, but there is rapid spread of diffuse hyaline degeneration with particular injury to the elastic tissue. It is difficult to distinguish in the radiograph the aluminium lung from one which is tuberculous, but spontaneous pneumothorax is common and the loss of elastic tissue produces characteristic distortions of the pulmonary and cardiac outlines. The macroscopic changes recorded are readily explained from examination of microscopical sections. *G. C. Pether.*

Pneumonoconiosis Due to Talc in the Cosmetic Industry. MILLMAN, N. (1947). *Occup. Med.*, **4**, 391–394.

Pneumonoconiosis resulting from talc (asbestine and tremolite) has been fairly extensively reported as occurring in miners and millers. This, however, is only the second case reported as developing in a man working on the manufacture of talcum powder. He was aged 55, and had for 24 years been employed in the talcum-powder mixing room of two cosmetic factories. He complained of pain in the chest and weakness. He was slim and underweight but had no abnormal physical signs. *X*-ray examination of the chest revealed nodular densities ranging from 1 to 3 mm. scattered throughout both lung fields and in both hilar regions, and a thickened pleura between the upper and middle lobes of the right lung. Dust counts showed 16,000,000 particles per cubic foot (0·028 cubic metre) of air in the general room atmosphere, 236,000,000 when the mixing machine was being filled, 133,000,000 while the pulverizer was operating. The powder contained less than 0·5% of free silica. The talc had added to it zinc stearate, osmokaolin, chalk, and colouring.

K. M. A. Perry.

Benign Pneumoconiosis Due to Tin Oxide. A Case Report with Experimental Investigation of the Radiographic Density of the Tin Oxide Dust. PENDERGRASS, E. P., and PRYDE, A. W. (1948). *J. industr. Hyg.*, **30**, 119.

A workman, aged 45, had for 15 years been bagging tin oxide dust obtained by treating tin cans with a caustic. The inhalation of the dust produced pseudo-nodulation in the lung fields similar to that seen in arc welders, and the authors named the condition benign pneumoconiosis. There was little fibrosis and never any true nodulation. The tin oxide dust contained 96·5% of tin oxide, but no silica. When an artery of a freshly excised dog's lung was injected with a saline suspension of tin oxide, or the suspension was instilled into the bronchi, even small amounts of it produced appreciable densities in the lung.

H. M. Vernon.

Pneumonokoniosis in New South Wales Coal Miners. NISBET, A. T. (1948). *Med. J. Aust.*, **1**, 389.

The coal mined in New South Wales is soft and has a silica content varying from 0·4% to 4·0%; no anthracite is found in Australia. The average number of employees in New South Wales collieries between 1941 and 1946 was 17,600. The incidence of incapacitating pulmonary fibrosis due to dust was 4·90 per 1,000 employees per year (2·75 partly and 2·15 totally incapacitated). The earliest identifiable changes are of nodular fibrosis rather than reticulosis. Enlargement of the hilar and mediastinal lymph nodes is unusual in N.S.W., and it is unusual to find any evidence of tuberculosis. Linear fibrosis is common but is not by any means confined to coal-workers and cannot be taken as evidence of damage by dust. If much linear fibrosis is detected in the radiograph of a coal-miner, there is usually little or no sign of nodular fibrosis. From this the author concludes that the presence of chronic bronchitis is protective against the action of inhaled dusts, and suggests that the increased [inflammatory] secretions in the bronchi trap the dust particles, which are later expectorated. [This is an interesting observation, but it is doubtful whether workers elsewhere will agree that chronic bronchitis has a protective influence.] *H. E. Harding.*

Radiological Study of the Pulmonary Hilum in Silicosis. (Studio radiologico sugli ili polmonari nella silicosi.) ZANETTI, E. (1948). *Med. d. Lavoro*, **39**, 7.

The author examined 4,000 chest radiographs; in 1,062 silicotic changes were observed. He divides the latter series into 600 with fibrous reticulation, 110 with fibrosis and early nodular changes, 240 with nodules, and 76 with massive silicosis. He considers that in nearly all cases with reticulation there is some visible silicotic change in the hila. The changes did not vary much with the source of risk. Marked involvement of the lower parahilar lymph nodes was noted in workers who gradually developed pathological changes due to persistent slight inhalation of dust. In most of the 1,000 cases there were some hilar changes. The common hilar changes characteristic of silicosis include symmetrical variations from the normal with enlargement, a more marked demarcation of the lower parts, and a "fluffy" border to the shadows. Hilar changes often precede the more widespread reticulation but, when the latter is marked and nodular areas appear together with patches of emphysema, the contrasting density of the hila is less obvious. In the differential diagnosis from tuberculosis it should be observed that the glandular changes in the latter are rarely symmetrical but are more clear-cut. *G. C. Pether.*

Clearing of *X*-ray Shadows in Welders' Siderosis. DOIG, A. T., and MCLAUGHLIN, A. I. G. (1948). *Lancet*, **1**, 789.

The authors first drew attention to welders' siderosis in 1936 (*Lancet*, **1**, 771). In the present paper they describe their findings when they re-examined 15 of the cases which were the subject of the earlier work.

Two had left their employment as welders; *x*-ray changes had been observed in both in 1936, but in 1945 the radiograph in 1 case was normal and in the other the shadows had become less intense. Four men whose earlier radiographs had been abnormal were unchanged: they had continued work as welders, but remained clinically well. The radiographs of 2 men were normal in 1936, but were classed as "suspicious" in 1945; 2 others who had been suspect in 1936 now showed reticulation. In the remaining 5 cases there were no abnormal *x*-ray changes in 1936 or 1945. None of the men had any clinical disability.

The sputum has been shown to give the Prussian-blue reaction for 18 months after exposure to dust ceases, and it is concluded that much of the dust is removed from the lungs in the sputum. Several workers agree that the condition does not cause disability and should be classified as a benign pneumoconiosis. *L. W. Hale.*