

FILE NAME: German Articles - Some with English Translation (GER)

DATE: 1958-1959

DOC#: GER042

DOCUMENT DESCRIPTION: English Abstracts from Medical Journal

Bohlig

1000 001 2

Vol. 34 No. 10 pp. 969-1064

OCTOBER 1959

BULLETIN OF HYGIENE

LIBRARY
JAN 12 1960
NATIONAL INSTITUTE OF HEALTH

CONTENTS

The Eye as the Portal of Entry of Infections	969	Other Communicable Diseases	1002
Public Health	972	Zoonoses	1002
Maternal and Child Health	974	Diseases due to Fungi	1004
Care of Old Persons and the Chronically Ill	976	Rheumatic Diseases	1006
Vital Statistics and Epidemio- logy	977	Cancer	1007
Infective Diseases	979	Occupational Hygiene	1010
Tuberculosis	997	Sanitation	1030
Venereal Diseases	1001	Food and Nutrition	1033
		Bacteriology and Immunity	1034
		Miscellaneous	1063
		Book Reviews	1063

For detailed Contents see p. ii

BUREAU OF HYGIENE & TROPICAL DISEASES

KEPPEL STREET · LONDON W.C.1

Telephone: MUSeum 304E

PRICE 10/6

Annual Subscription (Jan.-Dec.) £5 (\$14)

his experience of 150 patients, cor pulmonale was rare. The ECG is often characteristic with right axis deviation and diphasic or inverted T in D2, D3, and the thoracic leads. S. Rossi (pp. 54-56) dealt with the ECG in pulmonary tuberculosis. Between 1947 and 1958 the ECG was performed on 10,000 patients (5,680 men and 4,420 women) at the C. Forlanini Institute at Rome. 3,780 had abnormal tracings of some sort, mostly atypical voltage, or changes in S-T and T wave; right axis deviation occurred in 743 and left axis deviation in 403. There is no typical ECG syndrome. M. CASTELFRANCO (pp. 58-59) discussed pathogenetic factors in cor pulmonale. The mechanical insufficiency of the vascular bed is related to the size of the right ventricle; hypoxaemia causes increased pulmonary pressure. G. PEZZUOLI (pp. 59-60) spoke on the lesser circulation in pulmonary surgery. Investigation of 53 patients from 1 month to 6 years after pneumonectomy or lobectomy by means of angiopneumography, ECG, and cardiac catheterization showed that surgery did not induce pulmonary hypertension later. E. SARTORELLI (pp. 61-62), discussing cor pulmonale, stated that it was a frequent complication of silicosis as demonstrated either post mortem or by study of the haemodynamics of the pulmonary circulation; the other usual methods had not helped in diagnosis. Examination of 28 patients with confluent and massive disease showed cor pulmonale in 82%; the ECG on 115 patients showed right ventricular preponderance in only 9.8%. Cardiac catheterization on 30 patients with silicosis showed pulmonary hypertension in a high percentage though by the usual methods there was only a small number. He concluded that cor pulmonale in silicosis must be connected with the organic alterations in the lesser circulation. P. C. CURTI, L. DONNO and G. L. SCALFI (pp. 62-68) mentioned that at autopsy on 194 patients with pulmonary tuberculosis, cor pulmonale was present in 22%; catheterization of 70 patients frequently showed pulmonary hypertension without any clinical or ECG signs of affection of the right heart. The addition of tuberculosis even if only slight and localized, greatly aggravates the position. Autopsy on 28 patients showed right hypertrophy in 14. Emphysema is an important factor. Cardiac catheterization on 21 patients with the combined disease showed pulmonary hypertension in 60% at rest and in 95% after work. While there is in such cases a functional deficit of ventilation, and pulmonary hypertension especially after work, anoxaemia is not evident, hence the value of treatment by breathing oxygen is not great.

[From the evidence submitted it would seem that cardiac catheterization is of value in demonstrating pulmonary hypertension in the absence of evident signs. In view of Prof. Monaldi's figures on schoolchildren at Naples, it would be interesting to have details of the BCG vaccination results.] W. K. Dunscombe

NORDVIK, N. La silicose et l'asbestose prédisposent-elles au cancer pulmonaire? [Are Silicosis and Asbestosis predisposing Causes of Cancer of the Lung] *Arch. Belges Méd. Sociale, Hyg., Méd. du Travail et Méd. Légale*, 1959, Feb., v. 17, No. 2, 85-99, 2 figs. [94 refs.]

A grinder of steel castings who suffered from silicosis developed cancer of the lung which was proved by the

detection of malignant cells in the sputum. He died of compensation on the basis that the combined disease constituted an occupational disease. This question whether or not malignant disease of the lung should be regarded as causally related to pneumoconiosis and silicosis is not uncommon nowadays; indeed it has become an increasingly frequent problem for compensation medical boards. The crucial difficulty is that primary cancer of the lung is a disease prevalent among all groups of the population, irrespective of their occupations. A particular aspect of the problem is the relatively high incidence of lung cancer among heavy cigarette smokers. In the absence of experimental proof that pneumoconiosis and cancer of the lung are linked aetiotogically, recourse must be had to studies of the relative prevalence of lung cancer in separate occupational groups. This statistical approach has been used in many field studies all over the world. A review of these studies is the substance of the present article [The author is to be congratulated on the comprehensive bibliography]. The author does not accept that there is any interrelationship between cancer and silicosis; he admits the probability in asbestosis. These conclusions accord generally with present thought and practice in Great Britain. The recent observations of J. C. WATSON on mesothelioma of the pleura among workers in asbestos mines in South Africa [*Proceedings of the International Conference of Experts on Pneumoconiosis*, Johannesburg, Feb., 1959—in the press; J. & A. Churchill, London] support the conclusion in asbestosis. There is, however, the reservation that all varieties of asbestos mineral may not be equally carcinogenic; present chrysotile dust particularly is under suspicion.

[The question in respect of both silicosis and asbestosis should be regarded as open. In recent years the National Union of Iron and Steel Foundry Workers in Great Britain has claimed that there is an excessive incidence of cancer not only of the lung but of other organs among their members (see TURNER, H. M. & GRACE, H. G., this *Bulletin*, 1938, v. 13, 295). The number of cases recorded by separate observers cannot always be taken at their face value. Thus Great Britain GLOYNE undertook the pathological investigation of asbestosis cases for several observers and individual cases are common to several reported series. Nearly 25 years ago the interrelationship of cancer of the lung and asbestosis suggested itself to the reviewer when a husband and wife, certified cases of asbestosis, both died of primary cancer of the lung.]

A. Meiklejohn

BONFIG, H., JACOB, G. & KALLABIS, B. Über Morbidität und Pathologie des Asbestlungenkrebs. [Morbidity and Pathology of Lung Cancer with Asbestosis] *Ztschr. f. Unfallmed. u. Berufskrankh.* 1959, Mar. 15, v. 52, No. 1, 64-78, 3 figs. [Numerous refs.]

The extensive world literature on cancer of the lung in asbestos workers and on related subjects is here reviewed at considerable length with statistical analysis and critical discussion. From these reports the admittedly rough estimate is made that among 40,000 asbestos workers in the world 80 cases of lung cancer have been

ted in 20 years. The opinions and conclusions of different observers vary considerably and these differences are examined. Particular consideration is given to the importance of skilled autopsy examination and the difficulties which may exist in forming an opinion on cancer in a particular case exposure to asbestos connected to the development of cancer.

Further research on this cancer problem is needed. Up to the present it is stated that a comparison of the expectation of pulmonary cancer in the general population with that of workers in asbestos shows that in the latter groups the risk of cancer is not increased. The morbidity curve of cancer with asbestosis perhaps reaches its peak at a somewhat earlier age than that of industrial bronchial carcinoma. *M. E. Delafield*

1. M. J., KASS, I., SCHAEFER, W. B. & DENST, J. Infection with Atypical Tubercle Bacilli in Graphite Pneumoconiosis. *Arch. Intern. Med.* 1959, May, v. 103, No. 5, 814-7, 2 figs. [11 refs.]

Graphite pneumoconiosis is comparatively rare. In the literature of the subject post-mortem findings have been reported in 7 cases but though pulmonary cavitation was noted in 5 of these, in 1 case only was it attributed to tuberculosis.

A 2-year-old white man while employed at a graphite mill in Texas, where he had worked for 9 years, developed a spontaneous pneumothorax, which was treated by pleural effusion. Radiographic examination revealed diffuse pulmonary fibrosis, which was diagnosed as graphite pneumoconiosis, and excavating tuberculosis of the right upper lobe. This was treated by resection and the diagnosis of pneumoconiosis was confirmed. The particular interest of the case is in the pathological findings. Acid-fast bacilli were cultured from the sputum and directly from the resected pulmonary cavity. On oleic acid-albumin agar at 37°C. the colonies were round, white and glistening. The colonies, on exposure to daylight, became slightly wrinkled and discoloured, but not yellow. They were strongly catalase positive, rapidly decomposing hydrogen peroxide. The organisms were non-pathogenic for guinea pigs, mice, rats and rabbits. They were, from the outset, fully resistant to 20 µgm. of streptomycin per ml.

1 µgm. of isoniazid per ml., partially resistant to 2 µgm. of isoniazid per ml. and susceptible to 2 µgm. of para-aminosalicylic acid per ml. Organisms with these characteristics have been classified with those of the non-chromogenic "Batley" type. [The symbol "yg." is used throughout for these quantities of drugs per ml., and "mg." refers to microgrammes (µgm.).]

In the present case the organism is regarded as an atypical nonchromogenic mycobacterium and the pneumoconiosis is considered to be a factor predisposing to mycobacterial infection with organisms which are not usually pathogenic for man. A few similar cases have been reported in association with silicosis.

A. Meiklejohn

ii. — & SCHILLING, R. S. F. Respiratory Function during the Day in Rayon Workers—a Study in Byssinosis. *Ibid.*, 161-2.

i. Byssinosis has been reported in men and women exposed to cotton, flax and hemp. It has not been reported in those working with man-made fibres, though some of these contain cellulose, and are worked in the same manner as cotton.

In a mill that had been spinning viscose rayon for 20 years, 91 out of a total of 93 card-room and blow-room workers were interviewed and asked similar questions to those asked in other byssinosis prevalence surveys.

No byssinosis was found among those who had only been exposed to rayon. Of the 73 workers who had also been exposed to cotton dust previously, 15 had had byssinosis. Since working in rayon these 15 have lost their regular chest tightness on Mondays (first day of work after absence). 6 are symptom-free, the others having residual bronchitic symptoms.

ii. The clinical findings in this mill were confirmed by ventilatory function tests on those who had had byssinosis and matched controls. The maximum breathing capacity was measured (by the indirect method) before and after work on a Monday. There was no significant change in ventilatory capacity during the day in this group. This contrasts with a mean fall in ventilatory capacity of 14% in byssinotics and 6% in normal subjects in those working in cotton card rooms.

Both these clinical and physiological findings indicate that the causative agent of byssinosis is absent in a rayon mill.

C. H. Wood

STOTT, H. Pulmonary Disease Amongst Sisal Workers. *Brit. J. Indust. Med.* 1958, Jan., v. 15, No. 1, 23-37, 5 figs. [22 refs.]

"A study was made in Kenya in a factory making ropes and bags from sisal to determine whether the dust produced causes pneumoconiosis or other chest diseases.

"The average dust concentration in the card rooms was 243 particles per ml. (0.5 to 5 µ). Other parts of the factory were relatively dust free. Deposited dust had a very low silica content.

"The respiratory illness sickness rate was twice as high in the card-room workers as in those working in other parts of the factory.

"Radiographs of 37 workers with between six months' and 15 years' exposure in the card rooms revealed four with a similar type of apical fibrosis. Two showed heavy lung markings. In 46 films of workers of long experience in other parts of the factory only one showed heavy lung markings and none apical fibrosis.

"The average maximum breathing capacity (recorded for one minute) was 53 l./min. in 36 card-room workers and 61 l./min. in 25 workers in other parts of the factory and of similar age. The difference is statistically significant.

"No worker exposed to sisal dust gave the characteristic history of byssinosis. Skin sensitivity tests with extracts of sisal were uninformative.

"A subsidiary radiological survey of men in three sisal estates showed no evidence of pneumoconiosis or apical fibrosis but the exposure of the workers had been short and the dust concentration low.

1. J. R. An Investigation of Byssinosis in a Rayon Mill. *Trans. Ass. Indust. Med. Officers.* 1958, Jan., v. 7, No. 4, 157-60.