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Industrial Hygiene Digest

INDUSTRIAL HEALTH NEWS

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1948
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MARCH, 1948
(Vol. 12, No. 3)

INDUSTRIAL HYGIENE FOUNDATION
4400 FIFTH AVENUE -:- PITTSBURGH 13, PA.

FACTS

to industrial concerns holding membership in Industrial Hygiene Foundation. The Foundation is a non-profit association of industries for the advancement of healthful working conditions.

Vol. 10 March, 1948 No. 3

Foundation Announces New Laboratory

Industrial Hygiene Foundation has arranged with Elizabeth Steel Magee Hospital, part of the University of Pittsburgh Medical Center, to occupy a laboratory building providing facilities for expansion of the Foundation's basic researches in industrial health. The building is located near the Foundation's headquarters at Mellon Institute.

Andrew Fletcher, President of the St. Joseph Lead Company and Chairman of the Foundation's Board, in a recent communication to Member companies announcing the new facilities, said in part:

"In addition to our routine plant and field studies, we propose to develop at the new Laboratory an organization for the primary use of our Members along the following lines:

"1. Toxicological studies, including animal work.

"2. Research in industrial hygiene methods along the line of development of new instruments, method of analysis and procedures for use in practical field work, etc.

"3. Engineering research under controlled laboratory conditions, such as air cleaning methods, ventilation requirements, etc."

The additional laboratory facilities have been necessitated by the increasing demand from Member companies for investigations in fundamental and applied phases of industrial hygiene and toxicology and in industrial physiology.

The first project will be started early in April.

I--H--F

271 Blood Changes in Silicotic Coal Miners. B. Tortoir-Donati. Medicina del lavoro, 38, 151-166 (June, 1947) 12 refs.

In a study of the blood pictures of 103 coal miners, 72 of whom were still working and 31 of whom had ceased, the following results are cited: (1) There was a tendency to anemia and leukocytosis with neutrophilia (accompanied by hypertrophic granulations), especially in cases of massive silicosis and silico-tuberculosis. (2) Neither eosinophilia nor any deviation to the left of the Arneth formula was evidenced. (3) Stepping up of the sedimentation rate was significant in advanced stages of silicosis. (4) Weltmann's reaction did not come true in the flocculation tests; while the Ta Ka ta -Dohmoto reaction tended to give higher values in the first stages of silicosis and values lower than 60 in Silico-tuberculosis; and Matefy's reaction was also influenced by incipient silicosis. The author thinks that to detect the beginning of tubercular infection every silicotic patient should be subjected to blood sedimentation and flocculation tests. In one place, he refutes Heimann's finding (See I-H-F Abst. 278, Mar., 1947) relating to the increase of youg non-segmented leukocytes, which was corroborated only in tuberculous patients studied as controls but not in silicotics or mixed cases. -- Ind. Hyg. Index

272 Sedimentation Rate After Effort in the Diagnosis of Silicosis. L. Parmeggiani. Med. d. lavoro, 37, 216 ff. (1946) (Italian)

The erythrocyte sedimentation rate was observed in a number of subjects before and after exercise in the morning, after fasting and resting. The exercise was a quick ascent of 60 stairs or a 15 to 30-minute walk, depending upon the patient's condition. Three groups showed no increase in sedimentation rate; healthy controls, those with uncomplicated reticular silicosis, and with unassociated disease (with the exception of two with acute bronchitis). Patients with confluent silicosis showed an increase of 7 to 35%. In a group known to have silicosis with active tuberculosis there was a consistent increase of 30 to 70% in E.S.R. In another group with supposedly inactive tuberculosis, those whose E.S.R. was increased by exercise were found later to have active tuberculosis. From these findings the author claims that the E.S.R. estimations are of value in deciding, in conjunction with other signs, upon the activity of a tuberculous lesion in silicotics suspected of infection. -- From Brit. J. Ind. Med.

273 Some Thoughts on Silicosis. L.E. Hamlin. Ind. Hyg. Newsletter, 8, 5, 16 (Feb., 1948)

The extent of the work done on silicosis has led many to believe that little more remains to be done, so much that "complacency amounting to boredom has crept into the picture." The author points out that this attitude is unjustified; that there is still much to be learned about silicosis, and much to be accomplished in acting according to the best knowledge, particularly in diagnosis. He emphasizes that diagnosis must take account of accurately made dust counts as well as the x-ray picture and a general history of exposure. A table of chest conditions whose x-ray pictures simulate silicosis presents the following: (A) Industrial: (1) organic: byssinosis, bagassosis, and tabacosis, (2) inorganic: anthracosis, radiopaque deposits (baritosis, siderosis, and deposition of tin), beryllium, and asbestosis; (B) Non-Industrial: (1) mycotic (yeasts and molds): aspergillosis, moniliasis, wood dust spores, coccidioidomycosis, blastomycosis, and actinomycosis; (2) miscellaneous: miliary tuberculosis, sarcoidosis, mitral stenosis,

274 Pneumoconiosis in Coal Workers in Wales. J. Gough. Occ. Med., 4, 86-97 (July, 1947)

A number of illustrations show characteristic sections of lungs showing massive fibrosis, simple pneumoconiosis, focal emphysema, and other effects of coal mine dust. Brief descriptions accompany the illustrations. Silica is not entirely responsible for these manifestations.

275 Some Physiological Observations on West African Coal Miners. W.S.S. Ladell. Brit. J. Ind. Med., 5, 16-20 (Jan., 1948)

Rectal temperatures of hewers and of tubmen taken in the middle of the shift were statistically correlated with the air temperatures at the working place. The mean weight loss during a single shift was 1.76 kg. Some men lost more than 3 kg.; there was no correlation between weight loss and working temperature. The chloride content of sweat obtained from the African miners was comparable with that of sweat from Europeans living in the heat. No casualties from the heat were seen, nor have any been reported.

-- Author's summary.

276 Pseudotumorous Forms of Pneumoconiosis in Coal Miners: A Roentgenologic and Clinical Study. E. Martin and L. Roche. Arch. d. mal. profess, 7, 310 ff. (1946) (French)

The "pseudotumorous" condition was studied by the authors in 60 cases among coal miners. In the roentgenogram the "tumors" appeared as dense shadows in the lungs with sharp borderlines; in about half the cases only one was present, and they appeared in any part of the lungs. The development of the spots varied; sometimes blurred shadows developed into more accentuated ones; in some cases very small shadows gradually coalesced; less frequently large nodules continually grew; and in a few cases a diffuse shadow contracted and left clear borders. Contraction was a very common feature of all the tumors after their formation. Emphysatemous areas were usually found. The size varied from that of a walnut to that of an orange. Diffuse shadows, nodules, or fibrotic cords were usually present in other parts of the lungs. The tumors remain quiescent for one to five years, in a few cases longer. The lesion then progresses and cavities may appear. The tumors are sometimes destroyed, in some cases by tubercle bacilli. During dissolution, there is gray-black expectoration, and a clear zone appears in the roentgenogram. A miner may work 10 years with an isolated tumor. In the majority of cases the process advances after several years and the man dies of a cardiac failure or of tuberculosis. -- From Occ. Med.

277 The Experimental Production of X-Ray Shadows in the Lungs by Inhalation of Industrial Dusts: I. Iron Oxide. H.E. Harding, J.L.A. Grout, and T.A.L. Davies. Brit. J. Ind. Med., 4, 223-224 (Oct., 1947)

Definite radiological shadows have been obtained from the lungs of rats after inhalation of crocus, a crude form of ferric oxide. These shadows correspond exactly with aggregates of phagocytes containing dust. There is no evident tissue reaction to the presence of these phagocytes and their contained dust. The radiographic shadows are produced solely by the aggregates of iron oxide. -- Authors' discussion and summary.

278 The Significance of the Presence of Asbestos Bodies in the Sputum of Asbestos Workers. P. Luton, J. Champeix and P. Faure. Arch. malad. profess., 8, 56-68 (1947) 33 refs. 7 photomicrographs. (French)

The authors examined 176 persons who worked or had worked with asbestos. They find that asbestos bodies appear somewhat early in the sputum of these workers, sometimes after only 20 days from the time of exposure. These fibers may persist even after cessation of exposure, but occur in almost all workers exposed to asbestos dust, whether they exhibit functional or radiographic evidence of asbestosis or not. Brown or golden yellow bodies are seen in the sputum along with uncolored fibers or spicules. The presence of these bodies, more or less scattered, indicates that the subject has inhaled asbestos dust, but it does not necessarily signify that asbestosis exists. In other words, the discovery of asbestos bodies in the sputum is only one in the ensemble of elements which permit such a diagnosis. It is true that in the majority of cases where asbestosis is predicated by reason of the intensity of functional manifestations and radiographic signs, numerous asbestos bodies are noted, massed together, and displaying a radiate formation. As such, they are identical to the clumps that are observed on histological examination of the lungs of deceased cases, in the alveoli. -- Ind. Hyg. Index

279 Therapeutic Remarks About Benzene Poisoning. M. Duvoir, L. Pollet and M. Gaultier. Arch. d. mal. profess., 7, 230 (1946) (French)

The authors experimented with sulfur preparations in hemopathies due to benzene. In a case of agranulocytosis due to benzene they used extract of liver, ascorbic acid, sodium hyposulfite, penicillin and methionine all by injections and without effect on the blood picture. In the discussion, Kohn-Abrest mentions that he found benzene in the blood of a man two months after cessation of exposure. Perrault has discovered it in the bone marrow even 14 months after exposure. -- Occ. Med.

280 An Evaluation of Thenylene (N,N-Dimethyl-N-(Alpha-Pyridyl)-N'-(Alpha-Thenyl) Ethylene-Diamine Hydrochloride). R.R. Kierland and R.T. Potter. Proc. Staff Mtgs. of Mayo Clinic, 23, 48-51 (Jan. 21, 1948) Abst.

A clinical evaluation of thenylene, a new drug with antihistamine properties, shows it to be of definite value in the treatment of certain dermatologic conditions. Its most marked effect was in the treatment of dermatoses, such as urticaria and angioneurotic edema, which are characterized by cutaneous edema. With few exceptions oral doses of from 50 to 100 mg. three or four times a day led to a lessening or disappearance of such edema. No cumulate effect was noted and untoward reactions were minimal. A clinical comparison, as to the results of treatment, of thenylene, benadryl and pyribenzamine revealed a high degree of similarity. -- Authors' summary and conclusions.

281 Two Fatal Cases of Intoxication With Symmetric Dichloroethane. Jan Roubal. Casopis Lekarii Ceskych, 86, 1-8 (1947) (Czecholovakian)

Two fatal cases of symmetric dichloroethane are described. The autopsy revealed in both cases hemorrhagic gastritis, inflammation of the mucosa of the esophagus and duodenum, degeneration of the liver, and typical toxic nephrosis. -- C.A.