

which were observed in the dockers. The animals were killed at the various stages of the disease, and microscopic examination of the lungs revealed the essential part played by the sharp-edged vegetable debris in the development of pneumoconiosis. The authors admit the possibility of a fungous or a pyogenic superinfection of the primary lesions.

The great majority of the grain workers with pneumoconiosis presented the second stage of the disease. The first stage of the disease with chronic bronchitis and dyspnea on exertion requires immediate change of work and roentgenologic examination every year for three years. Patients presenting the second stage of the disease with permanent dyspnea and cyanosis must discontinue any kind of work, sojourn in a rest home and submit to roentgenologic examination every six months for two years and after that every year for three additional years.

The extraction of dust from cereals is feasible and should be done by cyclone aspirators at the time of the unloading.

BERYLLIOSIS. F. BORBÉLY, Schweiz. med. Wchnschr. 80:323-326 (April 1) 1950.

The criteria of the diagnosis of beryllium poisoning are:

1. Proof of exposure to beryllium: The atmospheric concentration at which symptoms occur is over 100 $\mu\text{g./cu.m.}$ of air. About 300 cases of acute and 11 cases of chronic berylliosis occurred in America in the extraction of beryllium, where the average concentration was 675 $\mu\text{g./cu.m.}$

2. Absorption. Beryllium is present in the urine of most exposed persons and indicates absorption but not poisoning. It is best estimated by a spectrographic method, which can demonstrate amounts corresponding to 0.1 $\mu\text{g./L.}$

3. Clinical symptoms may be classified as: (a) Nonspecific irritation of skin and mucous membranes, usually from contact with beryllium halogen compounds or acid salts. This may be an erythematous, edematous, itching dermatitis of the chest, forearms, face and scrotum; acute rhinitis, sometimes leading to ulcers and perforations of the septum; catarrhal conjunctivitis, tracheitis and bronchitis, which may progress to a fatal acute pneumonitis.

(b) Specific granulomatosis of lungs, skin and other organs. Chronic granulomatosis differs from acute berylliosis in not arising during contact, but months or years after cessation of exposure. Repeated attacks of acute respiratory inflammation often precede the stage of severe general symptoms—lassitude, weakness, loss of weight—which may last for weeks or months to be followed by cough, dyspnea and pain in the chest. Decrease in vital capacity occurred in 83 per cent of the cases recorded by Machle.

The roentgenogram shows a diffuse granular and finally nodular granulomatosis. The granulomas are rarely larger than 1 mm. in diameter and are localized chiefly in the alveolar walls, extending gradually to the interstitial tissue of the interlobular septums of the large vessels, the bronchioli and the intrapulmonary bronchi. Microscopically the nodules are at first cellular in structure, consisting of lymphocytes, plasma cells and a few large mononuclear cells, later of hyalinized fibrous tissue. Inclusion bodies such as are found in silicosis, tuberculosis and Boeck's sarcoid have not been observed; areas of necrosis, not occurring in Boeck's sarcoid, are frequently present.

Granulomas may also occur in lymph glands, spleen, liver and bone marrow.

The differential diagnosis must be made with respect to Boeck's sarcoid, erythema multiforme, periarteritis nodosa, mediastinal lymphoma, metastases of cancer, mitral stenosis, lympho-granulomatosis, moniliasis and other fungoid infections of the lung, and pneumoconiosis.

Therapy is at present ineffective. The chief aim must be prophylaxis, checking and controlling exposure at its source.

ETHEL BROWNING [BULL. HYG.].

VARIOUS FORMS OF PNEUMOCONIOSIS STUDIED ESPECIALLY IN ITALY: THIOPNEUMOCONIOSIS AND BARITOSIS DUE TO BARIUM SULFIDE. G. PANCHERI, Med. lavoro 41:73 (March) 1950.

Pancheri found in two groups of employees (working with pure sulfur and with barium sulfide, respectively) that thiopneumoconiosis has the same clinical characteristics and