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This article is based upon data collected by the author from the examination of some 700 workers exposed to aluminum dust in German war industries. The examinations were primarily radiological and clinical but included also 125 vital capacity and sputum tests, and 100 blood counts. The chief complaints recorded in the personal medical histories of these workers were dry cough with stitch-like pains in breathing, dyspnoea, failing appetite and dragging gnawing pains in the abdomen. There were no pathognomonic findings on clinical examination. The blood counts exhibited a relative lymphocytosis and eosinophil cells were somewhat increased up to 5-10 per cent. Total leucocyte counts tended to be low, whilst red cell counts produced no significant changes. Blood sedimentation tests were also normal. Vital capacity tests showed a reduction in capacity. Four cases of spontaneous pneumothorax were noted, one of them fatal.

Radiologically the earliest sign consisted of focal shadows in the apical regions with, later, an increase (often one-sided) of the normal bronchial markings in the upper and middle thirds of the lung, giving a reticular appearance. There was also sometimes an increase in these markings in the lower lobes suggesting increased drainage to the hilum glands. Retraction of the diaphragm and distortion of the heart shadow were found. At a later stage the focal shadows tended to increase and become confluent (unfortunately the radiograms reproduced have been much reduced in size and do not bring out all the finer points mentioned).

One case came to autopsy. On microscopical examination the connective tissue elements of the lung showed coarse, branching hyaline collagenous fibres enclosing phagocytes containing fine and coarsely granular particles which differed from carbon particles by their jagged outlines. In parts of the lung these hyaline collagenous fibres were also found surrounding the walls of the alveoli, which contained phagocytes. These changes were most marked in the right upper lobe. (No illustrations are given.) The regional lymph glands exhibited a few of these dust cells lying chiefly in small groups. It is suggested that these histological changes result from a colloidal reaction between the aluminum dust particles and the tissue fluids.—*Bull. of Hyg.*

THE INJURIOUSNESS OF ALUMINUM DUST TO THE LUNGS.

Jöten and Eichhoff. *Arbeitsschutz*, pp. 102-109 (1942); *Chem. Zentr.*, vol. II, p. 923 (1942).

Aluminum dust presents an industrial hazard.—*Chem. Abstrs.*

EXAMINATION OF WORKERS IN AN ASBESTOS FACTORY.

A. Böhme. *Arch. f. Gewerbepath. u. Gewerbehyg.*, vol. 11, no. 4, pp. 433-452 (Nov. 10, 1942).

This is a record of clinical and radiological observations made in an asbestos factory during the years 1936-1937 and the year 1940. The factory handled

raw asbestos and manufactured a variety of asbestos products. It employed up to 500 workers. Of 132 persons examined, 29 per cent showed radiological evidence of asbestosis. Correlating these findings with exposure, it is stated that there were in workers with less than three years of exposure 5 per cent of cases, in those with 3-5 years of exposure 12 per cent, in 5-10 years 56 per cent, and in over 10 years 79 per cent. Five cases of pulmonary tuberculosis were noted. The clinical histories of these are recorded.—*Bull. of Hyg.*

FURTHER OBSERVATIONS ON OCCUPATIONAL CARCINOMA IN ASBESTOS WORKERS. A. Wels. *Arch. f. Gewerbepath. u. Gewerbehyg.*, vol. 11, no. 4, pp. 536-560 (Nov. 10, 1942).

This article is a record of two cases of asbestosis complicated by cancer of the lung. The first patient was aged 43, with an exposure of 11 years in an asbestos factory; death was due to squamous cell carcinoma. The second worker had had 30 years' experience in asbestos work and showed at autopsy an atypical epithelial cell new growth.

The author suggests there is a causal relationship between asbestosis and carcinoma.—*Bull. of Hyg.*

INVESTIGATIONS ON THE CAUSE OF INDUSTRIAL LUNG DISEASE IN THE MANSFELD COPPER MINES. J. H. Hellmers and H. Udluft. *Arch. f. Gewerbepath. u. Gewerbehyg.*, vol. 11, no. 4, pp. 480-502 (Nov. 10, 1942).

This article is a general survey of the mineralogical aspects of the industry with special emphasis on their relation to the dust hazard, but very little medical information is contained in it. The copper mines have been worked for a period of 700 years, and what is known as Mansfeld pneumoconiosis ("Mansfelder Staublungen"), has been the subject of a number of articles since 1934, some of the findings of which have been summarized (in *Bull. of Hygiene*, vol. 11, p. 282, 1936). The article consists almost entirely of very elaborate chemical and mineralogical analysis of the raw material of the mines and the dust produced, including, by way of comparison, analyses of a portion of one silicotic lung obtained from a Mansfeld miner. No details of morbid anatomy or of the histological condition of this lung, however, are given. The figures of these analyses are not suitable for abstraction. The dust encountered showed particles of numerous different substances including limestone, kaolin, silica, quartz, feldspar, mica, sericite and rutile. These varied in size from less than 2μ up to more than 50μ .—*Bull. of Hyg.*

ILLNESS CAUSED BY CADMIUM. Joseph J. Schifftner and Henry Mahler. *Amer. J. Pub. Health*, vol. 33, no. 10, pp. 1224-1226 (Oct., 1943).

Two outbreaks of acute cadmium poisoning are described in which 7 persons became ill with acute gastritis

within $\frac{1}{2}$ to 1 hour after partaking of heated with cadmium. In contradistinction to reports in the past, the drinks were not contaminated by ice cubes exposed to scalings from cadmium plated evaporators. A survey of apartment house developed field test, shows 25% of the one manufacturer to be cadmium plated. Platers revealed refrigerator shelves also had also been cadmium plated. Evidence in this investigation points to the fact that plating is being done in other cities.—*Au*

LUMINOUS DIAL PAINT. Calif. Safety N. 3, p. 7, (Sept., 1943).

The luminous dial industry has expanded with the recent expansion of the air. The luminous substance used on dials is a minute amount of Ra or mesothorium, an exciting agent. The energy, released by other radioactive substances in the form of alpha rays can be stopped by lead screens but is exceedingly penetrating and some through even large thicknesses of lead.

When radioactive material enters the body, alpha rays can be destructive. Bone, and especially the marrow, suffer worst from radioactive material. Anemia and bone necrosis or decay as from radium. Less drastic forms of injury are burns, and loss of nails.

There is no practical method of removing radioactive deposits from the human body or of arresting their releasing ability. The only method of preventing injury is to prevent exposure. Adequate ventilation or sufficient air space will reduce radioactive dust. Clothing will prevent contact. Cleanliness and accumulation of dangerous material.

Frequent blood counts for employees in workrooms should be tested periodically to see that it does not exceed limits. Radon content can also be determined in expired air of workmen.—*Stephen L. Mac*

THE ALLERGENIC PROPERTIES OF THE VEG. A CASE OF ASTHMA DUE TO TRAGACANTH. Gelfand. *J. Allergy*, vol. 14, p. 203 (May, 1943).

Published reports of sensitivity to tragacanth indicate that the chief sources of sensitization are karaya gum in hair-waving lotions and tragacanth in the offset sprays used by printers. Persons exposed to occupational contact with gum include confectioners, employees of gum engaged in the manufacture of cigars, matches, porcelain and pottery, and other known sources of possible contact with gum is presented.

severe cases than in the mild cases. These differences are statistically significant. The author finds that amongst the mild cases low plasma chloride concentrations were more frequent when vomiting had occurred than when there was no vomiting, and more frequent when the patients suffered from cramp than when there was no cramp. But the reviewer finds that these differences between the sub-groups of mild cases were not statistically significant.

Of the personal factors related to collapse the most important appear to be loss of acclimatization (following two to seven days' absence from work), disturbance of health, and unacclimatization. Emphasis is laid on the importance of deficient salt intake.

In the deeper levels of these mines, 7,000 to 8,000 ft., dry bulb temperatures reach 115° to 120°F., and wet bulb temperatures as high as 97°F. are reported. Collapse is liable to occur when the wet bulb temperature exceeds 90°F., and especially when it is above 93°F. The engineer should keep the wet bulb below the latter level. The benefits of air-conditioning are demonstrated by a striking fall in the incidence of collapse at Champion Reef Mine.—*T. Bedford.*

TOXIC NECROSIS OF THE LIVER FROM TRINITROTOLUENE.

Walter L. Palmer, Gerald S. McShane and William H. Lipman. *J. A. M. A.*, vol. 123, no. 16, pp. 1025-1027 (Dec. 18, 1943).

In three cases of apparent trinitrotoluene poisoning with recovery, the evidence suggests that the toxic necrosis of the liver was severe in one, moderate in the second, and slight to moderate in the third.

A residual pigmentation and inflammation of the skin of the ankles was noted in the third patient in addition to the jaundice, anilism and gastrointestinal symptoms characteristic of trinitrotoluene intoxication.—*Authors' summary.*

CO-INCIDENCE OF PRIMARY CARCINOMA OF THE LUNGS AND PULMONARY ASBESTOSIS. F. Homburger. *Am. J. Path.*, vol. 19, no. 5, pp. 797-807 (Sept., 1943).

In the medical literature there are now at least 19 known cases of asbestosis associated with primary pulmonary carcinoma. In 4137 autopsies at the pathology laboratory at Yale University School of Medicine, there were 45 cases of pulmonary carcinoma in the years from 1918 to 1938. Asbestosis was diagnosed 8 times, silicosis 17 times. Pulmonary carcinoma was found in 4 of the 8 cases of asbestosis and twice in the 17 silicotic cases.

Despite the high correlation of the foreign body asbestosis in the lungs with primary pulmonary carcinoma, this is a small series of cases and the value of these data is limited. Three cases are given in detail. The diagnosis of pulmonary asbestosis was diagnosed according to the following criteria: 1) fibrosis of the lung and 2) presence of asbestosis bodies.—*Stephen L. Moley.*

ASBESTOSIS AND PULMONARY TUBERCULOSIS. R. Desmeules, L. Rousseau, M. Giroux and P. Richard. *Laval méd.*, vol. 8, p. 217 (March, 1943).

Asbestosis is an occupational disease of the lungs due to inhalation of asbestos dust. It is characterized by the transformation of normal lung tissue into fibrous tissue. Symptoms appear usually five to seven years after the beginning of the exposure. The presence of asbestos bodies in the sputum is a proof for the existence of pulmonary asbestosis. Both asbestosis and tuberculosis were seen in 8 workers exposed to asbestos dust for five to twenty years. Three of these cases are described, in whom the asbestosis was masked by tuberculosis and where the history and the presence of the asbestos bodies permitted the diagnosis.—*Am. Rev. Tuberc.*

ASBESTOSIS AND PULMONARY TUBERCULOSIS. R. Desmeules and M. Giroux. *Laval méd.*, vol. 8, p. 227 (March, 1943).

The case history of a forty-four year old man is given who had worked for twenty years in an asbestos mill. After ten years he had developed productive cough which increased gradually. Only a short time prior to his admission to the hospital the patient started to run fever and had pains in his chest. The diagnosis of ulcero-fibrous tuberculosis and asbestosis was made. Tubercle bacilli and asbestos bodies were found in the sputum. The autopsy confirmed the clinical diagnosis. Besides the ulcero-fibrous tuberculosis, diffuse peribronchial and perialveolar sclerosis with numerous asbestos bodies was seen. Radiologically and pathologically it could not be decided whether the tuberculosis preceded or followed the asbestosis. However, it is believed that the first symptoms of asbestosis appeared ten years before the symptoms of tuberculosis.—*Am. Rev. Tuberc.*

PULMONARY ASBESTOSIS. L. Rousseau. *Laval méd.*, vol. 8, p. 233 (March, 1943).

The radiological picture of pulmonary asbestosis is not characteristic; it is usually similar to that of tuberculous fibrosis. The diagnosis is, therefore, often made only after asbestos bodies have been found in the sputum. Asbestos fibers may be seen in the sputa of individuals who do not suffer from asbestosis; asbestos bodies are due to a pathologic tissue reaction. Microscopical examination of the lungs of patients who have died from an intercurrent disease may show asbestosis, which had not been found on X-ray examination. It cannot be decided whether asbestosis favors the development of pulmonary asbestosis. The case history of a forty-two year old man with asbestosis without tuberculosis is given. The patient had been working in the asbestos industry for eighteen years. For two years the patient had been suffering from increasing cough, expectoration and dyspnea. Roentgenological examination showed mottling of both lungs. Sputa

and gastric examinations were negative for tubercle bacilli. Asbestos bodies were found in the sputum.—*Am. Rev. Tuberc.*

ASBESTOSIS BODIES. M. Giroux. *Laval méd.*, vol. 8, p. 239 (March, 1943).

The "curious bodies" found in the sputum of patients suffering from pulmonary asbestosis are of various sizes, 24 to 50 μ by 12 to 24 μ but can be as small as 10 μ . They consist of a central fiber of asbestos dust covered by a golden-yellow substance. Asbestos bodies were found in the sputum of rabbits, guinea pigs and one dog were found in the sputum of rabbits and in the dog. The guinea pig after several weeks, macrophages with asbestos bodies in their alveoli. Erythrocytes appeared in the sputum and hemoglobin derivatives containing asbestos fibers two to three years after the beginning of the inhalation of asbestos dust. When a suspension of asbestos in olive oil was injected subcutaneously or into the testicles of rabbits, asbestos bodies were formed. However, when blood was injected and then the same needle, asbestos bodies were formed. The presence of asbestos bodies in the sputum is believed to be a definite sign of asbestosis.—*Am. Rev. Tuberc.*

BAGASSE DISEASE OF THE LUNG. W. L. Pullen. *New Orleans Med. & Surg. J.*, vol. 12, pp. 558-560 (June, 1943).

A case of bagasse disease of the lung is reported together with the findings at biopsy in the lung. The picture appears to be that of organic pneumoconiosis. It is evident that bagasse may enter the alveolar regions and cause a reaction. The mechanism of the cellular reaction of the stimulus set up by the bagasse to produce the cellular reaction, remains to be determined.—*Bronfenbrenner.*

LIQUEFACTION NECROSIS IN BILATERAL CONGLOMERATE LESIONS OF ANTHRACOSIS. B. J. McCroft. *Roentgenol.*, vol. 50, no. 1, pp. 42-45 (Jan., 1943).

It is the intention of the author to present a correct interpretation of the roentgen picture of necrosis and cavitation in the conglomerate lesions of anthracosis. Anthracosilicosis may be very difficult to interpret, showing these lesions, uncharacteristic of tuberculosis. The only known exposure was when the man worked as a pick miner for a period of 12 years and there was a period of 44 years before his death. The roentgenologic appearance of the necrotic consolidation or pleural thickening. The cavity was found to contain thick, black material which showed no free silica on examination.—*Bronfenbrenner.*

IS AND PULMONARY TUBERCULOSIS. R. De L. Rousseau, M. Giroux and P. Richard. *ed.*, vol. 8, p. 217 (March, 1943).

Asbestosis is an occupational disease of the lungs due to the inhalation of asbestos dust. It is characterized by the transformation of normal lung tissue into fibrous tissue. Symptoms appear usually five to seven years after the beginning of the exposure. The presence of asbestos bodies in the sputum is a proof for the existence of pulmonary asbestosis. Both asbestosis and tuberculosis were seen in 8 workers exposed to asbestos dust for twenty years. Three of these cases are in whom the asbestosis was masked by tuberculosis and where the history and the presence of asbestos bodies permitted the diagnosis.—*Am. Rev. Tuberc.*

ASBESTOSIS AND PULMONARY TUBERCULOSIS. R. De L. Rousseau, M. Giroux. *Laval méd.*, vol. 8, p. 22 (1943).

The history of a forty-four year old man who had worked for twenty years in an asbestos mine. Ten years he had developed productive tuberculosis which increased gradually. Only a short time after his admission to the hospital the patient had fever and had pains in his chest. The diagnosis of ulcero-fibrous tuberculosis and asbestosis was confirmed. Tubercle bacilli and asbestos bodies were found in the sputum. The autopsy confirmed the diagnosis. Besides the ulcero-fibrous tuberculosis, peribronchial and perialveolar sclerosis and asbestos bodies were seen. Radiologically it could not be decided whether tuberculosis preceded or followed the asbestosis. It is believed that the first symptoms of tuberculosis appeared ten years before the symptoms of asbestosis.—*Am. Rev. Tuberc.*

ASBESTOSIS. L. Rousseau. *Laval méd.*, vol. 8, p. 3 (March, 1943).

The roentgenological picture of pulmonary asbestosis is characteristic; it is usually similar to that of tuberculosis. The diagnosis is, therefore, often made. Asbestos bodies have been found in the sputum. Asbestos fibers may be seen in the sputum. Patients who do not suffer from asbestosis; asbestososis is due to a pathologic tissue reaction. Microscopic examination of the lungs of patients who have tuberculosis and asbestosis may show asbestosis. Asbestososis has been found on X-ray examination. It is decided whether asbestosis favors the development of pulmonary asbestosis. The case history of a forty-four year old man with asbestosis without tuberculosis is given. The patient had been working in the asbestos industry for eighteen years. For twenty years he had been suffering from increasing cough and dyspnea. Roentgenological examination showed mottling of both lungs. Sputum

and gastric examinations were negative for tubercle bacilli. Asbestos bodies were found in the sputum.—*Am. Rev. Tuberc.*

ASBESTOSIS BODIES. M. Giroux. *Laval méd.*, vol. 8, p. 239 (March, 1943).

The "curious bodies" found in the sputum of patients suffering from pulmonary asbestosis usually measure 24 to 50 μ by 12 to 24 μ but can be as large as 250 μ . They consist of a central fiber of asbestos which is covered by a golden-yellow substance containing iron. Rabbits, guinea pigs and one dog were exposed to inhalation of asbestos dust. Asbestosis did not develop in the rabbits nor in the dog. The guinea pigs showed, after several weeks, macrophages with asbestos fibers in their alveoli. Erythrocytes appeared in the alveoli, and hemoglobin derivatives containing iron could be found on asbestos fibers two to three months after the beginning of the inhalation of the asbestos dust. When a suspension of asbestos in olive oil was injected subcutaneously or into the testicles of guinea pigs no asbestos bodies were formed. However, if first one cc. of blood was injected and then the asbestos dust through the same needle, asbestos bodies could be found one month later. The presence of asbestos bodies in the sputum is believed to be a definite sign of pulmonary asbestosis.—*Am. Rev. Tuberc.*

BAGASSE DISEASE OF THE LUNG. W. A. Sodeman and R. L. Pullen. *New Orleans Med. & Surg. J.*, vol. 95, no. 12, pp. 558-560 (June, 1943).

A case of bagasse disease of the lung is reported together with the findings at biopsy in an involved area of the lung. The picture appears to be that of an organic pneumoconiosis. It is evident that particles of bagasse may enter the alveolar regions and produce this reaction. The mechanism of the changes, and the nature of the stimulus set up by the bagasse dust to produce the cellular reaction, remain obscure.—*Jack Bronfenbrenner.*

LIQUEFACTION NECROSIS IN BILATERAL SYMMETRICAL CONGLOMERATE LESIONS OF ANTHRACOSILICOSIS OF LUNG: REPORT OF CASE. B. J. McCloskey. *Am. J. Roentgenol.*, vol. 50, no. 1, pp. 42-45 (July, 1943).

It is the intention of the author to show that the correct interpretation of the roentgen appearance of necrosis and cavitation in the conglomerate lesions of anthracosilicosis may be very difficult. A case is reported, showing these lesions, uncomplicated by tuberculosis. The only known exposure to silica was when the man worked as a pick miner in a soft coal mine for a period of 12 years and there was no exposure for a period of 44 years before his death. The roentgenologic appearance of the necrotic areas was that of consolidation or pleural thickening. At autopsy each cavity was found to contain thick, black, viscid fluid, which showed no free silica on examination. Examination

of the cavity wall and surrounding lung tissue showed a content of 0.25 per cent silica.—*Jack Bronfenbrenner.*

PNEUMOCONIOSIS AND WORKING CONDITIONS IN COAL MINES. *Brit. Med. J.*, no. 4316, pp. 395-396 (Sept. 25, 1943).

The Committee on Industrial Pulmonary Disease has been unable to draw final conclusions on causation or differences in incidence of pneumoconiosis in the South Wales coalfield. Anthracite dust is more dangerous than that of bituminous mines. The most important measure in prevention is the reduction of dust breathed by the miners. To this end, the committee advocates a series of procedures which are discussed in this article: (1) maintenance of adequate ventilation, (2) use of water to prevent dust dispersion, (3) alaying of dust in roadways and at loading points, (4) reduction of shot-firing to a minimum, with fewest possible men exposed, (5) regulation of ripping processes, and (6) prevention of chill during spake journeys.—*Jack Bronfenbrenner.*

RADIUM POISONING AND ITS PREVENTION. E. Neitzel. *Z. ges. Schiess- u. Sprengstoffw.*, vol. 37, pp. 74-75, 94-96, 114-116, 132-135, 155-156 (1942).

Various well known examples of radium poisoning are described. On account of its relation to calcium in the periodic table radium can replace calcium wherever found in the animal organism. From its point of fixation in the body radium exercises destructive effects upon the tissues, mainly by virtue of its disintegration products. In small doses the destructive effects are frequently not noticed until after long periods of time, sometimes as long as ten years. The physiologic effects of the several disintegration products are described, as are the various means of measuring the radioactivity of samples and the several routes by which radium or its emanations may enter the human body. One of these is the breathing of radium emanations. Charcoal, silica gel and Permutit were tried, without marked success, for absorbing these emanations. A detailed method is described for examination of urine, blood, etc., for radium emanations. Various diagnostic means and a quantitative method for estimating the amount of radium in the body and in cadavers is described. Various means are given for preventing radium poisoning as prescribed by the safety precautions of the Association of Chemical Industry in Germany. A review of the literature is included.—*Chem. Abstrs.*

TREATMENT OF LEAD POISONING. CONFERENCES ON THERAPY. *N. Y. State J. Med.*, vol. 43, no. 21, pp. 2079-2086 (Nov. 1, 1943).

The discussion emphasizes the facts that ingested lead, especially in small amounts, rarely causes poisoning because of poor absorption, and that the greater

ence between X-ray evidence and clinical. Contrary to established belief, the changes of silicotics are not due to fibrous connective tissue. So-called fibrosis is really due to scattered collagen which are laid down in various places. The collagen deposits are a defense mechanism. Late symptoms of dyspnea are due more to occlusion and intervascular changes as the lung encroachment, than to loss of alveolar tissue.—*Stephen L. Madey.*

OSIS OF COAL WORKERS—A METHOD FOR ESTIMATING THE HEALTH HAZARD FROM AIRBORNE DUST. *The Coal Dust Research Committee Report.* (Hann, D. A., Chairman). *Monmouth and South Wales Coal Owners' Association*, 1943).

of the pneumoconioses, concentrations of dusts are usually expressed in terms of the particles present in unit volume of the dust. Numerical concentration measured in a dust depends on the method of sampling. Microscope technique employed: different methods give very different results, and unless the sampling and of evaluation are taken into account counts can give but a rough idea of the dust present. In the Medical Research Council report on "Chronic Pulmonary Disease in Coalminers: II—Environmental Studies" (Review, THIS J., 25: 453, 1943) it was suggested that standards of maximum permissible dust based on the mass concentration of dust below 5 microns in size—since particles larger than 5 microns are probably of little significance in the pneumoconiosis. Concentrations in terms of mass of dust of a restricted range of particle size determined directly by the usual gravimetric method; and in the Medical Research Council report, it is shown that, with the thermal precipitator instrument, a close estimate of the mass of dust not exceeding 5 microns in size can be obtained by counting only the particles below 5 microns in size.

report by the Coal Dust Research Committee for Monmouthshire and South Wales Coal Owners makes no direct reference to the Medical Research Council report, but refers instead to "the Medical Authorities," which indicate that dusts of 5 microns and smaller size that are of significance. Any method put forward for the estimation of the health hazard should, in addition to giving a measure of the amount of dust above 5 microns, and also the amount of dust below 5 microns in size.

put forward for the routine estimation of dust not exceeding 5 microns in size. A gravimetric sample is obtained by the method, in which the dust contained

in a measured volume of air is entrapped by a paper thimble. The weight of dust so caught is ascertained and then the mass concentration of the total air-borne dust is calculated. The dust is removed from the paper thimble, mixed, and a known weight of it then taken for a sedimentation test. The sedimentometer consists of a glass cell through which passes a flat horizontal beam of light which impinges on a photoelectric cell. Light transmission values are measured: (a) when the cell contains clean alcohol; (b) when a weighed quantity (about 20 mgm.) of the dust sample has been added to the alcohol, and the particles are still in turbulent motion after stirring; and (c) after the lapse of the calculated time which will allow all particles but those smaller than 5 microns to settle below the level at which the light beam traverses the cell.

From the photometric readings the proportion (by weight) of dust below 5 microns is estimated, allowance being made for the fineness of division of the whole dust (as indicated by the "specific surface" of the dust). Hence, since the mass concentration of the whole dust has been ascertained by direct gravimetric methods, the mass concentration of the dust below 5 microns in size can be estimated.

In the report it is admitted that certain criticisms may be levelled at the procedure recommended, and since only a few samples have been so evaluated, no exact statement of the probable error of the method is given. It is said that the probable error will be under 50 per cent, an error which, it is said, is quite small in comparison with those to which other methods at present used in Great Britain are liable. The procedure gives no information about the constituents of the dust.—*Bull. of Hygiene.*

ASBESTOSIS AND PULMONARY CARCINOMA. H. W. Wedler. *Deut. med. Woch.*, vol. 69, no. 31/32, pp. 575-576 (Aug. 6, 1943).

The author has collected the published autopsy records on asbestosis from various countries and finds that there have been 14 instances of malignant disease of the lungs and pleura in 92 post-mortem examinations (16 per cent). This is in excess of the proportion of lung carcinomata in autopsies generally (2-6 per cent). Carcinoma as a complication of asbestosis occurred most frequently in males between 35 and 41 and was generally in the part of the lung most affected with asbestosis. Development of the lesion was slow but corresponded with the length and intensity of the exposure (12-42 years). There was often a long interval between the cessation of exposure and the development of the cancer, which, in the author's view, must now be regarded as an occupational cancer.—*Bull. of Hygiene.*

THE ASBESTOS CORN. H. S. Alden and W. M. Howell. *Arch. Dermat. & Syph.*, vol. 49, p. 312 (May, 1944). Derwitz in 1930 directed attention to warts and corns on the hands and feet of persons who worked with

asbestos and described the discovery of an "asbestos needle" in the cornified layer of tubercles removed from the hands. Alden and Howell observed small painful "warts" or "corns" in 99 of 167 workers who used amosite, a natural form of asbestos, in their work in a navy yard. The workers who have these lesions complain of an original pricking sensation and ability to feel a small splinter-like foreign body. Rough attempts to extract this splinter-like body are usually unsuccessful, but with rubbing or with neglect the sensation tends to disappear. In about ten days a small hard cornlike tumor appears, which slowly grows, often attaining the size of a small split pea. Frequently a pinpoint black center, which defies extraction, can be observed in the excrescence. At this period the small cornified tumor is tender to pressure, as though a splinter were present, and interferes with comfortable work. Cornification becomes more pronounced, a small hard corn resulting, and the area does not become normal in appearance and feeling until the hard center plug is removed by instrumentation. These corns usually appear on the tips of the fingers and knuckles, most often occurring in the thick-skinned areas of the hands. X-ray examination does not reveal abnormal shadows. Biopsy specimens from 4 patients revealed no pathologic changes except extreme thickening of the surface epithelium with hyperkeratosis. The dermis, while fibrous, was essentially normal in appearance and did not present any evidence of inflammation. Despite diligent search, foreign bodies could not be found in the sections. Observations and history of symptoms imply, however, that a foreign body is at some time present in the lesions. There is no relation to asbestosis of the lungs. No satisfactory method of prevention can be offered.—*J. A. M. A.*

EPIDEMIC KERATOCONJUNCTIVITIS: A REPORT OF A CASE WITH MARKED SYSTEMIC MANIFESTATIONS. John J. Curry and Francis C. Lowell. *New England J. Med.*, vol. 231, no. 1, pp. 11-13 (July 6, 1944).

A case is presented that showed many of the signs and symptoms of epidemic keratoconjunctivitis.

The outstanding feature was the presence of severe depression with only mild ocular disease.

Serologic studies during convalescence showed the development of antibody against the virus of epidemic keratoconjunctivitis.—*Authors' summary.*

SURVEY MADE OF HEALTH PROBLEMS IN THE FUR INDUSTRY OF NEW YORK. Harry Heimann. *N. Y. State Ind. Bull.*, vol. 23, no. 6, pp. 217-220 (June, 1944).

Based on a medical study of 694 workers in the fur industry it is concluded that:

1. Traumatic affections of the skin appear characteristically among the occupational groups of fleshers, unhairers, hand-stretchers and nailers.

2. The cases of dermatosis appear among those workers who handle the dyed furs and are not related