

- 1174 Chronic Beryllium Lung Disease: Disease in Search of Work History. H. C. Neu and R. Schreiber. N.Y. State J. Med. 67, 1184-1187 (May, 1967).

A case history of chronic pulmonary beryllium disease is presented with the notation of the 15-year latent period and the demonstration of the value of lung biopsy and chemical analysis to document the disease. The patient was admitted to the hospital in September 1964 complaining of 4 years of progressive dyspnea. Her work history showed an exposure from 1936 to 1945 in a neon light factory sealing tubes and spraying fluorescent coatings. On biopsy, the lungs were found to be firm and leathery with granulomas of 0.1-0.4 cm. size scattered over the entire lung. Analysis of the lung for beryllium showed 0.64 microgram/g. of lung tissue. Since the radiologic picture is compatible with a wide variety of diseases which cause similar pulmonary insufficiency, it is essential that tissue be analyzed histologically and chemically. Although there is little objective improvement during steroid therapy, the subjective changes are remarkable. This patient went from a state of dyspnea on the least exertion to essentially normal activity. The chest pain disappeared and the appetite returned. The ultimate prognosis is poor with frequent pneumothoraces and eventual cor pulmonale, although the effect of steroid therapy on this prognosis is not yet settled. -- APCA Absts.

- 1175 A Method for Detecting Cadmium Poisoning in Fish. D. I. Mount and C. E. Stephan. J. Wildlife Management 31, 168-172 (January, 1967).

Subacute exposures of bluegills to cadmium sulfate dissolved in water were made at sublethal concentrations for periods up to 90 days. Acute exposures of bluegills and brown bullheads were made at lethal concentrations. In living fish, the accumulation of cadmium never exceeded 130 micrograms/gram of gill tissue based on dry weight, but in fish that died of acute cadmium poisoning, the accumulation of cadmium was a minimum of 150 micrograms/gram of gill tissue. The data suggest that acute cadmium poisoning can be detected by measuring cadmium in the gill tissue. There are 10 references.

-- Authors' abst., Public Health Eng. Absts.

- 1176 Chelation Therapy in Acute Iron Poisoning. S. Leikin, P. Vossough, and F. Mochir-Fatemi. J. Pediat. 71, 425-430 (September, 1967).

A highly specific iron chelating agent, deferoxamine, was used in association with supportive therapy in 14 children with acute iron intoxication of mild to moderate severity. Serum iron levels and iron excretion of these patients were compared with those of eight patients receiving only supportive therapy. Both groups showed a rapid drop in serum iron levels. Urinary excretion of iron increased in patients receiving deferoxamine. The children all recovered.

-- J. Am. Med. Assn. References & Reviews

- 1177 Essential Trace Metals in Man: Zinc, Relation to Environmental Cadmium. H. A. Schroeder, et al. J. Chronic Diseases 20 (4), 179-210 (1967).

Surveys of zinc and cadmium in the environment of man by atomic absorption spectrophotometry which involved analyses of food, waters, foliage, and tissues of animals are reported. Human tissues from 13 areas of the world were assayed by emission spectrography. Zinc is omnipresent and is one of the most abundant of the essential trace elements in the human body with its concentration in the soft tissue in the same range as that of iron. The zinc is stored in striated muscle which contains 5/8 of the total body pool. The highest concentrations of zinc are in the prostate, liver, and kidney and lowest in the ectodermal tissues such as the brain, lung and spleen. Renal cadmium and zinc are intimately related and their mean concentration increases with age up to the fourth decade of life and declines after the seventh. A high ratio is consistent with a shortened life-span. Wild animal tissues contain approximately the same concentration of zinc as do human. The daily intake of zinc is estimated at 8-13 mg. and cadmium at 200-500 micrograms with considerable variations according to the sources and types of food and water. Cadmium is found mainly in the endosperm of wheat and rice and zinc is concentrated in germ and bran. Refining of wheat flour and polishing of rice results in a lessened intake of zinc in relation to cadmium. High Cd: Zn ratios in the kidneys of rats and men are associated with arterial hypertension. Sources of cadmium in food and drink thus become important in public health. -- APCA Absts.