590 Accidental Acute Radiation Injury. The Need for Recognition. G.A. Andrews and R.J. Cloutier Arch. Environmental Health 10, 498-507 (March, 1965).

The probability of serious exposure to radiation that will produce acute symptoms is exceedingly small as shown by past history. However, the increased use of radiation makes it desirable that physicians be acquainted with the symptoms and management of acute radiation exposure. Usually whether a radiation exposure has been or could have been received will be known. The possibility that an unknown exposure to radiation may occur is real, and in this situation skill and awareness are needed for a correct diagnosis. Early diagnosis will provide a basis for treatment and will permit the discovery of other persons who may also have been exposed: most important, it will permit the elimination of the source of exposure.

-- Authors' summary

ENVIRONMENTAL MEASUREMENTS

591 Photodynamic Bioassay of Polycyclic Atmospheric Pollutants. S.S. Epstein, et al. J. Air Poll. Control Assn. 15, 174-176 (April, 1965).

The mortality from lung cancer in many parts of the world has reached alarming proportions. The existence of close associations between lung cancer, urbanization, and atmospheric pollution is now generally accepted. Although the mode of interaction of the latter factors and smoking is debated, the importance of multiple etiologic factors has become apparent. These considerations emphasize the paramount need for methods which will yield simple and rapid estimates of the potential carcinogenic hazard of polluted atmospheres. Such information could possibly then serve as a basis for action designed to reverse lung cancer mortality trends. The authors describe a photodynamic bioassay which can be conducted on one milligram amounts of organic atmospheric particulates. The results of a pilot study on pollutants from several American cities indicate that the assay may provide a rapid, simple and economical biological index of potential carcinogenic hazard attributable to polycyclic compounds. The utility of the assay for this purpose is under further evaluation

592 The Detection and Estimation of Part Per Billion Concentrations of Hydrocarbons. M. Feldstein and S. Balestrieri. J. Air Poll. Control Assn. 15, 177-178 (April, 1965)

The addition of a freeze-out step in liquid nitrogen prior to analysis by gas chromatography with flame ionization detection permits the accurate determination of C_2 and higher hydrocarbons in the part per billion (ppb) range. Concentrations of C_2 and higher hydrocarbons have been measured in commerical cylinders of nitrogen, helium and hydrogen. Using a 150 ml. sample of gas, recovery of ppb concentrations is 95 to 100%. -- Authors' abst

593 Further Evaluation of Glass Fiber Filters for Sampling Hydrogen Fluoride. M.R. Pack and A.C. Hill. J. Air Poll. Control Assn. 15, [illegible] (April, 1965).

Air sampling studies were conducted to evaluate the effectiveness of glass fiber filters for collecting hydrogen fluoride. Air containing hydrogen fluoride was drawn through glass fiber filters and the amount collected determined. A single filter collected up to 75 micrograms F/sq. in. and 2 filters, one behind the other, collected up to 250 micrograms F/sq. in. of filter area before loss through them reached 5%. Filters with a latex binder were less efficient in collecting hydrogen fluoride than those without the binder. Once adsorbed, little hydrogen fluoride was lost by drawing additional low fluoride air through the filter. Glass fiber filters can be used for sampling hydrogen fluoride over a wide range of concentrations as long as the sampling rate and time are controlled to avoid exceeding the saturation limit of the filter.

-- Authors summary