

Iatrogenic Cancer

Dr. Winship has requested that, in the abstract of the article on thyroid carcinoma in children by him and Chase, the last sentence on page 80 of the May, 1956 issue of *CA: Treatment by radiation during infancy for enlarged thymus is shown definitely to be an etiological factor*, be changed to read: *There is a considerably higher prevalence rate of thyroid carcinoma in children treated by radiation to the neck region than would be expected in a group of nonirradiated children.*

Of further interest in this connection is the report in *Clin. Proc. Child. Hosp.* (Washington, D. C.) 11: 209, Oct., 1955, of a discussion of the irradiation effects of therapy of the thymus gland in relation to the production of thyroid carcinoma, at a meeting of the Tumor Board of that hospital on September 14, 1955, Dr. Lattman, Radiologist, presiding:

DR. WINSHIP: "Counting all the known cases in the United States, of childhood with carcinoma of the thyroid, almost 20 per cent have had irradiation to the thymus gland or to the neck for some other disease. This is a significant percentage. These figures should be recalled when we plan to irradiate a child who has difficulty in breathing. Court-Brown and Abbatt [*Lancet* 1: 1283, 1955] . . . found that 25 of the 2361 patients with ankylosing spondylitis, treated with x-rays, developed leukemia. The expected rate of leukemia for a group of this size was 3.9 patients. I mention this only because the results are similar to those in children irradiated for thymus enlargement who develop thyroid carcinoma . . . in the city of Washington during the past ten years there have been ten cases of thyroid carcinoma in children and three of them had irradiation of the thymus gland."

DR. KLOPP, referring to the practice of irradiating for tuberculosis of the cervical lymph nodes, acne, tonsils and adenoids, and heavy beard: "Irradiation is potentially very dangerous and we should

use it very, very carefully. The percentage is higher than found by Dr. Winship and would be still higher if we had the correct information."

Dr. Morris Fishbein, in *Postgrad. Med.* 20:446, Oct., 1956, reviewed the report of D. E. Clark before the Chicago Surgical Society meeting, May 6, 1955. Of thirteen cases of cancer of the thyroid three had had irradiation for enlarged thymus, three for cervical adenitis, five for enlarged tonsils, one for peribronchitis, and one for persistent pertussis. Age at the time of irradiation ranged from two months to six years, and at the time of histologic diagnosis from four to fifteen years. The current increase in the incidence of carcinoma of the thyroid corresponds to the period when irradiation was being widely used for benign conditions of the head, neck and thorax. Dr. Fishbein comments that while the evidence is small in amount and obviously statistical, the observations support the concept that there may be an association between prior irradiation and cancer of the thyroid in children and adolescents.

Majarakis, Slaughter, and Cole [*J. Clin. Endocrinol.* 16:1487, Nov., 1956] found that of ten patients with thyroid cancer 15 years of age or younger, all had had x-ray therapy to the head and neck an average of approximately eight years previously. None of five patients with thyroid cancer and older than fifteen years had been irradiated.

Stewart, A., et al., in *Lancet* 2:447, Sept. 1, 1956, reported that in two comparable groups of mothers—one given, and the other not given, antenatal roentgen-ray examinations—forty-two children in the irradiated group and but twenty-four in the nonirradiated group died of leukemias, and that forty-two children in the irradiated group and but twenty-one in the control group died of other malignant disease. These figures indicate that diagnostic pelvimetry, in addition to previ-

ously known genetic damage to the fetus, occasionally causes leukemia and other malignant disease in the unborn child.

J. Chassar Moir (Oxford), in Letter to the Editor, *Lancet* 2:99, July 14, 1956, condemns the use in pregnancy of the Thoms method of brim pelvimetry as a leukemogenic hazard to the infant. As an example of excessive roentgen diagnosis he refers to a patient with pulmonary tuberculosis who had 127 chest radiographs in five years. He recommends minimizing the amount of radiation used for individual exposures, and concludes: "If the recent publicity concerning the genetic hazards of radiation has done nothing else, it will have served a useful purpose by reminding clinicians of the

potential dangers of the examinations which they sometimes so light-heartedly request."

H. S. Breton, in Correspondence, *Brit. M. J.* 1:1111, May 12, 1956, suggests repeated roentgen-ray examinations of the chest in mass screening for pulmonary tuberculosis as a possible trigger cocarcinogenic etiologic factor in lung cancer together with cigarette smoking, air pollutants, etc.

Peller and Pick, in Correspondence, *J. A. M. A.* 147:893, Oct. 27, 1951, reported that the incidence of leukemia among physicians is four times that among the general population, and eight to nine times higher among radiologists than among other physicians.

CURRENT BOOKS OF INTEREST

LUNG CANCER. By Seymour M. Farber, M.D., Associate Clinical Professor of Medicine, University of California Medical School, Lecturer in Diseases of the Chest. University of California School of Public Health. Springfield, Illinois. Charles C Thomas. 1954. 157 pp. \$4.75.

SMOKING AND LUNG CANCER: A DOCTOR'S REPORT. By Alton Ochsner, M.D. London. Frederick Muller. 1955. 86 pp. \$2.00.

CAUSAL FACTORS IN CANCER OF THE LUNG. By Carl V. Weller. Springfield, Illinois. Charles C Thomas. 1956. 113 pp.; 20 illus. \$3.00.

PULMONARY CARCINOMA, PATHOGENESIS, DIAGNOSIS, AND TREATMENT. Edited by Edgar Mayer, M.D. and Herbert C. Maier, M.D. New York. New York University Press. 1956. 540 pp. \$15.00.

SMOKING AND ITS EFFECTS: With Special Reference to Lung Cancer. By Sidney Russ, C.B.E., D.Sc. London. Hutchinson's Scientific and Technical Publications. 1955. 144 pp. \$2.00.

CANCER OF THE LUNG: Pathology, Diagnosis, and Treatment. By Milton B. Rosenblatt, M.D. and James Rubeo Lisa, M.D. New York. Oxford University Press. 1956. 330 pp. \$15.00.