

showed some clearing, and on October 20 (fig. 3) this was described as "considerable." In this roentgenogram some cardiac enlargement was noted. The blood pressure, which was at this time averaging about 155/100, and the cardiac silhouette returned to normal when the lower dosage levels of ACTH were reached. On November 2 the patient was allowed to leave the hospital, and while out on pass he bowled two games without discomfort. Although he was an enthusiastic bowler, this was the first time he had been able to bowl in two years. He seemed completely recovered when he was discharged on November 9 on maintenance therapy, which was to be continued for the customary three months' period. This striking improvement has persisted to the present time (Feb. 25, 1951).

CASE 5 (woman, aged 25, University Hospitals no. 302-929).—*Industrial History*.—L. K. worked in a fluorescent lamp factory from Sept. 16, 1942 to June 3, 1944. Most of this time she was engaged in operating a machine which sealed the filament into the end of the tube. Through occasional breakage and some dusting from handling the open tubes, she would often notice on her gloves a small amount of the dry phosphor.

Medical History.—The patient had enjoyed good health all of her life. Two years ago she had a normal pregnancy with a weight gain of 13 lb. (6 Kg.). Her present illness coincided precisely with the conception of a second pregnancy in April 1950. There were at this time a gradual loss of weight of approximately 20 lb. (9 Kg.), increasing dyspnea, cough and weakness. In October she was studied by Dr. Karl P. Klassen at the Ohio State University Hospital in Columbus, and an open chest lung biopsy was performed on October 24. The tissue showed numerous granulomas with centrally situated multinucleated giant cells. Many of the alveoli were compressed, and in some sites metaplasia of the lining of alveoli was seen. No beryllium was found in the spectrographic analysis of the ashed specimen. The chest roentgenogram showed diffusely scattered irregular soft shadow on a fine granular background. Even in the absence of beryllium in the biopsy specimen, the remainder of the clinical picture was so characteristic that a diagnosis of chronic beryllium poisoning was made. The patient was admitted to the University Hospitals on October 30 for ACTH therapy.

Physical Examination.—Her temperature was 37.5 C. (99.5 F.); pulse rate, 124; respiratory rate, 22; blood pressure, 130/80. She was not particularly undernourished but appeared chronically ill. There was severe dyspnea from such slight exertion as turning in bed or talking. There were cyanosis and clubbing. The heart sounds were normal. There were no rales. The uterus was enlarged above the umbilicus, consistent with a six months' pregnancy. The fetal heart sounds were normal.

Pertinent Initial Laboratory Findings.—These are summarized in table 1.

Hospital Course.—Although we had no previous experience in using ACTH during pregnancy, we deemed any reasonable risk justified because the progress of the disease was so rapid in this patient. In order to exercise caution, however, the dose of ACTH was held at a minimum consistent with any prospect of its being effective. On November 8 the administration of 40 mg. of ACTH a day was begun, this being divided into four equal doses as in our other cases. In a few days the patient seemed somewhat better. This improvement had continued for about another week when it stopped. During this short respite there had been some increase in appetite as well as a little clearing in the roentgenogram of November 14, but the respiratory function and oxygen saturation of arterial blood were unchanged. Coughing increased in severity, and it was occasionally accompanied by vomiting. It was obvious that the patient had begun to relapse, so the daily intake of ACTH was increased to 60 mg. on November 22, to 80 mg. on November 29 and to 100 mg. on December 19. Although she began to feel somewhat better with the higher dosage, objective evidence of improvement was entirely lacking. The fasting eosinophil count, which had been averaging 110 per cubic millimeter during the early weeks of treatment, now rose to 370. Administration of thyroid was started on December 20 with 1 grain (0.06 Gm.), daily, which was increased to 2 grains (0.13 Gm.) on December 26. On Jan. 1, 1951, for the first time, a roentgenogram of the chest showed substantial clearing, the cough lessened and the eosinophil count was reduced 50 per cent over the level maintained before the addition of thyroid to the treatment routine. Although there was at this time evidence of some improvement, and adrenal responsiveness was demonstrated by the 24-hour total 17-ketosteroids excretion