

## METABOLIC STUDY OF A CASE OF CHRONIC BERYLLIUM POISONING TREATED WITH ACTH

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**T**HIS SINGLE case of chronic beryllium disease is presented as a study of metabolic changes in the patient occurring during ACTH therapy.

A. K., a white woman, 24 years old at the time of this report (1950), was employed in 1942 for a period of two weeks in a shop manufacturing fluorescent lamps. In this shop the process was new at the time, with the result that many lamps were broken and a good deal of beryllium-containing phosphor was released into the air.

During 1944, A. K. reports, she had many respiratory infections for which tonsillectomy was done with, she thought, some improvement. During 1945 she was aware of unusual fatigue and what she called weakness, which persisted after the disappearance of the respiratory infections.

In 1948, nearly six years after she left the beryllium-contaminated working environment, she became pregnant. Early in her pregnancy she accompanied her sister to a local hospital where she submitted to the routine roentgenologic chest examinations. The roentgenogram showed the characteristic granular changes that have been described as accompanying chronic beryllium intoxication. A. K. delivered a normal, healthy, full-term baby and appeared to suffer no ill effects from this experience. However, when the baby was about 2 months old and she attempted to care for it herself, she was aware of increasing weakness and dyspnea, as well as loss of appetite and nausea. She had to give up taking care of the baby and in 1950 became a bed patient completely. By this time her weight had gone down to about 95 lb. (43 Kg.) from her best weight, in 1943, of 118 lb. (53.5 Kg.).

In February 1950 she was brought to the Massachusetts General Hospital for study. Abnormal liver function values were found, and on a punch biopsy of the liver an unusual hepatitis was reported. Spectrographic analysis revealed the presence of beryllium in the biopsy tissue. In spite of the short exposure and long period after leaving a beryllium-containing atmosphere, we found that she was excreting small amounts of beryllium in her urine. Her tuberculin test was negative, and to be certain of the differential diagnosis, a KVEIM test was done and found to be negative, and there were no roentgenographic changes in the bones

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