

One and one-half years later, following persistent cough, loss of weight, fever and exertional dyspnea, a diagnosis of beryllium intoxication was made on the basis of chest roentgenograms which showed the characteristic granular appearance in the lung fields. The above symptoms persisted until admission. On admission the only pertinent abnormality was dyspnea on moderate exertion. There was no visible cyanosis.

Studies of lung function before therapy showed an exceptionally large total capacity, of which the vital capacity fraction was much less than normal (chart 7). Her maximum breathing capacity was lower than expected. During the first course of ACTH therapy frank clearing of the lungs was demonstrated by roentgenogram; vital capacity increased slightly. Maximum breathing capacity showed a persistent fall throughout this period. The most significant change was in the alveolar-arterial oxygen partial pressure difference (table 6). This value fell from 28 mm. Hg to 10 mm. Hg (normal) and remained at this level for several

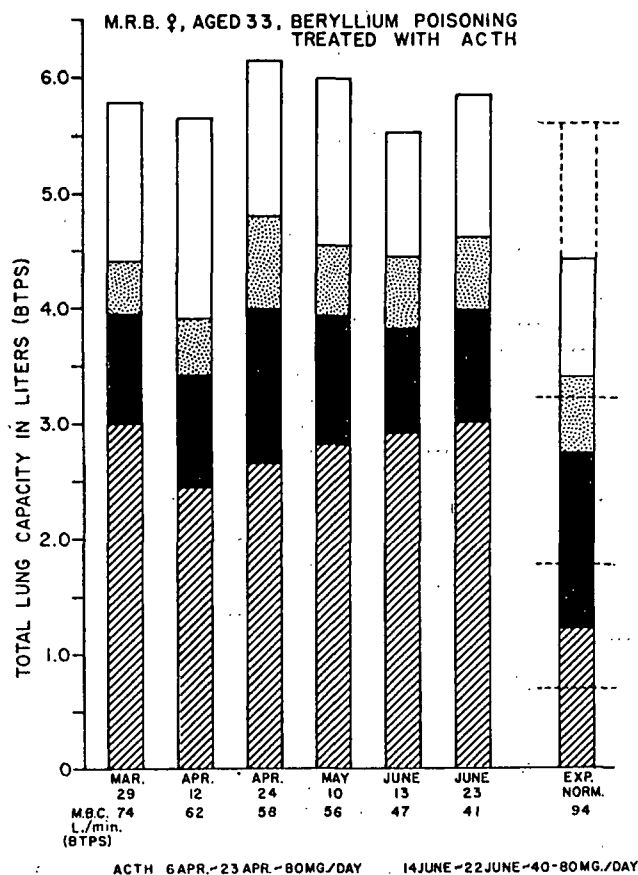


Chart 7 (case 6).—The patient's pulmonary volume subdivisions and maximum breathing capacity before, during and after two separate courses of ACTH therapy. See chart 1 for key to the subdivisions. The last column to the right indicates by broken lines (----) the limits of normal for the residual volume and the total lung capacity.

weeks. An excellent adrenal response was indicated by the fall of the eosinophil count and the increase of the 17-ketosteroids excretion during this course of therapy (table 6).

In June 1950 there was a second period of ACTH therapy. Again there was a good eosinophil response but no increase in 17-ketosteroids excretion. Studies of lung function showed a continuous regression to the original pretreatment levels, and the maximum breathing capacity continued to fall. Arterial blood gas measurements at the start of this period yielded values similar to those at the start of the first period of therapy.

Throughout this time there were no significant changes in the electrocardiogram. However, on May 10, 1950 the pulmonary artery was reported to be slightly prominent by roentgenogram.