

a prompt fall in the fasting eosinophil count from 200 to 50 per cubic millimeter, an increase in appetite, disappearance of cyanosis, and a gain of 15 lb. (7 Kg.) in weight during the two weeks of hospitalization. The remarkable improvement in respiratory function is graphically demonstrated in figures 6 and 7. Within a few days the daily maintenance dose was reduced to 75 mg., and this dosage has been continued to the time of writing (Feb. 25, 1951). Except for several small kidney stones necessitating urethral meatotomy on February 21, he has felt very well and has been able to continue without interruption at his usual bench work.

Treatment in the case of L. T. (case 1) had been irregular, ACTH therapy being finally discontinued on Sept. 8, 1950. Although he had been at work since July 10, 1950, it was evident on November 20 that a relapse had begun. His appetite had fallen off, he had lost about 10 lb. (4.5 Kg.) in weight, and his cough had returned. Following the same schedule as with the re-treatment of N. B. (case 3), cortisone therapy was started orally on Jan. 19, 1951, the daily dose being reduced in a rather short time to a maintenance level of 50 mg. Within a few days after the start of the steroid treatment, his appetite and general strength increased

TABLE 3.—*Urinary Beryllium Excretion Studies*

Case 1 L. T.			Case 2 R. C.			Case 3 N. B.			Case 4 G. R.			Case 5 L. K.		
Date	μ g. Be/L.	24 Hr. Output	Date	μ g. Be/L.	24 Hr. Output	Date	μ g. Be/L.	24 Hr. Output	Date	μ g. Be/L.	24 Hr. Output	Date	μ g. Be/L.	24 Hr. Output
6-2-50	0.012 ₅	0.013	6-16-50	0.006 ₂	0.006	7-3-50	0.005	0.008 ₁	9-30-50	0.019	0.023	11-1-50	0	0
6-3-50	0.007 ₅	0.014	6-18-50	0.003 ₇	0.006	7-4-50	0.005	0.008	10-1-50	0.050	0.050	11-4-50	0.005	0.006
6-4-50	0.012	0.013	.....	.....	.....	.....	.....	.....	10-2-50	0.021	0.024	.....	.....	.....
6-7-50*	.....	.....	6-21-50*	.....	.....	7-6-50*	.....	.....	10-4-50*	.....	.....	11-8-50*	.....	.....
6-13-50	0.008 ₇	0.013	6-24-50	0.003 ₇	0.004	7-10-50	0.003 ₇	0.007 ₅	10-7-50	0.015	0.019	11-14-50	0.004	0.008
6-20-50	0.003 ₇	0.005	6-25-50	0.002 ₅	0.003	7-14-50	0.004 ₂	0.009	10-17-50	0.015	0.034	12-8-50	0.007 ₅	0.016
6-21-50	0.002 ₅	0.005	6-26-50	0.002 ₅	0.002	7-20-50	0.003 ₉	0.008	10-27-50	0.025	0.076	12-18-50	0.05	0.034
6-25-50	0.003 ₇	0.007 ₇	6-27-50	0.003 ₇	0.003									
6-28-50	0.003 ₇	0.007 ₉	7-4-50	0.003 ₇	0.004									
			9-21-50†	.....	.....									
			10-15-50	0.003 ₇	0.003									

* Treatment began.

† Treatment discontinued.

considerably. Although he has gained only 5 lb. (2 Kg.) in weight, he has continued to work without interruption.

COMMENT

In patients with chronic beryllium poisoning, corticotropin and cortisone produce a prompt and substantial remission of the chief symptoms: fatigue, loss of weight, cough and dyspnea. Although beryllium is widely distributed throughout the body, there is no evidence that it exerts its deleterious effects by interfering with adrenal function. Relief of symptoms, however, has been shown to be dependent on a definite adrenal response induced by corticotropin or on the introduction of a supplementary adrenocortical steroid.

In addition to improvements in weight and strength, which are nonspecific and probably of a general metabolic nature, definite evidence of improved pulmonary function was obtained. Although the breathing patterns were normal before treatment (fig. 8) with the exception of that of G. R. (fig. 9), who showed evidence of obstructive ventilatory dysfunction, respiratory function was deranged in all.