blood pressure, electrocardiography, urinary output or body weight. In five of these, marked diuresis and significant loss of body weight with disappearance of the edema present followed the administration of other diuretics. In one of these, another diuretic was tried both before and after the trial of the calcium with excellent response at both times, though none occurred during the period of exhibition of the calcium. (This individual only became edema-free when treated with the combination of rest in bed, digitalis and diuretics. When the diuretics were withdrawn, the edema of the dependent portions of his body gradually returned.)

In two more patients with congestive heart failure of similar functional condition, given daily injection of calcium chloride in 0.5 gram doses, results similar to those obtained by oral administration of the calcium occurred.

3186

The protective action of quinidin against the onset of paroxysmal auricular fibrillation and tachycardia.

HAROLD L. OTTO. (Introduced by H. C. Jackson).

[*From the Department of Electrocardiography, New York University and Bellevue Medical College, New York City.*]

(1) A female, age 23, with mitral stenosis and insufficiency of rheumatic etiology, predisposed to paroxysms of auricular tachycardia, never failed, when not previously subjected to the influences of other drugs, to have a paroxysm of auricular tachycardia following 2 injections of 1 cc. of epinephrin, 15 minutes apart.[1] When quinidin sulphate, 0.2 grams, twice daily, was administered previously, a paroxysm failed to appear upon exhibition of epinephrin in the same manner. This was performed twice. The first time after 6 weeks of this quinidin therapy, and 7 days later during which time no quinidin was administered, a paroxysm of tachycardia followed the exhibition of epinephrin as described. Fourteen weeks of quinidin therapy followed this and at the end of this time no paroxysm appeared after the

[1] Otto, H. L., PROC. SOC. EXP. BIOL. AND MED., 1926, xxiii, 550.

epinephrin, yet five days later during which time no quinidin was administered, a paroxysm of tachycardia followed administration of the epinephrin.

(2) A male, age 65, with arteriosclerotic heart disease, subject to attacks of paroxysmal auricular fibrillation during a period of normal sinus rhythm, was similarly treated with epinephrin. Auricular fibrillation appeared with very little change of rate about 15 minutes after the 2nd injection of epinephrin. Quinidin was utilized to re-establish the normal sinus rhythm, which reappeared 12 hours after administering 0.2 grams every two hours. The dosage was then reduced to 0.2 grams four times daily. After four days administration of quinidin in this manner, during which time the normal sinus rhythm prevailed, epinephrin exhibited in the same manner was not followed by alteration of the rhythm controlling the heart beat. It appears as if quinidine offers a protection to the heart against the inception of paroxysmal auricular tachycardia and fibrillation induced by means of epinephrin.

3187

Nitrogen balance on a low protein diet in a case of diabetes mellitus.

W. S. McCLELLAN and R. R. HANNON.

[*From the Russell Sage Institute of Pathology and the Second Medical Division of Bellevue Hospital, New York City.*]

As low protein diets have been recommended in treatment of diabetes by Joslin,[1] Petren, as quoted by Joslin,[2] Newburgh and Marsh,[3] and others, a study of long continued low protein diet was made in this case. The patient was a man, age 32, with a history of moderately severe uncomplicated diabetes for the past 2½ years.

[1] Joslin, E. P., "Treatment of Diabetes Mellitus," 3d ed., Lea and Febriger, 1923, p. 444-6.

[2] *Ibid.*, p. 525-32.

[3] Newburgh, L. H., and Marsh, P. L., *Arch. Int. Med.*, 1920, xxvi, 647; 1922, xxix, 97; 1923, xxxi, 455.