

14, positive in 5; amino nitrogen (blood) in 14, positive in 10; urea percentage (urine) in 14, positive in 3; ammonia percentage (urine) in 14, positive in 10; amino nitrogen percentage (urine) in 7, positive in 5.

Myocardial Insufficiency.—Twelve cases of myocardial insufficiency were studied. Phenoltetrachlorophthalein studied in feces in 9 cases with 1 positive, lowest being 18 per cent., and in urine 10 cases with 5 positives; fibrinogen in 11 with 1 positive; lipase in 11 cases with 1 positive; fibrinolytic ferment in 12, positive in none; galactose in 7, positive in none; levulose in 3, positive in none; urea nitrogen percentage (blood) in 12, positive in 1, in which 6 were over 50 per cent., and 3 over 60 per cent.; amino nitrogen (blood) in 9, positive in 7.

The functional injury in liver cirrhosis is relatively greater than in chronic passive congestion, for a consideration of all the tests in each condition indicates that in 10 of the 14 cases of cirrhosis there was definite functional injury, 3 with less marked injury and only one with a practically normal function throughout, while in chronic passive congestion only 4 showed definite decrease, while 7 showed a practically normal function.

Carcinoma of Liver.—Little data outside of the phenoltetrachlorophthalein have been collected. C 28, who definitely had metastasis to the liver,²⁰ showed a 23 per cent. output five months before death. H 29, with gastric carcinoma and clinically thought to have metastasis to the liver, showed a 24 per cent. output, phenoltetrachlorophthalein positive in urine and the urea only 21 per cent. of the total non-protein nitrogen of blood. These cases are in keeping with the three cases of liver carcinoma reported last year in which the phenoltetrachlorophthalein excretion was 8, 14 and 7 per cent., respectively. However, a slight decrease in phenoltetrachlorophthalein, for instance, from 20 to 25 per cent. does not indicate liver carcinoma, since such findings have been found in gastric carcinoma when no proof of liver metastasis was at hand, in which case it is merely the expression of the influence of anemia and cachexia on liver function.

²⁰ Details of these cases can be found in the article in the Proceedings of American Physicians.