

- [331] The test has been applied clinically by Whipple in a limited number of cases. A case of eclampsia showed a very high plasma lipolytic activity and at death showed hæmorrhagic portal liver necroses. Pneumonia, peritonitis, leukaemia, and various infections show an increased lipase, at times more than double the normal. Early stages of liver cirrhosis show a high lipase while late stages may, unless complicated with some liver necrosis, show a low lipase. A normal content was found in pernicious vomiting, uræmia with convulsions, in jaundice and obstructive jaundice of months' duration.

#### GHEDINI'S FERMENT TEST.

Within the current year Ghedini<sup>46</sup> has proposed a new test which is based upon the presence in the blood serum of a ferment which he claims arises in the liver cells and which is capable of converting glycogen into maltose, isomaltose, and glucose. In short, this must be a test for two blood ferments, diastase and maltase. Diastase varies tremendously in normal sera, consequently, *a priori*, this in itself would vitiate the test. Sufficient evidence has not been presented to establish the liver as the sole source of the ferment or ferments involved.

#### GENERAL CRITICISM OF FUNCTIONAL TESTS.

With the exception of the urobilinogen test, none of these deal with functions which can be said with certainty to be specific of the liver, since the muscles play a large rôle in carbohydrate metabolism, and the kidney, according to recent work of Van Slyke,<sup>47</sup> possibly participates in the conversion of amino acids into urea. The results of the tests seem to be inconstant, with the possible exception of the urobilinogen test, which is positive in most mild diseases of the liver. However, it only indicates the existence of liver injury and gives no conception of its extent.

Technical difficulties are encountered in some of the tests. The administration of large amounts of carbohydrates leads to nausea, vomiting, and diarrhoea, all of which vitiate the test. Considerable chemical training and equipment are