

could be made of diagnostic importance; further, that when a fat dietary was given, gastric digestion occurred chiefly through the pancreatic juice; thirdly, that the free acids and pepsin of the vomitus or gastric contents, especially after a test meal rich in fat, may be marked by the regurgitation of the alkaline pancreatic juice, which neutralizes the acid and so prevents peptic activity; finally he suggested the possibility of a tryptic digestion of the gastric mucosa as a cause of *ulcus ventriculi*.

Volhard, in 1907, reported that in 9 of 11 normal persons the oily gastric juice had a tryptic action. His pupil, Faubel, found a positive result in 22 of 37 cases examined. Volhard then studied three pathological cases (*viz.*, carcinoma of the pancreas, acute enteritis and pancreatic diabetes) and found the tryptic ferment to be absent. In one case the autopsy revealed pancreatic atrophy.

Levinsky recommended the weakening of the gastric acidity by an alkali as a preliminary measure. He believed that the absence of the tryptic ferment signifies a pancreatic insufficiency, or a mechanical obstruction to the reflux of the pancreatic juice into the stomach (as in "hour-glass" stomach).

Ehrman and Lederer concluded from a large series of examinations that in achylia and anacidity the pancreatic function is not, as is usually considered, injured but possibly may be even more active than normal. If, however, hyperacidity be present the findings of tryptic ferments are negative (or very slightly positive in cases in which sodium carbonate has been previously given). Further, he believed that the mechanical influences of the passage of the tube, the gagging and the external pressure to the abdomen, are at least aids if not the cause of the reflux of the pancreatic juice, and not merely the fatty oil.

Koziczowsky, in 1909, gave his support as to the value of the Boldyreff test for the pancreatic function, but recommended the use of 250 grains of cream instead of oil.

*Method.*—One gives to the fasting patient 100-200 c.c. of a 2 per cent. solution of oleic acid in olive oil, or even pure oil; this may be drunk or introduced by the tube. The gastric contents are removed in one-half to one hour, with the patient in the horizontal position. If nothing is obtained the tube is again introduced in one-half to one hour. The contents are allowed to stand and the pancreatic juice is pipetted off; 10 c.c. of fluid are sufficient for the necessary tests. Three parallel tests are made in an acid, alkali and neutral medium.

Volhard recommends the use of 200 c.c. of olive oil, which he removes in half an hour, when one can recover 50-100 c.c.; the oily fluid is removed from the watery juice by a separating funnel.