

Partial gastrectomy is the operation done for ulcer or carcinoma of the pyloric end of the stomach. It originated as a pylorotomy with anastomosis of the cut end of the duodenum into upper angle of the gastric incision, it was then changed by Billroth to complete closure of the stomach with a posterior gastrojejunotomy, and finally it has been perfected by Mayo, who recently introduced the method known as the modified anterior Polya operation. This operation can be done with low mortality on suitable cases, and gives admirable results. Patients with ulcer of the pyloric end of the stomach are relieved of all symptoms and restored to complete health. Patients with cancer of the stomach have their life prolonged, and in the 306 cases reported by the Mayo clinic, over 37 per cent. of the patients have remained well at the end of a three year period. This is a most satisfactory showing for the surgical relief of an otherwise hopeless condition, and even better results may be expected when cases are diagnosed earlier and referred to the surgeon more promptly.

Pyloroplasty is the operation done on the pylorus for the excision of an ulcer or the relief of obstruction due to nonmalignant disease. The operation at first consisted of an incision through the wall of the pylorus in a line parallel with its long axis and the closure of the incision at right angle to the direction in which it was originally made, thus widening the pyloric opening and relieving the narrowing. This operation has been modified by Finney, Horsley and others so as to make it more effective and applicable to

a larger number of cases. Pyloroplasty is an ideal operation both from an anatomical and physiological standpoint, but it is also ideal in the sense it can rarely be satisfactorily performed. In 72 per cent. of patients according to Deaver the ulcers are located so far from the pylorus that the method is not applicable, and in cases of long standing the walls of the pylorus are so thick and inelastic that the tissues cannot be approximated in the desired position without producing a deformity which interferes with the motility of the stomach, stitches often cut out when tension is made on them, and the suture line is insecure and there is danger of leakage.

Gastroenterostomy is the operation most frequently done for benign obstruction of the pylorus and for duodenal ulcers. It consists of an anastomosis between the stomach and a loop of the jejunum, thus establishing a new opening through which the contents of the stomach can reach the intestinal tract. The effect of the operation on the stomach is both mechanical and chemical. Mechanically it permits the gastric contents to pass readily into the intestines as the new opening between the stomach and jejunum relieves any obstruction that may have existed at the pylorus. Chemically it lowers the acidity of the gastric contents, as the stomach also permits the alkaline secretions of the liver and pancreas to pass into the stomach. Thus gastric dilatation and food stagnation are cured by drainage and hyperacidity of the stomach is relieved by neutralization of the acid with the patient's own alkali.