Gastric Ulcer.—The condition which primarily or secondarily leads to the greatest amount of stomach surgery is the ulcer. The operation may be indicated, 1. Because of the painfulness of the ulcer; 2. In order to control (*a*) acute or (*b*) chronic hemorrhage; 3. In order to prevent secondary conditions such as (*a*) perforation; (*b*) peritoneal adhesions; (*c*) pyloric obstruction due to cicatricial contraction; (*d*) hour-glass stomach; (*e*) gastric dilation due to obstruction; (*f*) starvation; and last but not least, (*g*) implantation of carcinoma in the ulcer.

Diagnosis of Ulcer.—Since the presence of gastric ulcer primarily is the beginning of so many of the surgical conditions, it is important to recognize this lesion early in its development.

The most constant symptom in the presence of this lesion is pain. This is usually located below the tip of the sternum, is increased upon pressure, and upon taking food. The patient can usually tell which food will cause the pain to become severe. If the ulcer is on the posterior surface of the stomach the pain radiates into the back, usually to the left of the median line and up as high as the lower end of the scapula.

Very commonly the pain accompanying the presence of gall-stones is mistaken for the pain due to gastric ulcer, but it is usually not difficult to differentiate between these two, because the former is increased upon pressure at the point between the end of the ninth rib and the umbilicus, a point first located by Mayo Robson, while the latter is increased upon pressure in the median line.

Again, in case of gall-stones the pain in the back extends to the right at about the level of the tenth rib, while in gastric ulcer it is greatest in the median line or to the left of this and higher up.

The stomach contents are usually exceedingly acid in the presence of gastric ulcer, and there is an abundance of free hydrochloric acid present unless the ulcer has become carcinomatous. It should, however, be stated here that the chemical examination of stomach contents must always be looked upon only as of value in corroborating diagnosis, made as a result of a study of the history and physical examination. Robson and Graham have demonstrated this fact conclusively in a large series of carefully studied cases.

The history usually states that the patient has felt distress upon eating for a considerable period of time; that there has been eructation of acid stomach contents; that this is much more severe when certain articles of food have been taken; that the patient is much less uncomfortable when carefully following some diet which experience has taught him to select.

Quite frequently the feces are observed to be black from the presence of partly digested blood from slight gastric hemorrhages.

So many of the patients have, however, received subnitrate of bismuth as a remedy, or some form of iron, that care must be taken not to confound the effect of these remedies upon the color of the stools with that of hemorrhage from a gastric ulcer.

Frequently these hemorrhages have not been observed, but