Peptic ulcer surgery has been decreasing considerably in the past decades. Approximately 20 to 30 years ago it probably was the most surgery performed by surgery residents. With the advent of anti-ulcer drugs associated with treatment of *H. pylori*, the treatment of peptic ulcer has achieved cure rates above 90%, therefore leaving very few cases for the surgeon. With the reduction in the number of gastrectomies to treat ulcers, impairing the training of residents, younger surgeons have little experience with this procedure and, consequently, they have difficulties regarding the indications of gastrectomy. We will mention possible indications of gastrectomy as a treatment of complicated peptic ulcer or in those cases that do not respond to clinical treatment.

Perforated ulcer: whenever possible, gastrectomy should be performed instead of suturing the perforation. Suturing only takes care of the emergency, but predisposing factors are still present. Suturing should be reserved for patients in poor clinical condition or when the abdominal cavity is contaminated with pus and/or food. We prefer partial gastrectomy with Billroth I reconstruction, whenever possible, or Billroth II, when the duodenum does not have ideal conditions to be used in the reconstruction. We also recommend drainage of the cavity both after gastrectomy and after suturing the perforation, since conditions in the cavity stimulate postoperative dehiscence.

Gastric outlet obstruction: the stomach should be prepared before the surgery with gastric lavage, since the presence of food in the stomach is common. Partial gastrectomy, with the above mentioned reconstructions, is the recommended surgery. We do not recommend antrectomy with vagotomy because of the consequences of sectioning the vagus nerve.

Hemorrhage: endoscopic treatment should always be attempted. In cases of rebleeding or gastric or duodenal ischemia after therapeutic endoscopy, gastrectomy can be indicated. Gastrostomy or duodenostomy with suture of a bleeding ulcer should be avoided, since this is a risky treatment with a high failure rate. The gastrectomy described before is indicated.

Lack of clinical response: lack of clinical response is rare, but it is seen and, in those cases, surgical treatment is mandatory. One should only operate a duodenal ulcer that does not show response to clinical treatment after a long time, since the lesion does not undergo malignant changes. On the other hand, gastric ulcer should be treated for 4 to 8 weeks and, if remission or cure is not observed, gastrectomy is indicated. We should not forget that gastric ulcer can be, in reality, a gastric neoplasia, and delay of surgical treatment can be prejudicial to the patient, even when ulcer biopsies are negative.

Note that gastrectomy is not a simple procedure, being subjected to important complications; therefore, this surgery should be performed by trained surgeons with experience in the field.