GASTRIC SURGERY IN ELDERLY PATIENTS

STANLEY O. HOERR, M.D.
Department of General Surgery

ELDERLY patients are correctly regarded as substandard risks for abdominal operations. Possibly because of this fact and the additional precautions that surgeons habitually exercise for the elderly, it is noteworthy that indicated operations for gastric or duodenal lesions can be performed just about as safely in the elderly patients as in the young ones. There are two exceptions to the over-all safety existing for elderly patients: generally, there is a sharp increase in the incidence of nonfatal complications involving the cardiovascular system, urinary tract, and lungs after age 60 years; and similarly, there is a greater likelihood of postoperative mortality in the hospital, or within one month, for elderly patients suffering from malignant gastric lesions that are surgically incurable, than for younger patients with a similar condition.

In analyzing the results of gastric surgery one should differentiate the conditions for which the operations were performed. A convenient grouping separates those patients having operations for malignant disease from those having surgery for benign conditions. For example, some selection is possible in operations for duodenal ulcer; on the other hand, transabdominal exploration is performed in all patients with malignant disease unless there is irrefutable evidence that there is metastatic spread beyond the possibility of cure. Rarely, in malignant disease, has surgical intervention been inadvisable because of the poor condition of the patient. This circumstance, occurring in less than 5 per cent of my personal series, is illustrated by two cases.

Case 1. No operation for hopelessly advanced cancer. A 75-year-old retired farmer had been well until about nine months previously when he had an episode of hematemesis. Subsequently he had bled on several occasions. He had been jaundiced for a week, and was so severely prostrated that he was unable to get out of bed. The patient had lost 46 pounds in weight. Examination disclosed a weak, icteric, elderly man with an enlarged liver and a vague epigastric mass. Roentgenograms showed apparent involvement of the distal three-fourths of the stomach by an infiltrating neoplasm, including a widening of the duodenal loop. It was believed that this patient would not survive an exploration and that there was overwhelming presumptive evidence of incurability of the lesion. No operation was performed. He was discharged home and died two weeks later.

Case 2. No operation for cancer giving minimal symptoms and in a very unfavorable location. A 76-year-old retired man had mild digestive symptoms from "gas" for several months before examination. Roentgenograms showed evidence of a malignant neoplasm at the cardiac end of the stomach. Probable metastic nodules were palpated during the digital rectal examination; they were inaccessible to needle biopsy. Since the

patient had minimal symptoms and since the risk is great and the outlook poor in all operations for lesions of the cardia, three consultants were in agreement that operation was inadvisable. The patient continued his quiet life at home, did not develop obstruction, and had a gradual, painless decline; he lived approximately six months.

Malignant Disease

The mortality from the operations for gastric malignancy always will be substantially higher than that for benign gastric conditions, because the preoperative status of the patient often is poor and difficult to improve, and because the surgeon makes every effort to remove even a very extensive lesion if a cure seems possible. Figure 1 indicates the age distribution and mortality in a personal series of 114 consecutive patients who underwent resection for apparently curable gastric malignancy; the mortality is gratifiyingly low even for patients

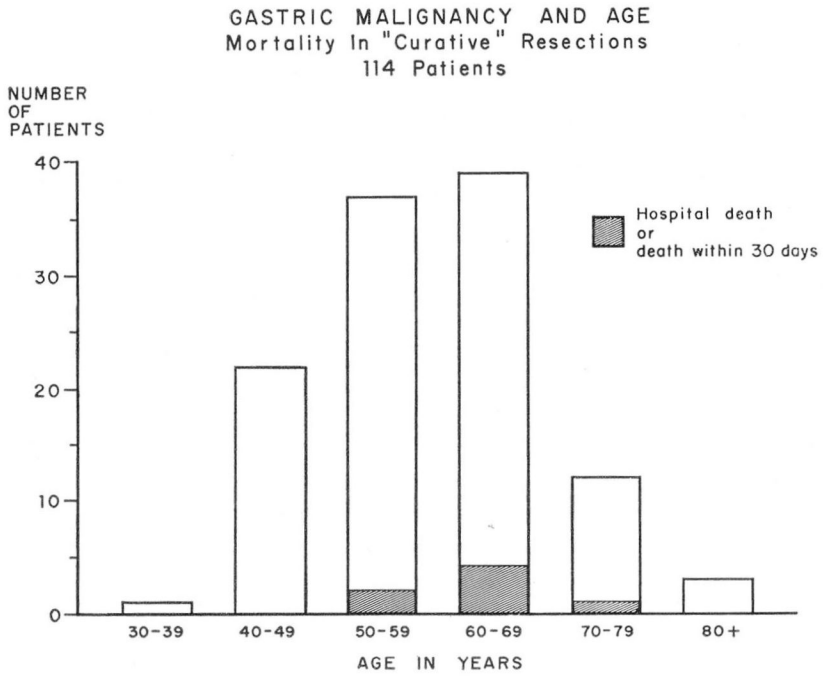

Fig. 1.

more than 70 years of age. By way of contrast, Figure 2 illustrates the mortality for 105 consecutive patients in whom the lesion was surgically incurable; here the risk is seen to increase sharply after the age of 60 years. Nevertheless, justification for operating on these elderly patients is to be found in the fact that some will have curable lesions, as in the following case.

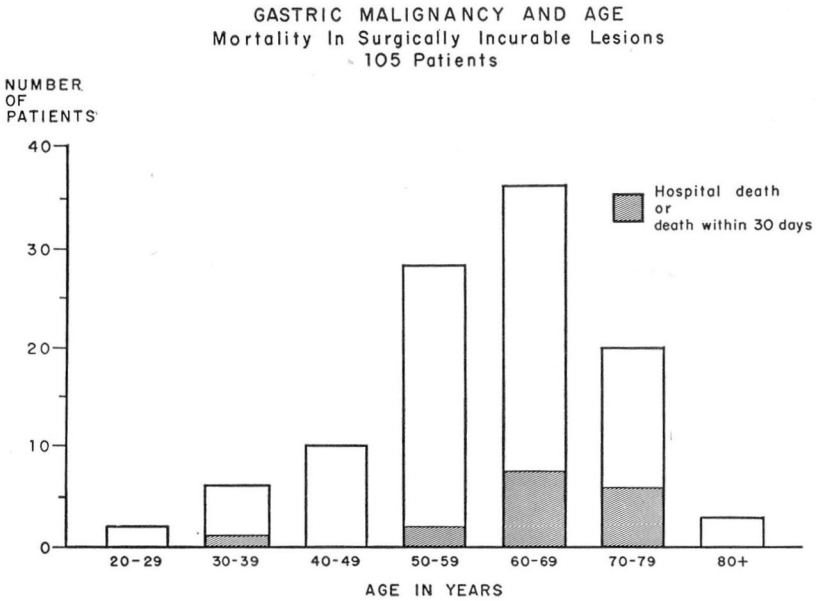

Fig. 2.

Case 3. Good result in conservative resection for large obstructing cancer. A 79-year-old retired business man, previously well, developed vague epigastric distress, then vomiting, within a period of 10 days. The patient seemed to be a vigorous man. Roentgenograms showed a large neoplasm at the lower end of the stomach. There was no evidence of distant metastatic spread. At operation a large fungating necrotic polypoid tumor, filling the entire antrum of the stomach and extending along the lesser curvature well into the pars media, was conservatively resected; approximately half of the stomach was preserved. No effort was made to perform a radical operation, although an extension of the cancer into the transverse mesocolon was resected en bloc with the stomach, and all tumor tissue was apparently removed.

The pathologic report was carcinoma of the stomach (massive), body and pylorus, with the proximal line of resection widely free and the distal line within 1 mm. of the neoplasm. No involved lymph nodes were apparent. The patient had an entirely uneventful postoperative course and was discharged on the eighth day. He has been seen periodically since and is vigorous and healthy five years from the time of operation. The patient now is 84 years old and his weight has been maintained at the preoperative level of 165 pounds.

Benign Disease

In a personal series of 410 consecutive operations performed for benign disease of the stomach and duodenum—including gastric ulcer, duodenal ulcer, jejunal ulcer, and miscellaneous conditions such as polyps, gastritis, negative

exploration for cancer, but excluding acute perforations—there were three deaths (Fig. 3). It is apparent that this type of surgery can be considered relatively safe in all age groups taken as a whole.

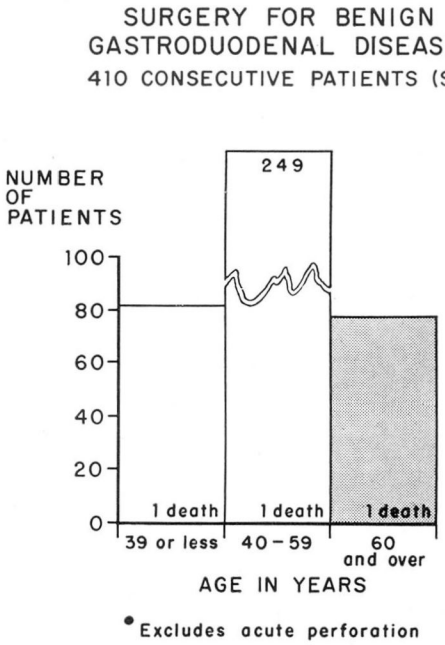

Fig. 3.

Gastric ulcer. In a series of 140 consecutive patients who had gastric resection for benign gastric ulcer and its various complications (excluding acute perforation), there was one death, that of a man aged 66 years (Case 4). The late results were good both in old and in young patients. In the group of patients more than 60 years of age, however, the incidence of nonfatal cardiovascular, pulmonary, or urinary tract complications, was 18 per cent; whereas it was 0 per cent in the group younger than 40 years of age, and only 6 per cent in the group between 40 and 59 years of age. The one fatality occurred as follows.

Case 4. Death from suppurative pancreatitis after gastrectomy for benign ulcer. A 66-year-old man had diabetes with advanced Laennec's cirrhosis, moderate hypertension, and arteriosclerotic cardiac disease. He had a subtotal gastric resection and a cholecystectomy for a large gastric ulcer and gallstones. The ulcer had penetrated into the pancreas. The patient did poorly following operation and, despite every supportive effort, died 11 days later. At autopsy there were an acute suppurative and necrotizing pancreatitis, a purulent peritonitis, and a severe cirrhosis of the liver of the Laennec type.

Duodenal ulcer. Although a majority of the 220 patients operated upon for duodenal ulcer (excluding acute perforation) could not be classed as elderly,

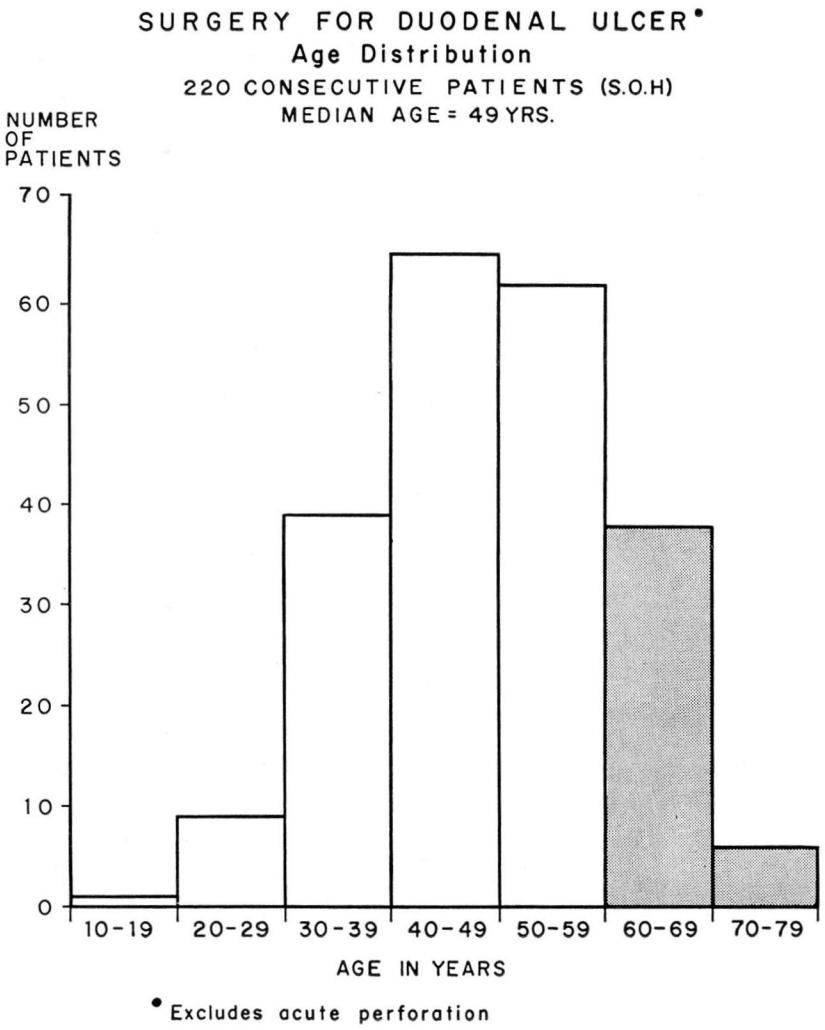

Fig. 4.

a fair number were not young (Fig. 4). It is obvious that in this group of patients a more careful selection for operation is possible than in the group of patients in whom a gastric malignancy is suspected. If the disease can be controlled on a medical regimen, operation will not be performed. However, elderly patients, like younger ones, bleed, are subject to obstruction, and they also may suffer from uncontrollable pain; such complications may make operation mandatory. The two deaths in this series of 220 patients with duodenal ulcer occurred in men under the age of 50 years; but again, it is to be noted that the incidence of

nonfatal complications involving cardiovascular system, urinary tract, and lungs, was 32 per cent in patients 60 years of age or older, as contrasted with 4 per cent in patients who were younger than 40 years of age. The safer vagotomy and gastroenterostomy as opposed to any type of resection would seem to be particularly applicable in this older age group as in the following case.

Case 5. Vagotomy and gastroenterostomy for obstruction and hemorrhage from duodenal ulcer. A 76-year-old farmer with a duodenal ulcer had been followed for four years. He was hospitalized once for obstruction, and once after hematemesis, and required four pints of blood. Although operation was advised on several occasions, he refused it. Finally, because of persistent pain, he consented to operation, and a subdiaphragmatic vagotomy and posterior gastroenterostomy with feeding jejunostomy was performed. His convalescence was uneventful and he was discharged on the eighth postoperative day. He has remained symptom free and when last heard from, four and one-half years after operation, he described himself as entirely well and very happy at the age of 80 years, hoping he would be able to answer our annual inquiry for the next 25 years!

Discussion

On the basis of the foregoing results it would seem that elderly patients can undergo necessary gastric operation with not much greater risk to life than younger persons, although the danger of nonfatal cardiovascular, pulmonary, or urinary tract complications increases with advancing age.

Certain principles should be adhered to with great strictness before one undertakes "elective" surgery in elderly patients. First, the surgeon should be even more certain than usual that measures short of surgery will not manage the disease successfully. Secondly, he also should be certain that the patient himself actively desires the operation. All experienced surgeons have the impression that the patient's attitude is of particular importance, if not a decisive factor, in the way he combats a serious postoperative complication: a patient's fighting spirit may provide the margin of safety, and a lack of interest in life may result in death. Finally, the surgeon should be willing to take plenty of time in getting the patient into optimal condition before operation. This will include not only correction of anemia, protein deficiency, or electrolyte imbalance that exist beforehand, but the postponement of the operation if there is a history of recent upper respiratory infection. The use of depressant drugs should be kept to a minimum both in the preoperative and in the postoperative phase, and only small doses of narcotics should be employed. It is especially important to have skillful management of anesthetics. Although nearly all of the elderly patients reported here had general anesthesia with endotracheal intubation and the use of muscle relaxants, the anesthesiologists made special effort to have the patients responsive and moving shortly after the conclusion of the operation. I am certain that avoidance of many of the possible complications in the early postoperative course are a direct result of the skillful management of anesthesia by the anesthesiologist, which not only makes the operation easier for the surgeon but also

immeasurably safer for the patient. In elderly patients the use of a tube gastrostomy from the stomach or its remnant will avoid the need of a Levin tube; it is our clinical impression that not only is the patient more comfortable, but that danger of chest complications is thereby decreased.

In the postoperative course the patient must be ambulated frequently. Postoperative ambulation is not to be confused with the ill-advised hoisting into the vertical position of an exhausted, debilitated, elderly patient merely to satisfy a surgical principle. *Ambulation* means *walking* and patients should stretch their legs themselves. Sitting in a chair probably is undesirable unless the legs are elevated. The patient should not sit on the edge of the bed and dangle the legs; the feet should rest on a chair and there should be no pressure on the back of the thighs or calves—to allow a patient to do otherwise is to invite venous thrombosis. Finally, elderly patients have had a long time to develop habits and whims; it is in the interests of all concerned to indulge them in every possible way. It may be that the elderly patient would like the family to bring him specially prepared broccoli, or that he wishes to chew tobacco, or that he has a minor superstition that he wants to have humored. The bedside attendants should allow the elderly patient as much latitude as is consistent with his safety in satisfying these personal desires.

Summary

Elderly patients withstand necessary gastric operation about as well as younger patients, from the standpoint of mortality, although the incidence of nonfatal complications involving the cardiovascular system, urinary tract, or lungs is markedly increased. With a careful selection of patients for operation, skillful management of anesthesia, and preoperative and postoperative care aimed at securing the optimal physical condition with a minimal use of depressant drugs, gastric operations on elderly patients can be performed with reasonable safety.