EMERGENCY SURGERY IN MASSIVE HEMORRHAGE FROM HIGH LESSER CURVATURE ULCERS

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THE PROBLEM OF massive hemorrhage from the upper gastro-intestinal tract is considerably simplified after the site of hemorrhage is determined. Usually this can be done quickly when radiological barium studies are carried out as soon as possible after the onset of bleeding, even during the bleeding phase (1,2). However, when the bleeding site is found to be ulceration above the mid-portion of the lesser curvature and when the patient fails to respond to transfusion and other medical measures and continues to hemorrhage, surgical intervention becomes imperative. Such a situation poses a difficult problem for the surgeon.

The patient is usually exsanguinated, is in the older age group and a poor risk for surgery. What should be the surgeon's plan of attack in such a situation? Should a high gastric resection including removal of the ulcer be done when such a procedure obviously will be technically difficult and prolonged? Or should some less radical procedure be utilized in consideration of the patient's poor condition and the increased mortality attendant to high resection? This may include gastrectomy in which the ulcer is left in situ, wedge excision of the ulcer or mere ligation of gastric vessels.

We have been faced with this problem on four different occasions at this hospital during the past 2 years and present our experiences with this situation.

CASE REPORTS

Case 1.—(#298777)—J. N., a 32 year old white male, was admitted to Cleveland City Hospital on September 8, 1948, because of hematemesis, tarry stools and weakness of 6 hours duration. There was a 10 year history of ulcer distress and perforation once.

Examination on admission revealed the patient to be in shock. The red blood count was 1.89 million with 5.5 grams of hemoglobin. 1000 cc of whole blood were given and the patient responded quickly. He was then started on antacids and frequent feedings and became free of abdominal pain. The red blood count rose to 2.6 million. However, on the fourth hospital day he suddenly had another massive hematemesis of about 1500 cc of bright red blood and went into shock. 1500 cc more of whole blood were given.

An emergency gastro-intestinal study was done as soon as the patient came out of the shock and questionable outpouring was noted high along the lesser curvature of the stomach as well as midway between the base and apex of the duodenal bulb. During the next 4 days the patient appeared to have stopped bleeding and the red blood count rose to 2.78 million.

On the 9th hospital day the patient developed massive hematemesis for the third time and again went into shock. 1500 cc of whole blood were given and the patient was taken to surgery. Under gas-oxygen-ether anesthesia an ulcer was found on the lesser curvature 3 cm from the cardia. Because of its high position the operator felt that gastrectomy with removal of the ulcer would entail too high a resection incompatible with patient's poor condition. For this reason a Polya type of resection was done leaving the ulcer in situ although the vessels along the lesser curvature including the left gastric artery were ligated.

The patient did well for 6 days post-operatively. On the 7th post-operative day, however, he vomited small quanti-

Fig. 1.—Radiograph made in Case 2 showing high position of ulcer along lesser curvature.
grams of hemoglobin and a hematocrit of 15%. Emergency studies of the upper gastro-intestinal tract revealed a high lesser curvature ulcer (Figure 1). The patient was given 3 units of plasma and 1000 cc of blood.

Nineteen hours after the onset of bleeding the patient was operated upon. Surgery was started under local procaine intercostal block anesthesia but the patient became completely uncooperative and it was necessary to revert to gas-oxygen-ether anesthesia. There was marked induration along the lesser curvature extending from the anterior to the posterior wall and gastrectomy revealed the presence of an ulcer high in this area. Frozen sections made from this area revealed no evidence of malignancy. Because of the patient’s age and poor condition a wedge resection of the ulcer was done rather than a high resection.

About 12 hours post-operatively the patient developed atelectasis and this was treated by tracheal aspiration. A radiograph of the chest made on the 4th post-operative day revealed massive broncho-pneumonia on the left. Positive pressure oxygen was necessary to keep the patient comfortable. On the 6th post-operative day 1000 cc of whole blood were administered as supportive therapy. During the next few days the patient’s condition, however, deteriorated steadily and on the 8th post-operative day the patient had a massive hematemesis and died.

Post-mortem examination revealed that the sutured wound representing the area from which the wedge had been excised had broken down and ulcerated with massive hemorrhage into the gastro-intestinal tract. The gastrectomy wound in the anterior wall of the stomach was well healed. Incidentally discovered was an undifferentiated carcinoma of the right upper lobe bronchus (small cell type) with metastasis to the tracheobronchial lymph nodes.

Comment—This patient developed massive hematemesis while on an adequate medical routine for ulcer. In a person aged 70 this is sufficient indication for emergency operation in spite of the patient’s poor condition. Under such circumstances local anesthesia is much to be preferred but the patient’s reactions made it necessary to use a prostrating general anesthetic. When the ulcer was found to be high on the lesser curvature gastrectomy to include removal of the ulcer would have required complete dissection of the indurated tissues along the lesser curvature and a Hofmeister resection. But the patient’s condition did not seem to warrant such a prolonged procedure. The possibility of a malignant process had been excluded to a certain degree by the frozen sections and a wedge resection appeared to be an expedient procedure allowing for a quick attack on the bleeding ulcer. The patient’s stormy course post-operatively was aggravated no doubt as the result of the prostrating general anesthetic used during operation. But nevertheless excision of the ulcer failed to prevent additional exsanguination.

Case 3.—(#298254) F. II., a 56 year old white male, was admitted to Cleveland City Hospital on August 18, 1948, because of far-advanced pulmonary tuberculosis. Shortly thereafter two stages of a thoracoplasty were done but completion of this procedure was abandoned because of low vital capacity. On April 7, 1949 the patient suddenly had a massive hematemesis and went into shock. The red blood count was 2.8 million. 500 cc of blood were given and the patient responded quickly. On the following day the patient had another massive hematemesis and again went into shock. 1000 cc of blood were administered with a satisfactory response. On April 9th an emergency gastro-intestinal study revealed a large peptic ulcer along the lesser curvature of the stomach (Figure 2). Because of the patient’s far-advanced pulmonary tuberculosis, low vital capacity (49%) and dilatation of the ascending aorta suggestive of luetic aortitis surgery seemed to be contraindicated.

But on April 11th the patient again had a massive hematemesis and went into shock for the third time in four days. Emergency gastrectomy was then carried out, four days after the onset of bleeding. Intercostal procaine supplemented by nitrous oxide-oxygen and pentothal was used. A large ulcer was found along the lesser curvature of the stomach. Because of the ulcer’s high position a Hofmeister type of resection was done with an ante-colic gastro-jejunostomy. The patient made an uneventful recovery and has remained asymptomatic.