Laparoscopic splenectomy and subsequent oncologic gastric surgery in cirrhotic patients with portal hypertension and hypersplenism

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To the editor,

The first case was that of a 59-year-old male patient admitted to our department with recalcitrant epigastric pain, who already had hepatitis B virus (HBV)-related cirrhosis for 8 years. Endoscopy revealed esophageal varices in the distal esophagus without bleeding and a 2.5 cm ulcer lesion on the lesser curvature of the stomach. Biopsies revealed signet ring cell carcinoma. The second case was that of a 66-year-old female patient with HBV cirrhosis who had undergone a gastroscopy; biopsy confirmed gastric antrum cancer, and she was referred to our hospital from another hospital. She had been diagnosed with HBV-related cirrhosis 6 years ago but had no episodes of gastrointestinal bleeding. Both patients had thrombocytopenia and leucopenia.

The patients first underwent laparoscopic splenectomy with our previously described technique (1). The patients smoothly recovered from laparoscopic splenectomy. The platelet counts of the patients increased from 38 to 110 and 52 to 186 ($\times 10^9$/L), respectively, and the white blood cell count increased from 2.7 to 5.5 and 2.3 to 6.9 ($\times 10^9$/L), respectively. Approximately 2 weeks later, the patients underwent distal subtotal gastrectomy with D2 lymph node dissection according to the Japanese gastric cancer treatment guidelines 2010 (2). Both patients had limited intraoperative bleeding (70 and 50 ml, respectively), and the surgery was completed in 3 h (2.9 and 2.8 h, respectively). No blood transfusion was necessary. The patients had an uneventful postoperative course and were discharged on postoperative days 12 and 10, respectively.

Gastric cancer (GC) is the second and third most common cancer among men and women, respectively, and is the second most common cause of death from cancer among both men and women in China (3). Liver cirrhosis (LC) is another major public health problem and is mainly caused by hepatitis B virus infection in China. Therefore, LC is not infrequently encountered among candidates for GC surgery (4). It is well established that surgery, especially gastrointestinal cancer surgery, in nonbleeding cirrhotic patients carries a high risk of mortality and morbidity (5). The two main factors that contribute to higher perioperative morbidity and mortality are propensity for bleeding and infection. Patients with LC and hypersplenism have bleeding and infection tendency due to thrombocytopenia and leukocytopenia. Patients with GC cannot receive oncologic gastric surgery safely because of LC and hypersplenism; therefore, they require splenectomy first. It is very important to obtain the best preoperative correction of thrombocytopenia and leucopenia through some procedures. To date, we have not seen any similar reports about laparoscopic splenectomy and subsequent oncologic gastric surgery in cirrhotic patients with portal hypertension. Our results demonstrate that distal subtotal gastrectomy with D2 lymph node dissection following laparoscopic splenectomy can be safely conducted in patients with GC with portal hypertension and hypersplenism.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of the Second Affiliated Hospital Zhejiang University School of Medicine.

Informed Consent: Written informed consent were obtained from the patients who participated in this study.

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