D2 distal subtotal gastrectomy for antral carcinoma

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Abstract: A 53-year-old Chinese man was pre-operatively diagnosed with adenocarcinoma of gastric antrum (moderately differentiated). The tumor was preoperatively assigned to $T_{2-3}N_{1-2}M_0$. Preoperative evaluation of the patient allowed him to undergo surgical treatment. In advanced gastric cancer, D2 lymphadenectomy was needed. Therefore, distal subtotal gastrectomy with D2 lymphadenectomy was adopted. During surgical exploration, abdominal or pelvic metastasis was not found and local invasion was not observed. The distal gastrectomy with Billroth I reconstruction was performed, two thirds of the stomach was resected. Lymph nodes of group 1, 3, 4, 5, 6, 7, 8, 9, 11P, and 12 were dissected. The whole operation lasted about 3 hours and intraoperative blood loss was about 100 ml. The patient recovered well after the surgery.

Key Words: D2 distal subtotal gastrectomy; antral carcinoma

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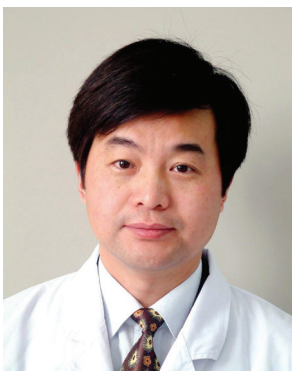

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Video description

A 53-year-old Chinese man presented to the Department of Surgical Oncology in Zhongnan Hospital with 2-months history of upper abdominal pain and discomfort. He underwent endoscopy with biopsies. Endoscopic visualization of the gastric antrum revealed an ulcer about 5cm in diameter. Pathological biopsy confirmed that was gastric carcinoma. The patient was then hospitalized for treatment on April 16, 2013. At admission, physical examination showed upper abdominal lighter tenderness. Jaundice was not observed. No enlarged lymph nodes were noted; the liver and spleen was impalpable; abdominal mass was not palpated. Laboratory evaluation included a complete blood count, urine and stool test, the liver and renal function test, all of which were normal. EKG was normal. Serum tumor marker test showed that CEA was 84.5 ng/ml, CA19-9 was 61.6 u/ml. Several imagine procedures were performed; the results of chest computed tomography (CT) and pelvic B ultrasound were normal; upper abdominal CT plus three-dimensional reconstruction showed: gastric antrum and wall thicken, tumor possibly had invaded the gastric muscularis; meanwhile, enlarged perigastric and retroperitoneal lymph nodes were observed (*Figure1A*, *B*). The preoperative TNM stage was T2 or T3N1 or N2M0. During surgical exploration, no metastasis was found in pelvic cavity, abdominal cavity and liver; the tumor located in the gastric antrum, sized about 3 cm in diameter; the serous membrane was normal. After exploration, distal subtotal gastrectomy with D2 ymphadenectomy was performed (*Video 1*, *Figure1C*, *D*, *Figure2*, *Figure3A*, *B*, *C*). Postoperative pathological examination showed: the tumor sized about 5 cm × 4 cm × 3 cm, protruded into the gastric cavity and infiltrated the deep muscularis(*Figure3D*); pathological classification was gastric adenocarcinoma

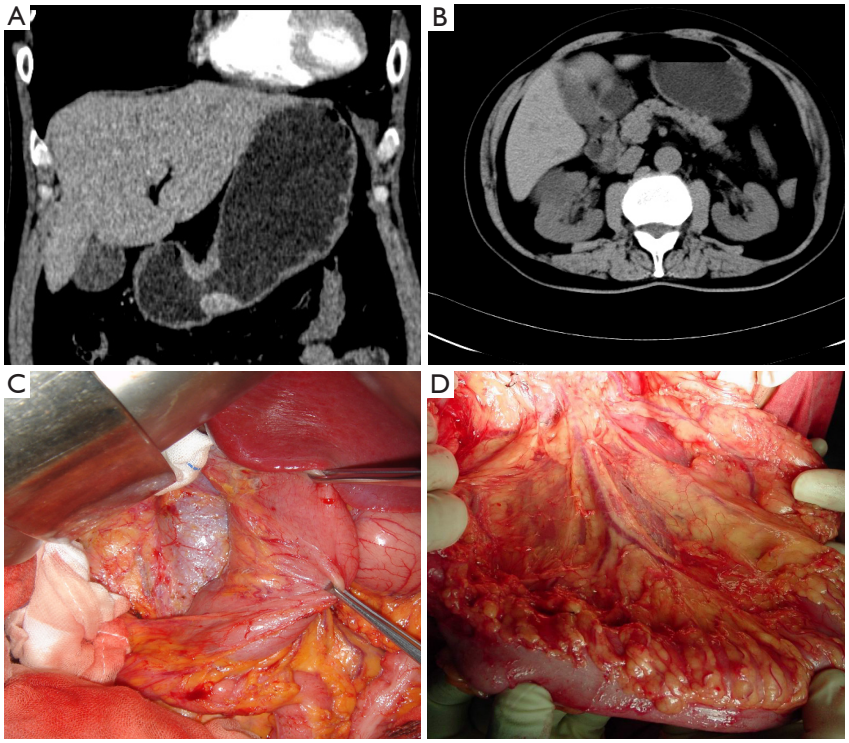

Figure 1 A. Three-dimensional reconstruction revealed that the tumor was located at gastric antrum and invaded the muscular layer; however, no enlarged perigastric lymph node was observed; B. Sectional view showed the relationship between the pancreas and the stomach. No enlarged lymph node was found behind the peritoneum; C. COX incision; D.Removal of the anterior lobe of transverse mesocolon

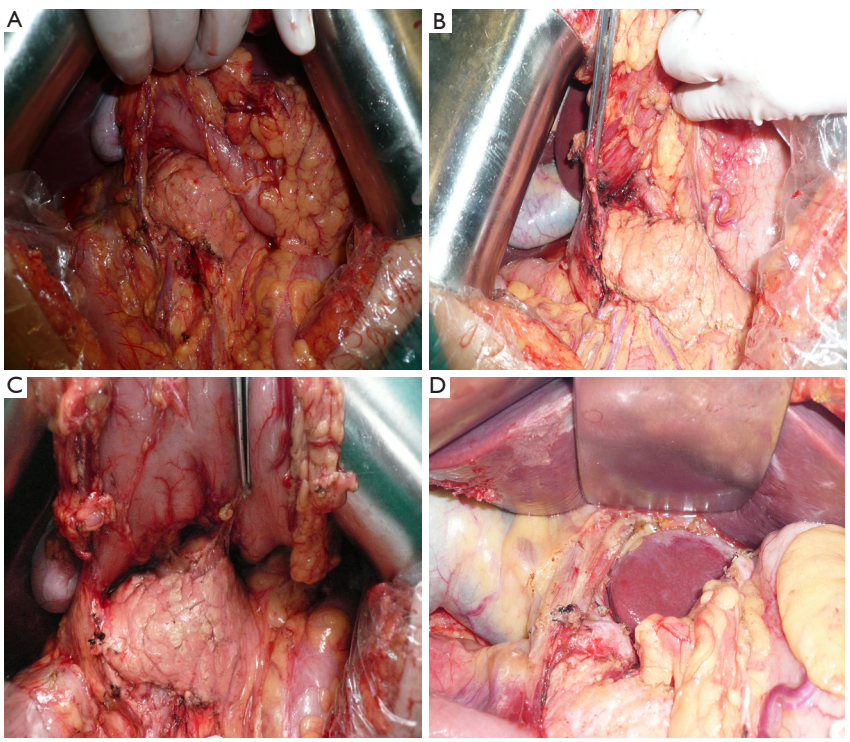

Figure 2 A. Ligation of right gastroepiploic vein to dissect lymph node station 6; B. Decortication of the pancreas; C. Ligation of the right gastroepiploic artery; D. Dissection of lymph node stations 5 and 12

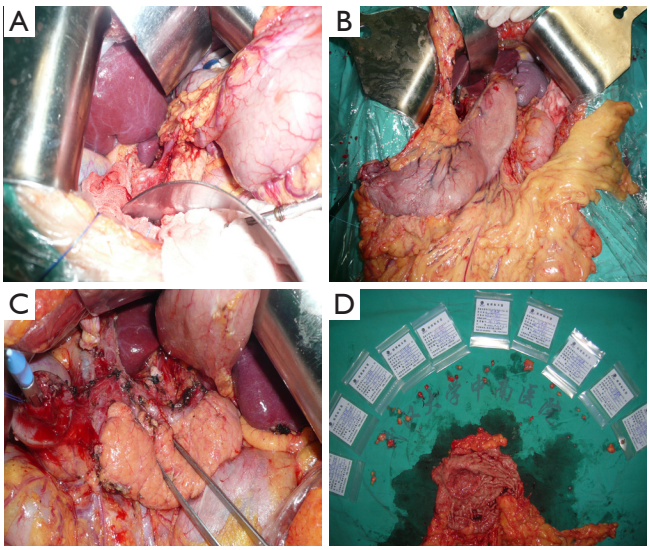

Figure 3 A. Dissection of lymph node stations 7, 8, 9, and 11P; B. Dissection of lymph node stations 1, 3 and 4; C. The surgical field following dissection; D. Postoperative specimens

Video 1 D2 distal subtotal gastrectomy for antral carcinoma

(moderately differentiated); Immunohistochemical test showed CerbB2 was positive (3+) and ki67 was about 95% positive; all the surgical margins were negative. Metastasis was found in several groups of dissected lymph nodes (group 7 4/4, group 6 1/2 and group 12 1/1). Group 5 was fiber adipose tissue without findings of carcinoma. According to the results of the postoperative pathological examination, the pathological stage was assigned to T2N2M0. The patients recovered well after surgery. Post-operative adjuvant therapy was provided.

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