

Subjects to be Considered for Total Gastrectomy and Reconstruction

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Various subjects should be considered at the total gastrectomy for gastric cancer. Followings are the major subjects:

Required Proximal Margin for Resection and Indication of Total Gastrectomy

2 cm is the minimal requirement for proximal margin for early cancer and circumscribed advanced cancer. For infiltrative advanced cancer, 5 cm is necessary for safe resection. Total gastrectomy is always indicated for diffuse cancer namely Borrmann type 4 cancer because of difficulty in assessment of cancer extension. Transdiaphragmatic approach is recommendable for cancer with esophageal invasion.

Lymph node (LN) Dissection

Proximal cancer has several special lymphatic channels. The left upper para-aortic LN has a direct lymphatic stream from the cardia along the left subphrenic artery. Incidence of metastasis was 5% and we could cure 18% of node positive patients by para-aortic node dissection. In patients with esophageal invasion, incidence of metastasis was 16% at the lower para-esophageal LN. However all node-positive patients could not survive more than 2 years even after the mediastinal dissection. Considering effectiveness and risks of open-chest LN dissection, trans-diaphragmatic approach is recommendable for the purpose.

Preservation of Pancreas and Spleen

For the purpose of LN dissection along the splenic artery and at the splenic hilum, distal part of the pancreas can be preserved removing the spleen and splenic artery. The pancreas preserving total gastrectomy reduced remarkably pancreatic juice fistula, subphrenic abscess, and postoperative diabetes. In cases of T1 and T2 cancer located at the lesser curvature, the spleen can be preserved because of no possibility of LN metastasis at the hilum.

Reconstruction after Total Gastrectomy

Followings are the important considerable factors for reconstruction. a) Release tension at the anastomosis by end-to-side anastomosis, b) Better blood circulation at the esophago-jejunal anastomosis by end-to-side anastomosis and preserving mesenteric vascular arcade sacrificing 15 cm length of the jejunum, c) Prevent regurgitation considering level difference between the esophageal hiatus and the subphrenic bottom using jejunal pouch/loop with suitable length, d) Buffer of bowed expansion by jejunal pouch/loop. e) Normal digestive route by jejunal interposition.

Post-operative Treatments

a) Drainage and check of amylase concentration, b) nutritional support by IVH, c) continuous infusion of atropine to reduce salivary and pancreatic juice secretion and to open Vater's papilla, d) taking bath as early as possible, and e) injection of Vitamin B12 every 6 months.