

# Distal gastrectomy with D2 lymph node dissection

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**Abstract:** Radical distal gastrectomy with D2 lymph node dissection is suitable for advanced gastric cancer patients. After distal gastrectomy, Billroth II and Braun anastomosis are preferred to complete the gastrointestinal reconstruction.

**Keywords:** Gastric cancer; radical distal gastrectomy; D2 lymph node dissection

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## Introduction

Open surgery for advanced gastric cancer patient. Radical distal gastrectomy with D2 lymph node dissection (*Figure 1*).

## Operative techniques

After anaesthetized, patient is placed in supine position. Tincture of iodine and alcohol were used to sterilize the skin.

Laparotomy: skin, subcutaneous tissue, the white line, and the peritoneum were incised layer by layer. A median incision was made on upper abdomen, and the peritoneal cavity was opened. No peritoneal adhesion or ascites was found. No nodules were seen on the liver surface or the abdominal cavity. No abdominal metastasis was found.

The primary tumor locates in the less curvature, body of stomach. The size of the tumor is about 1×1 cm<sup>2</sup> with invasion to muscularis propria layer. No obstruction or perforation was found.

After making Kocher incision along the duodenum in second segment, we separated the greater omentum, anterior lobe of transverse mesocolon and pancreatic envelope, dissected No. 6 and No. 4 lymph nodes, and then ligatured and cut off the left and right gastroepiploic artery and vein. We separated the anterior lobe of hepatoduodenal ligament and hepatogastric ligament, and disclosed the lesser omentum along the liver, which exposes hepatic



**Figure 1** Distal gastrectomy with D2 lymph node dissection (1).

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artery, and cleared lymphoid nodes (No. 12a). Then the right gastric artery was ligatured and cut off at its root, and the No. 5 lymph node was cleared at the same time.

Cut off the duodenum: linear stapler was used to close and cut off the duodenum, and we reinforced seromuscular layer of the stump by 3-0 Vicryl line.

Dissect No. 8a, No. 9, No. 7, No. 11p lymph nodes: the stomach was flipped cephalad. The assistant pressed downward the pancreas. We exposed hepatopancreatic fold and gastropancreatic fold, cut the hepatopancreatic fold, and found the common hepatic artery. We dissected the loose connective tissue between the surface of common hepatic artery and the lymph nodes from right to left along the

gap behind the pancreas, and dissected the No. 8a lymph node. After pulling up the caudate lobe of liver, we incised the lesser omentum until the right crus of diaphragm, and exposed the abdominal segment of esophagus. This cutline is the right boundary of lymph node clearance of No. 9. And we dissected the lymphoid tissue on the right side of No. 9 lymph nodes along this line to the root of common hepatic artery, and exposed the artery bifurcation root of common hepatic artery, splenic artery and left gastric artery. And then we cleared the tissue in the gap, cut off left gastric artery at the root, and completed the No. 7 clearance. By removing lymph tissue in group No. 11p along the proximal part of the splenic artery and left crus of diaphragm, we completed the clearance of No. 9, No. 11p.

Clearance of No. 1, No. 3: to clear No. 1 and No. 3 lymph nodes, we dissected the lymph nodes along the front and posterior wall of the lesser curvature of stomach to the right side of the abdominal segment of esophagus. At the time, the D2 lymph node dissection was completed.

Reconstruction of digestive tract: 80 mm stapler was used to cut off part of the greater curvature of the stomach transversely 5 cm away from the tumor. Pulling out jejunum from the treize ligament 25 cm away, we opened side wall and embeds 25 mm circular stapler anvil head for anastomosis. Then we opened distal gastric stump, inserts the 25 mm circular stapler rod, and traversed the proximal posterior wall of gastric body. We made end to side anastomosis with jejunum (output loop at the lesser curvature), and used the 80 mm staplers to resect the residual gastric lesser curvature, removing the specimen.

We incised the side wall of afferent loop 10 cm away from the anastomosis and the side wall of efferent loop 20 cm away from the anastomosis, and put the two arms of linear stapler into the two loops to make side to side anastomosis, completing Brauns anastomosis. Vicryl line is used to reinforce seromuscular layer of the stump and the anastomosis.

### Comments

Radical distal gastrectomy with D2 lymph node dissection is suitable for advanced gastric cancer patients. After distal gastrectomy, Billroth II and Braun anastomosis are preferred to complete the gastrointestinal reconstruction.

### Acknowledgements

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### Footnote

*Conflicts of Interest:* The authors have no conflicts of interest to declare.

### References

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