

Role of splenectomy in proximal gastric cancer patients undergoing total gastrectomy

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The aim of the addition of splenectomy to a D2 gastrectomy in patients with gastric cancer is to achieve R0 resection and to improve patient survival. However, the survival benefit of splenectomy remains uncertain and the associated morbidity and mortality rates may compromise the beneficial effects of splenectomy (1,2). Given splenic hilar lymph node metastasis has not been observed in early gastric cancer (3), researchers have suggested that a splenectomy for the purpose of splenic hilar node clearance should be performed for patients with high suspicion of metastasis near the splenic hilum or direct tumor invasion of the spleen (3-6). In the issue of *Annals of Surgery*, Sano *et al.* indicated that in total gastrectomy for proximal gastric cancer without invading the greater curvature, splenectomy did not provide survival benefits with increases in operative morbidities based on a multi-institutional randomized controlled trial (7). In their study, tumors without macroscopic nodal metastasis at the splenic hilum and patients with proximal gastric cancer of clinical T2-4/N0-2/M0 not invading the greater curvature were recruited. In this setting, the incidence of splenic hilar nodal metastasis was as low as 2.4%, and those patients also had other nodal metastasis with poor prognosis (88% of patients died of recurrence). Their results also suggest that proximal gastric cancer not invading the greater curvature with splenic hilar node metastasis, disease cannot be cured by surgery alone. In this regard, Shin *et al.* have shown that the 5-year survival rate was only 11% for patients with splenic hilar node metastasis, significantly worse than the rate of 52% in those without metastasis (3). Nonetheless, whether the addition of splenectomy may improve the patient prognosis for a tumor located to the greater curvature is not answered in this study (7). Yu *et al.*

have conducted a randomized controlled trial to elucidate the benefits of splenectomy in patients with proximal gastric cancer (5). Their results reveal that splenectomy had no impact on survival in patients with splenic hilar nodal metastasis or metastatic lymph nodes along the splenic artery. Therefore, they concluded that the use of prophylactic splenectomy to remove macroscopically negative lymph nodes near the splenic hilum in patients undergoing total gastrectomy for proximal gastric cancer should be avoided. However, because it is difficult to definitely diagnose nodal metastasis at the splenic hilum before and during surgery, splenectomy still is the useful way to facilitate lymph node dissection. More accurate diagnostic tools to detect the nodal metastasis are urgently needed. Based on current accumulated evidences, the role of prophylactic splenectomy for tumors localized to the greater curvature of the stomach remains an unresolved issue. Routine splenectomy is not justified for proximal gastric cancer patients undergoing total gastrectomy when the tumor does not involve the greater curvature or there is no macroscopic lymph node metastasis near the splenic hilum.

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