Editorial

Surgical treatment of gastric cancer

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Gastric cancer (GC) is the fourth most common cancer and the third leading cause of cancer-related deaths worldwide (1). Most patients have inoperable disease at the time of diagnosis and encounter recurrence even after radical surgery (2). Curative resection including adequate lymphadenectomy provided the chance of a cure for localized disease (2,3). According to the Japanese guideline for surgical treatment of GC, D1 and D2 lymphadenectomy is suggested for selected early (T1) and advanced (T2–4) GC, respectively (4). Our previous studies have demonstrated a strong association between the numbers of lymph node retrieved and improved survival in advanced GC and therefore suggest retrieving more than 25 lymph nodes during radical surgery to improve outcomes (3,5). However, there is no survival benefit in early GC without nodal metastasis in terms of the numbers of lymph node retrieval (3,6). Furthermore, the addition of splenectomy to a D2 gastrectomy for the purpose of nodal clearance at the splenic hilum (No. 10) or along the distal splenic artery (No. 11) did not prolong patient survival in whom the GC was located at the lesser curvature of the stomach and there was significant nodal metastasis around the splenic hilum (3,7,8). Accordingly, routine splenectomy is not justified for treating proximal GC patients under those conditions (9,10).

Laparoscopic gastrectomy has been widely adopted for treating early-stage GC with comparable long-term oncologic outcomes and providing favorable immediate postoperative results as compared to conventional open gastrectomy in an experienced surgeon (11,12). For locally advanced GC, laparoscopic approach is still a matter of debate in the safety and oncologic concerns. A phase II multi-institutional prospective controlled trial is still ongoing (13). In recent years, robotic gastrectomy has been increasingly used for treating early-stage GC which has some advantages such as three-dimensional view, precise dissections and easier suturing as well as stable camera platform in comparison with laparoscopic gastrectomy (14,15). The modern technology greatly decreases the learning curve in performing complicated radical gastrectomy and reconstruction.

A number of evidence suggests that preoperative serum markers such as neutrophil to lymphocyte ratios or lymphocyte to monocyte ratios are associated with GC prognosis (16-19). This biomarker is clinically accessible and useful to predict surgical outcomes for resectable GC and should be as part of the preoperative risk stratification process.

Peritoneal carcinomatosis frequently occurs in advanced GC (especially in T4 lesion, N2-N3 tumor or positive peritoneal cytology) following radical resection during the course of disease. Few studies have indicated that GC patients presenting with peritoneal carcinomatosis benefit from treatment by cytoreductive surgery (CS) and hyperthermic intraperitoneal chemotherapy (HIPC) (20). A meta-analysis of 10 randomized controlled studies showed that prophylactic HIPC may prevent peritoneal recurrence and improve the overall survival rate for advanced GC with serosal invasion after radical surgery (21). However, the CS-HIPEC was associated high morbidity and mortality rates which compromise merits brought by CS-HIPEC (20). More effects should be made including the use of nanotechnology in more precise drug delivery systems or choice of more efficient chemotherapeutic agents/dosage, open or closed perfusion techniques and so on to improve patient outcomes (22).

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