

REPLY

The Role of Wide Excision of Occult Cancer Tissue Harbored Posteriorly to the Superior Mesenteric Artery

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We would like to thank Drs. Dumitrascu and Popescu for their letter. A major point of comment regarding our article is the question that “the surgical outcome was improved but status of positive surgical margin was not changed”. As shown in our article [1], postoperative survival after a pancreaticoduodenectomy using left posterior approach was improved as compared with that after a pancreaticoduodenectomy using conventional methods in “univariate analysis”, but the difference was not shown in “multivariate analysis”.

It is well known the nerve bundle arising from the celiac ganglia forms the superior mesenteric plexus and then ramifies into the secondary plexus consisting of pancreatic branches and intestinal branches. The superior mesenteric plexus is thin and located in the innermost layer. Although the excision of the superior mesenteric plexus or the intestinal branches causes severe diarrhea after surgery, excision of the pancreatic branches alone does not influence intestinal motility.

Regardless of the dissection techniques, the principal variable affecting postoperative intestinal motility is whether or not dissection of the superior mesenteric plexus was performed, and whether the dissection was performed partially or extensively. In the control group of our study [1], the right half of the superior mesenteric plexus was resected. Accordingly, it is thought that the incidence of diarrhea did not differ significantly between the two groups.

From the point of view of the pathological examination, the resected margin of the plexus showed a complicated and irregular shape in the left posterior approach rather than in the conventional dissection (dissection on the right side of the superior mesenteric artery). Considering the mode of tumor extension involved in perineural invasion, the cancer cells spread continuously along the perineural space as reported previously by Nagakawa *et al.* [2]. However, on the mapping of the tumor extension in our study (Figure 3) [1], the deposit of the perineural invasion was far from the main tumor in some cases. The continuity of the perineural spread of the tumor was divided by the dissection of the plexus. In addition, the resected plexus was sampled and underwent intraoperative frozen section examination in some cases. Accordingly, the identification of the true surgical margins, especially the medial margin, may sometimes be difficult. The method of pathologically examining the evaluation of the status of the medial margin was altered gradually during the study period. In our study, the plexus invasion-positive case was taken as the margin-positive case [1]. The more detailed pathology examination was conducted in the left posterior approach group as compared to the control group. It may be one of the possible reasons that the positive rate in medial margin status did not decrease. However, we believe that the occult cancer tissue which was harbored posteriorly to the superior mesenteric artery was widely excised using the left posterior approach, and that local recurrence around the artery was reduced.

Nowadays, gemcitabine-based chemotherapy is the most popular therapy in a postoperative adjuvant setting. The preoperative imaging diagnosis for patient selection and postoperative management, including adjuvant chemotherapy, have improved rapidly. Liver perfusion chemotherapy [3] was performed more frequently in the left posterior approach group as compared to the control group [1], although its

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antitumor effect on liver metastasis has not been confirmed by a randomized control study. In resectable pancreatic cancer, timely and appropriate adjuvant chemotherapy is the most important consideration in addition to surgical local control of tumor. The retrospective nature of the study was a major limitation for the prognostic estimation of the surgical technique. However, we think that the left posterior approach was effective on the local control of cancer around the superior mesenteric artery.

Conflict of interest The authors have no potential conflicts of interest

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