AB051. P022. Vein invasion in pancreatic adenocarcinoma is a topography: vein resection in pancreaticoduodenectomy is worthy while

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Background: Portomesenteric venous resection (PDVR) during pancreaticoduodenectomy (PD) was supported by view that venous invasion was triggered by tumor location but argued by view that venous invasion was indicating more aggressive tumor biology. This study analyzes venous invasion in pancreatic cancer meaning tumor topography or tumor biology by collecting clinical data.
Methods: Patients underwent curative surgical treatment were divided into two subgroups: those having PD procedure and those having PDVR procedure. The tumor location was subdivided histopathologically into head-neck region, main head region, and uncinated region.
Results: Of 225 studied patients, 146 patients underwent PD, and 79 underwent PDVR. The postoperative mortality rate was 4.8% (7/146) in PD group and 3.8% (3/79) in PDVR group (P>1.0). A total of 64 patients in PD group and 43 in PDVR group had complications after surgery (P=0.129). Of the 79 patients in PDVR group, 65 patients were confirmed positive venous invasion by histology. There was no statistical significance in the tumor location, perineural invasion, tumor grade and nodal status between PD and PDVR groups. The mean tumor diameter of uncinated region was significant greater in PDVR group than that in PD group (4.1 cm in PDVR group and 3.3 cm in PD group, P=0.039). The R1 resection was 43 cases in PD group, while 15 cases in PDVR group (P=0.516). There was no statistical difference in the model of recurrence between the two groups (P=0.802). The highest local recurrence occurred in head-neck region with significant difference to other two regions in both groups. No statistical difference of survival time was observed between two groups (P=0.124). Endogenous PRRX1A and PRRX1B expression was assessed in pathological specimens of 62 patients in PDVR group in the way of IHC. Patients with high degree of PRRX1A staining intensity (n=56) had longer overall survival (OS) than those with low degree of PRRX1A (n=6) (P<0.001). Using univariate analysis involving age, gender, tumor location, nodal status, perineural invasion, tumor grade and tumor size showed than only tumor size was an independent risk factor for PRRX1B expression.
Conclusions: PDVR is as safe as PD. The patients with venous invasion had comparable prognosis after PDVR to those without venous invasion after PD. Tumor infiltrating the vein was related to the location rather than aggressive tumor biology. However, single surgical treatment for PDAC could not bring satisfactory OS on account of high rate of dismal recurrence. Epithelial-mesenchymal transition (EMT) probably played an important role in dismal recurrence.

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