Management of Borderline Resectable Pancreatic Cancer in a Specialized Hepato-Pancreato-Biliary Center in Latvia

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Introduction. Surgery is the only potentially curative treatment for patients with pancreatic cancer. However, less than 20 % of patients can potentially undergo curative surgery. Management of borderline resectable cancer (BRC) is controversial and is still a matter of debate due to difficulties to achieve R0 resection and high perioperative morbidity.

Aim, Materials and Methods. The aim of this study is to share our first experience of surgical management of patients with BRC of the pancreas. 197 patients diagnosed with pancreatic cancer at the Department of Surgery between years 2014 and 2016 were identified through a prospectively maintained database. According to preoperative radiological studies, 158 (80.2 %) were diagnosed of having locally and distally advanced disease and, therefore, recognized as primarily unresectable. According to National Comprehensive Cancer Network guidelines, the remaining 39 patients were identified as potentially resectable and considered for surgery (study population). All eligible patients were stratified into two groups: 30 patients who underwent standard oncological resection (VR–) and 9 who underwent vascular resection (VR+). Surgical procedure, the overall ICU and hospital stay, morbidity rate were analysed comparing both groups.

Results. Overall 39 (19.8 %) patients underwent resection with curative intent. Of these, 25 had pylorus- preserving pancreaticoduodenectomy, 11 – spleen preserving distal pancreatectomy, two – distal pancreatectomies without spleen preservation, and one – central pancreatectomy. Nine (23.1 %) patients whether before or during surgery were recognized as having BRC and considered for venous vascular resection. Resection of portal vein was performed in seven and superior mesenteric vein in two patients. Preoperative vascular involvement was suspected in only two patients; the decision to perform venous resection in other patients was based on intraoperative findings. The median age of VR+ patients was 73 years (range 48–77). The venous reconstruction procedures included six longitudinal or transverse closures of venous defects after resection; end-to-end anastomosis was performed in three patients. All venous repairs were completed using 5–0 Prolene running suture. Morphological examination revealed ductal adenocarcinoma in all patients that underwent borderline resection. The mean tumour size in VR+ group was 3.8 ± 1.1 cm, and seven (77.8 %) patients were classified as having T3 tumour. However, R0 resection rate was achieved in 88.9 %. Histologically venous wall invasion was described in 44.4 %. The median number of examined regional lymph nodes was 13 (range 2–22). Lymph nodes were found to be positive for tumour metastasis only in two cases. The mean operation time and intraoperative blood loss was 171.3 ± 44.6 min and 432.5 ± 282.2 mL in VR– group *vs.* 177.8 ± 30.7 min and 450.0 ± 269.3 mL in VR+ (p = 0.69 and p = 0.88, respectively). There was no significant difference between VR– and VR+ groups regarding ICU stay (3.7 ± 1.9 *vs.* 2.6 ± 1.1 days, respectively; p = 0.09). Overall, morbidity rate in VR– group was 20.0 % *vs.* 22.2 % in VR+, p = 0.89. There was no mortality in our series.

Conclusions. Approximately one fourth to one fifth (23.1 %) of patients undergoing pancreatectomy for pancreatic cancer present with borderline resectable disease. Strict radiological protocols are needed for preoperative diagnostics of vascular involvement, especially for patients considered for curative resection. Vascular resections in patients with BRC should be performed in centers with a high patient flow.

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