

Total Pancreatectomy – Indications, Early Morbidity, and Perioperative Strategy. Own Experience of 36 Consecutive Patients and Literature Review

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Abstract

Background/ Aim: Total pancreatectomy (TP) is an uncommon type of pancreatic resection, even at high-volume centers. The indications of a TP are not fully defined, and the outcomes are controversial. The study aims to assess the frequency of use, indications, and early outcomes of TP in a contemporary consecutive series of 36 patients.

Patients and Methods: The data of all consecutive elective TP performed by three experienced pancreatic surgeons between February 1, 2017, and December 31, 2024, were retrospectively extracted from a prospectively maintained electronic database of pancreatic resections. The data of patients requiring TP were analyzed for indications, surgical technique, and early outcomes.

Results: The patients were predominantly males (20 patients, 56%) with a median age of 67 years (range 44-76 years). Pancreatic ductal adenocarcinoma was the main indication (24 patients, 67%). The main reasons for a TP were multicentric lesions (14 patients, 39%), distal pancreas hypoplasia/hypotrophy (8 patients, 22%), high-risk anastomoses (7 patients, 19%), and positive pancreatic margins (6 patients, 17%) following pancreatico-duodenectomy. Splenectomy was performed in 23 patients (64%), while venous and arterial resections were performed in 4 patients (11%) and two patients (6%), respectively. Overall and severe (i.e., \geq grade 3 Dindo) morbidity rates were 83% and 25%, respectively, with a 90-day mortality of 6%. The primary sources of surgical morbidity were clinically relevant delayed gastric emptying (5 patients, 14%) and bile leak (4 patients, 11%).

Conclusions: TP has rare and specific indications, including multicentric tumors, distal pancreas hypotrophy, positive pancreatic neck margins, and high-risk anastomosis after pancreatico-duodenectomy. In experienced hands, severe morbidity and mortality rates are acceptable for such a complex surgical procedure.

Keywords: total pancreatectomy, indications, high-risk anastomosis, early morbidity, mortality, postoperative diabetes, experienced surgeon