

Surgery Indeed has an Important Role in Long-Term Outcome in Patients with Pancreatic Head Cancer by Zdravkovic et al.

David Petermann · Nicolas Demartines ·
Markus Schafer

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We thank Zdravkovic et al. [1] for their comments on our article recently published in the *World Journal of Surgery* on the impact of postoperative complications on survival after pancreaticoduodenectomy for ductal adenocarcinoma. The key finding was that postoperative complications, especially if severe, had a negative impact on long-term survival. In particular, patients at increased risk for early tumor recurrence, e.g. after incomplete R1 resection, are concerned by the occurrence of severe complications. A meticulous prospective assessment of complications using a standardized classification system, e.g. the Dindo–Clavien classification, usually reveals a high complication rate, since minor complications are otherwise under-reported. Hence, our morbidity rates represent the ‘real world’ of pancreatic surgery. However, despite that the overall complication rate was 57 %, severe complications (higher than grade IIIb) occurred in only 16 %. The perpetual debate on prevention of delayed gastric emptying (DGE), pancreatic fistula, and postoperative hemorrhage was not taken as an outcome in our study. Contrary to the comment made, there is good evidence that pylorus-preserving pancreaticoduodenectomy (PPPD) is not related to higher DGE rates [2, 3]. The type of pancreaticojejunal anastomosis to best prevent pancreatic fistula is the subject of a large series of publications without any clear result favoring a particular technique. Further, the question of pancreaticogastrostomy versus pancreaticojejunostomy is not yet elucidated, as a recent meta-analysis shows no difference [4], whereas postoperative fistula was lower after

pancreaticogastrostomy in two recent randomized controlled studies [5, 6].

The aim of the discussion about the impact of an R1 resection on long-term survival was to outline the multiplicity of the factors that could be taken into account to improve the results. Factors related to the tumor, such as tumor size, lymphovascular and perineural invasion, lymphatic node invasion, and differentiation might be balanced with the surgeon’s impact on the disease, i.e. resection margins and postoperative complications. Treatment of pancreatic ductal adenocarcinoma needs multidisciplinary care with knowledge of every parameter that could improve survival.

R1 resection in the entire group of patients was correlated with worse outcomes (1.2 vs. 1.6 years, $p = 0.037$). In patients without severe postoperative complications, survival after R1 resection was 2.0 years compared with 1.4 years after R0 resection, but this was not significant ($p = 0.27$). Patients with severe postoperative complications and R1 resection had poorer outcomes ($p = 0.0005$). We can agree that results are based on a small number of patients, but even with small figures, statistical analysis showed strong significance. Moreover, to date, to the best of our knowledge, very few studies have specifically addressed the problem of postoperative complications and its impact on survival.

References

1. Zdravkovic D, Bilanovic D, Randjelovic T, Zdravkovic M, Dikic S (2013) Surgery indeed has an important role in long-term outcome in patients with pancreatic head cancer. *World J Surg* [Epub ahead of print]

D. Petermann (✉) · N. Demartines · M. Schafer
Visceral Surgery, University Hospital CHUV, Lausanne,
Switzerland
e-mail: david.petermann@chuv.ch

2. Diener MK, Fitzmaurice C, Schwarzer G, Seiler CM, Antes G, Knaebel HP, Büchler MW (2011) Pylorus-preserving pancreaticoduodenectomy (pp Whipple) versus pancreaticoduodenectomy (classic Whipple) for surgical treatment of periampullary and pancreatic carcinoma. *Cochrane Database Syst Rev* 11(5):CD006053
3. Qu H, Sun GR, Zhou SQ, He QS (2013) Clinical risk factors of delayed gastric emptying in patients after pancreaticoduodenectomy: a systematic review and meta-analysis. *Eur J Surg Oncol* 39:213–223
4. He T, Zhao Y, Chen Q, Wang X, Lin H, Han W (2013) Pancreaticojejunostomy versus pancreaticogastrostomy after pancreaticoduodenectomy: a systematic review and meta-analysis. *Dig Surg* 30:56–69
5. Figueras J, Sabater L, Planellas P, Muñoz-Forner E, Lopez-Ben S, Falgueras L, Sala-Palau C, Albiol M, Ortega-Serrano J, Castro-Gutierrez E (2013) Randomized clinical trial of pancreaticogastrostomy versus pancreaticojejunostomy on the rate and severity of pancreatic fistula after pancreaticoduodenectomy. *Br J Surg* 100:1597–1605
6. Topal B, Fieuws S, Aerts R, Weerts J, Feryn T, Roeyen G, Bertrand C, Hubert C, Janssens M, Closset J (2013) Pancreaticojejunostomy versus pancreaticogastrostomy reconstruction after pancreaticoduodenectomy for pancreatic or periampullary tumours: a multicentre randomised trial. *Lancet Oncol* 14:655–662