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Long-term quality of life is better after laparoscopic compared to open pancreatoduodenectomy

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Abstract

Background: Three randomized controlled trials have reported improved functional recovery after Laparoscopic pancreatoduodenectomy (LPD), as compared to open pancreatoduodenectomy (OPD). Long-term results regarding quality of life (QoL) are lacking. The aim of this study was to compare long-term QoL of LPD versus OPD.

Methods and patients: A monocentric retrospective cross-sectional study was performed among patients < 75 years old who underwent LPD or OPD for a benign or premalignant pathology in a high-volume center (2011-2021). An electronic three-part questionnaire was sent to eligible patients, including two diseases specific QoL questionnaires (the European Organization for Research and Treatment in Cancer Quality of Life Questionnaire for cancer (QLQ-C30) and a pancreatic cancer module (PAN26) and a body image questionnaire. Patient demographics and postoperative data were collected and compared between LPD and OPD.

Results: Among 948 patients who underwent PD (137 LPD, 811 OPD), 170 were eligible and 111 responded (58 LPD and 53 OPD). LPD versus OPD showed no difference in mean age (51 vs. 55 years, p = 0.199) and female gender (40% vs. 45%, p = 0.631), but LPD showed lower BMI (24 vs 26; p = 0.028) and higher preoperative pancreatitis (29% vs 13%; p = 0.041). The postoperative outcome showed similar Clavien-Dindo ≥ III morbidity (19% vs. 23%; p = 0.343) and length of stay (24 vs. 21 days, p = 0.963). After a similar median follow-up (3 vs. 3 years; p = 0.122), LPD vs OPD patients reported higher QoL (QLQ-C30: 49.6 vs 56.3; p = 0.07), better pancreas specific health status score (PAN20: 50.5 vs 55.5; p = 0.002), physical functioning (p = 0.002), and activities limitations (p = 0.02). Scar scores were better after LPD regarding esthetics (p = 0.001), satisfaction (p = 0.04), chronic pain at rest (p = 0.036), moving (p = 0.011) or in daily activities (p = 0.02). There was no difference in digestive symptoms (p = 0.995).

Conclusion: This monocentric study found improved long-term QoL in patients undergoing LPD, as compared to OPD, for benign and premalignant diseases. These results could be considered when choosing the surgical approach in these patients.

Keywords: Laparoscopic surgery; Minimally invasive surgery; Open surgery; Pancreatoduodenectomy; Quality of life.

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