HPB P17 Preoperative cardiovascular disease and outcomes of pancreatoduodenectomy performed for malignancy

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Background: Despite improvements to morbidity and mortality rates in recent decades, pancreatoduodenectomy (PD) remains a high-risk operation. Patients with pre-existing cardiovascular disease (CVD) are known to be at increased risk of perioperative morbidity and mortality. Evidence is lacking on the impact of CVD on long-term outcomes. This study aimed to compare the outcomes of PD patients with preoperative CVD to those without.

Methods: Data was extracted from the Recurrence After Whipple’s (RAW) study, a multicentre retrospective cohort study of outcomes of PD performed for pancreatic head malignancy (29 centres in 8 countries, n=1484). Pre-existing CVD included any of the following: hypertension (HTN), atrial fibrillation (AF), other cardiac arrhythmia, ischaemic heart disease (IHD), previous cardiovascular surgery, heart failure, peripheral vascular disease (PVD), previous stroke, previous transient ischaemic attack (TIA), pulmonary HTN, deep vein thrombosis, valve disease, cardiomyopathy, subarachnoid haemorrhage, peri-/myocarditis and myocardial infarction. Several outcomes were compared: length of stay, 30-day readmission, 90-day mortality, unplanned return to theatre rate, and five-year survival.

Results: From 1484 cases, 590 patients (39.8%) had pre-existing CVD. HTN, AF, other cardiac arrhythmia, IHD, previous cardiovascular surgery, heart failure and PVD affected 33.0%, 3.6%, 1.0%, 5.3%, 1.9%, 1.3% and 1.5% of patients, respectively. Remaining pathologies surmounted to <1%. 30-day readmission (10.5% vs 8.1%, p=0.1), 90-day mortality (4.4% vs 3.2%, p=0.3), unplanned return to theatre (5.2% vs 4.8%, p=0.7) and five-year survival (31.2% vs 32.1%, p=0.7) were similar between the patient groups, however, median LoS was significantly longer in those with CVD (14 vs 12 days, p<0.0001). Similar results were obtained when hypertension was not classified as a cardiovascular comorbidity.

Conclusions: In our multicentre study of PD outcomes, patients with a preoperative cardiovascular comorbidity had longer length of stay than those who did not but the other studied outcomes were unaffected.
However, there were no differences in the postoperative INR (WMD 0.02, 95% CI -0.18 to 0.22, I² = 84%) and ALT (WMD -94.94, 95% CI -228.46 to 40.38; I² = 97%). More importantly,
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