FP17 - Free Papers 17 (mini oral) - HPB 2

FP17-01

RANDOMISED CONTROLLED TRIAL ON BENEFITS OF PREOPERATIVE CARBOHYDRATE LOADING IN PATIENTS UNDERGOING ELECTIVE MAJOR HEPATOBILIARY SURGERY

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Objective: Surgery induces a catabolic response which is further augmented with prolonged preoperative fasting. Compared to fasting from midnight, preoperative carbohydrate(CHO)-loading attenuates this response and enhances recovery. We aim to assess the effect of CHO-loading on length of hospital stay (LOS), preoperative wellbeing, resting energy expenditure(REE) nutritional status, morbidity and mortality following elective major hepatobiliary operations.

Methods: 35 patients were recruited and randomised into control group (fasted) or intervention group (preoperative CHO). 24 patients (12 from each group) were analysed. Preoperative wellbeing on thirst, hunger, dry mouth, anxiety and weakness assessed with VAS (0-10 score). REE, muscle grip strength(MGS), midupper arm circumference(MUAC) measured at baseline (preoperative), postoperative day 1, 4 and 7.

Results: Patients in control group had mean LOS 13.8 days (SD=5.06) compared with 8.1 days (SD=2.47) for intervention group(P=0.004). The mean rank of thirst, hunger and dry mouth scores were significantly higher in the fasted group compared to intervention (15.96 vs 9.04 (P=0.014), 16.46 vs 9.04 (P=0.005) and 17.5 vs 7.5(P=0.000) respectively). REE was significantly higher in the fasted compared to intervention group at postoperative day 1 by mean of 332kcal (P=0.018). Comparing with baseline this rise was significant in the fasting group(P=0.015) but not for intervention group. No difference for trends in MGS and MUAC, morbidity and mortality.

Conclusion: Preoperative oral carbohydrate significantly reduced LOS, improved preoperative patient comfort and reduced metabolic response to surgery when compared with conventional fasting from midnight in patients undergoing major hepatobiliary operations.

FP17-02

FUNCTIONAL AND VOLUMETRIC RESPONSE OF LIVER SEGMENT 4 AFTER RIGHT PORTAL VEIN EMBOLIZATION

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Introduction: Portal vein embolization (PVE) is performed in patients with insufficient volume or function of the future remnant liver (FRL) before planned hepatectomy. Additional embolization of segment 4 (S4) is not routinely performed in case of planned extended right hemihepatectomy. The aim of this study was to examine the functional versus volumetric response of the FRL and S4 after right PVE.

Method: Patients that underwent both CT-volumetry and liver function test before and after PVE for planned hepatectomy were included. Assessment of liver function was performed with mebrofenin hepatobiliary scintigraphy (HBS). Functional and volumetric response of FRL and S4 were calculated. Multiple regression analysis was conducted to explore predictors of functional and volumetric response.

Results: 90 patients underwent right PVE. Of the 66 resected patients, 32 underwent additional S4 resection. After 22 days (21-25) [median (interquartile-range)], the functional increase was significantly higher than the volumetric increase for both segments 2-3 (69.5% (42.6-108.5) vs. 41.8% (29.6-56.3), P<0.01) and segments 2-4 (54.7% (30.0-92.6) vs. 36.8% (24.0-60.7), P<0.01). The functional and volumetric contribution of S4 were respectively 41.5% (31.7-48.7) and 41.6% (37.4-48.5) of the non-embolized lobe. Multiple regression model revealed that type of liver disease and baseline liver function were significant predictors for functional, but not for volumetric, response.

Conclusions: After right PVE, the functional and volumetric contribution of S4 to the FRL is substantial. The functional response is higher than the volumetric and correlates with liver pathology and baseline function. This advocates for a functional rather than a volumetric assessment.

FP17-04

ANALYSIS OF 90-DAY READMISSION RATES AND HEALTHCARE COST IN PANCREATIC SURGERY: WHAT IF BUNDLED PAYMENT SYSTEMS WERE APPLIED TO PANCREATIC SURGERY?

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Introduction: National efforts to curb healthcare spending, reduce waste and improve quality have led to the development of bundled payments systems by the Centers for Medicare and Medicaid for certain surgical procedures, e.g. joint replacements. Integral components of bundled payment metrics include length of stay (LOS), post-operative major complication rates (PMCs) and unplanned 90-day readmission. The goal of this study was to quantify 90-day readmission and overall in-patient hospital costs in patients undergoing pancreatic surgery.

Methods: A retrospective review of clinical and financial data was conducted on 413 patients undergoing pancreatic resection at a single academic institution. Data were analyzed using non-parametric testing to assess association between LOS, readmission rates and total in-patient hospital cost.

Results: 104 patients (25%) required 90-day readmission after surgery and PMCs occurred in 15%. 87 required a single readmission (SRA) while 17 required multiple readmissions (MRA). Median LOS was 7 days in both SRA