Transplantation

PTU-051 DONOR MORBIDITY FOLLOWING LIVING DONOR LIVER TRANSPLANTATION (LDLT): OUTCOME FROM A SMALL VOLUME CENTRE

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Introduction Living Donor Liver Transplantation (LDLT) has grown immensely in certain countries over the last few years, whereas in West the growth remains static and low volume. Donor morbidity following LDLT has been reported in the median range of 15%–30% in various studies. One of the limiting factor for the growth of LDLT has been the concerns with morbidity and mortality during a centres initial experience. We report the donor outcome from a small volume centre, so as to assess if there is an impact on volume with donor outcome.

Methods Between June 2007 and December 2011, 25 LDLT procedures were carried out in our unit. The criteria for donor selection included age, fitness for surgery and remnant liver volume. Donor demographics, graft type, complications, length of stay and overall survival were extracted. Donor morbidity was assessed objectively using the modified Clavien-Dindo classification. Continuous variables are expressed as mean ± SD.

Results The mean donor age was 38.4±11.0 years and donor BMI was 23.9±2.8 kg/cm^2. Two donors were abandoned on table due to complex arterial and biliary anatomy respectively. The graft type was right lobe (n=12, 52.2%), left lateral lobe (n=10, 43.5%) and left lobe (n=1, 4.3%). The graft weight was 528.5±258.9 g. The morbidity was 21.7% (n=5). There were three Clavien grade II complications (wound infection, urinary infection and unknown sepsis needing antibiotics). One patient needed laparotomy for haemorrhage (Grade IIIb) and another patient had ultrasound guided drainage of subphrenic collection (Grade IIIa). None of our patients had any post-operative blood transfusion. The length of hospital stay was 7.9±2.8 days. At the end of median follow-up of 21.4 months, all our donors were alive, with no long-term morbidity.

Conclusion Our experience shows that donor hepatectomy for Living Donor Liver Transplantation is a safe procedure in a small volume unit. Our donor morbidity of 21.7% is comparable or better than most high volume centres across the world. Number of procedures performed by the unit shouldn't be an hindrance to the introduction of live donor liver programme.

Competing interests None declared.

PTU-052 IMPACT OF BODY MASS INDEX ON THE OUTCOME OF LIVER TRANSPLANTATION IN CHILDREN

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Introduction The impact of poor nutritional status on the outcome following liver transplantation in children is well recognised. Recently studies in adults and children have reported variable effects of obesity on post transplant morbidity and mortality. This study examines the impact of pretransplant body mass index (BMI) on the outcome of liver transplantation in the current era in consecutive children from a single centre.

Methods Data were retrieved from a prospectively maintained institutional database from 1994 to 2009. Patients were stratified into five BMI categories established by the WHO according to their Z scores: severe thinness (−3), thinness (-2), normal weight (0), overweight (+2) and obese (+3). Primary outcome was to evaluate post-operative morbidity and secondary measures were overall patient and graft survival. Categorical variables were analysed by χ^2, and continuous variables by one-way ANOVA. Kaplan–Meier curves were used to study patient and graft survival.

Results 146 paediatric liver transplants recipients were identified, of which 132 patients with height and weight data were included. 12.2% of patients were underweight (Z score −2 and −3), 8.3% were overweight (Z score +2 and +3) and the remaining 79.5% were normal weight for age. The overall morbidity was higher in underweight recipients in comparison to normal weight (81.2% vs 42.8%, p=0.006). Post-operative septic events were common in underweight recipients in comparison to normal weight recipients (75.0% vs 25.7%, p<0.001). Underweight patients had significantly longer intensive care stay than normal weight patients (mean 5.6 vs 3.1 days, p=0.029). The length of ventilation period was longer in underweight recipients in comparison to normal weight recipients (mean 3.4 vs 0.9 days, p=0.001). There was no difference in the overall length of post-operative hospital stay between underweight and normal weight recipients (mean 34.2 vs 30.9 days, p=0.602). There was no difference in the post-operative septic events, ITU stay, ventilatory period and hospital stay between overweight and normal weight. There was no difference in overall graft (p=0.949) and patient survival (p=0.984) between the three groups.

Conclusion This is the only reported UK series on BMI and outcome following paediatric liver transplantation. Despite current standards of peritransplant management we have demonstrated increased overall morbidity in underweight patients, with increased rates of post-operative septic complications, longer ventilatory period, and increased length of intensive care stay. However, unlike earlier studies, patient and graft survival were not affected. This study does not demonstrate any effect of obesity on post transplant morbidity or mortality.

Competing interests None declared.

PTU-053 THE EFFECT OF HYPOXIC STRESS ON ACTIVATED HEPATIC STELLATE CELL CHEMOTAXIS IN-VITRO

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Introduction Hepatic stellate cells (HSC) are believed to be the most important precursor of matrix-producing myofibroblasts that promote fibrosis following liver injury. In their activated form, HSCs migrate towards inflammatory foci in response to chemokines. When exposed to certain stresses, liver cells can express chemokines that control HSC migration. The aim of this study was to investigate the effect of hypoxia on chemokine expression by non-parenchymal liver cells using an in vitro model of ischaemia.

Methods Human HSCs, biliary epithelial cells (BECs) and Kupffer cells (KC) were isolated from normal-appearing liver tissue obtained from liver resection specimens (n=3). HSCs were cultured on either gel matrix or uncoated plastic in order to investigate both quiescent (qHSC) and activated (aHSC) phenotypes. Conditioned medium from each cell type was collected at various time points in culture after exposure to either normoxia (21% O2) or hypoxia (1% O2). For migration assays, fully activated human HSCs were used and were seeded on cell culture inserts exposed to conditioned medium from each cell type added to the lower compartment. Cells were then