LB-0-13

Benefits of fast track extubation following orthotopic liver transplantation

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Background: Fast-track extubation (FTE) after liver transplantation may be beneficial by reducing vasopressors requirements and duration of mechanical ventilation (MV). We investigate whether FTE is of clinical benefit - reducing vasopressor requirement, Acute Kidney Injury (AKI) and need for Renal Replacement Therapy (RRT).
Methods: Data were collected from consecutive adults undergoing deceased donor liver transplantation (May 2016 to December 2019) at the Royal Free Hospital. Multi-organ transplants, acute or acute-on-chronic liver failure, or patients who died <36 hours post transplantation were excluded. FTE was defined as immediate extubation in the operating theatre or <8 hours postoperatively. Primary outcome was the incidence of post-operative RRT. Secondary outcomes included; incidence and severity of AKI, duration of vasopressor support, ICU and hospital length of stay, reintubation requirement, mortality and dependency at three months post-transplantation.
Results: Data for 415 deceased donor transplant recipients were collected, 47 patients were excluded. Of the remaining 368 patients, 157 (42.7%) were FTE. A binomial regression model to generate a FTE propensity score was produced. Each additional APACHE II point and each unit of intraoperative blood transfusion reduced the likelihood of FTE by 9.6% and 17.7% respectively. Patients arriving in ICU during normal working hours were 2.6-fold more likely to be FTE.
216 patients, 108 in each cohort, were matched within 5% of their FTE propensity scores. A reduction in AKI stage 1 on postoperative day 1 and post-op RRT was observed in the FTE group vs non-FTE group (23.4% vs 36.4%, p=0.037 and 16.3% vs 7.5%, p=0.046 respectively). Vasopressor support and ICU stay was also significantly reduced in the FTE group vs non-FTE group (1 vs 2 days, p<0.001 and 3 vs 4 days, p<0.001 respectively).
Conclusions: FTE benefits both patients and institutions by reducing the requirements for organ support and length of ICU stay for patients.

LB-0-14

The role of portal vein pressure measurement in pediatric living donor liver transplantation

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Background: We have reported several techniques to achieve adequate portal venous flow (PVF) which is a key component for good graft and patient outcomes after pediatric liver transplantation (PLT). However, the impact of the intraoperative portal vein pressure (PVP) on the post-transplant outcomes has not been described in PLT so far. Therefore we aim to examine the impact of intraoperative (PVP) on the early graft and patient outcomes.
Methods: We enrolled 211 recipients with biliary atresia with <10 kg body weight who underwent living donor LT (LDLT) between November 2005 to November 2021. We further divided the patients into two eras, pre PVP measurement era (Era1, n=115) and post PVP measurement era (Era2, n=96). We measured PVP at LDLT in 73 out of 96 patients in Era 2. PVP was measured at 3 different time points: after laparotomy (PVP1), after collateral interruption or before PV reconstruction (PVP2), and before abdominal closure (PVP3), respectively. PVF was simultaneously measured by a transit-time ultrasound flowmeter. Outcomes were compared between two eras as well as among low (<15 mm Hg) and high PVP3.
Results: The amount of ascites was larger in Era1 than that in Era2 at 14 days after LDLT (p=0.028). The incidence of portal vein complications in Era2 tended to be lower than those in Era1 (p=0.16). Among the patients in Era2, PVP3 was not related to the incidence of T-cell mediated rejection nor the amount of ascites. Furthermore, PVP3 was not related to PVF3. The 5 years patient and graft survival were significantly higher in Era2 than Era1 (Patient, 100% Vs 94.8%, p=0.028, Graft,100 % Vs 93%, p=0.015) respectively.
Conclusions: Regardless of PVP before abdominal closure, it is important to increase PVP before implantation as much as possible to achieve good graft function in the setting of PLT.

LB-0-15

Impact of donor age over 70 years in donation after circulatory death liver transplantation: a 15 years of experience

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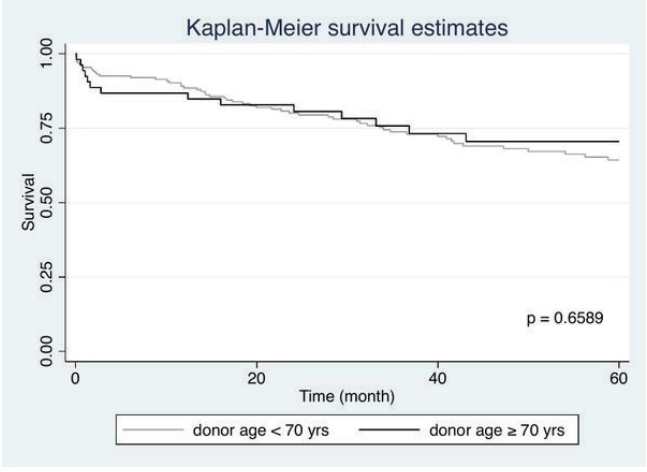
Background: Advanced donor age has been identified as a risk factor in donation after circulatory death (DCD 3) liver transplantation (LT), associated with poor graft function and development of ischemic cholangiopathy. In this study, we evaluated the results after DCD 3 LT using grafts from donors over 70 years compared to younger grafts (<70 years).
Methods: We retrospectively analysed outcome after DCD 3 LT (n=228), comparing donors ≥70 years (n=53) and <70 years (n=175) from our center between 2003 and 2020. The two age groups were compared in terms of graft and patient survivals at 1, 3 and 5 years, in terms of

donor and recipient demographics, transplant conditions and laboratory values.

Results: The overall graft survivals at 1, 3 and 5 years were 88, 75, 70 per cent respectively. Graft survival rates were not significantly different at 5 years between the two groups (P = 0,536). No difference was noted in incidence of acute rejection, biliary strictures, hepatic artery thrombosis or retransplantation rates between the two groups. The time of cold ischemia was significatively lower in the older group (mean 235 min; SD 72) than in younger donor (mean 258 min; SD 72) (p=0.012). The posttransplant AST peak was significatively higher in the advanced age donor group than the second group with 2201±2703 U/L vs 1561U/L (SD 2151±2151 U/L), respectively (p= 0.04).



Conclusions: Results for DCD LT from 70-yr-old grafts were similar to those from younger donors. Advanced donors should not be discarded for liver donation if other donor risk factors (such as cold ischemia time and graft quality) are limited.