22(10–113) 0.026 ITU length of stay (days) 2(1.5–3.5) 3.75(2.5–6.5) 0.021 Renal Replacement therapy 0 3 0.01 Data presented as median (IQR)

Discussion: It is apparent that there are significant resource implications of using NHBD grafts which result in substantially increased costs and patient morbidity. This raises many important questions especially as the NHBD LT resource may be increasing at the expense of HBD grafts.

References:
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OP15 DONATION AFTER CARDIAC DEATH LIVER TRANSPLANTATION: IS DONOR AGE AN ISSUE?

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Background: Donation after cardiac death (DCD) liver transplantation has been proposed to increase the number of transplantable liver grafts. As older liver grafts may be more sensitive to ischemia, DCD donors older than 55 years are usually not considered suitable for DCD liver donation. Our local policy is to not refuse DCD liver grafts based on age. Our aim was to compare the outcome of patients receiving older DCD livers to the younger ones.

Methods: We retrospectively compared the results of DCD liver transplantations in our centre from 2003 to 2009. DCDs were divided into two groups according to age: younger donors (Y-DCD) <55 years, and older donors (O-DCD) >55 years. We compared donor and recipient demographics, peak laboratory values during the first postoperative week and results at one year.

Results are expressed as mean ± SEM. $P < 0.05$ was considered as significant.

Results: Thirty three DCD liver transplantations (Y-DCD $n = 15$, mean age: 44 ± 2.2 years, extremes: 25-53; O-DCD $n = 18$, mean age: 66 ± 1.5 years, extremes: 56–79) were performed in the study period. No difference other than age in donor characteristics was noted between both groups. Mean age of the recipients was not different. Mean cold ischemia was 305 ± 28 min in the O-DCD group and 257 ± 18 min in the Y-DCD group (NS). Peak AST (UI/ml) and peak bilirubin (mg/dl) were 2.944 ± 1432 and 46.8 ± 9.5 in the Y-DCD group and 2.086 ± 494 and 60 ± 12 in the O-DCD group (NS). There was no PNF. Graft and patient one-year survivals were 100% in the Y-DCD group and 94% O-DCD group (NS).

Conclusion: In view of our experience, donor age >55 years should not be a contraindication to DCD liver transplantation, that could lead to excellent results, if cold ischemia is limited to 5 h.

OP16 A SINGLE CENTER LIVER TRANSPLANTATION EXPERIENCE OF 20 YEARS FOLLOW-UP WITH LIVERS FROM CONTROLLED DONORS AFTER CARDIAC DEATH

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Background: Because of a severe worldwide organ shortage, the interest in using grafts from donors after cardiac death (DCD) has received new attention. Although, the first liver transplantation (LTx) in Sweden was performed in 1984, brain death as a legal death criterion was not accepted until 1988. We retrospectively analysed the long-term outcome in recipients of DCD livers and in recipients of heart-beating donor (HBD) livers done during the same period.

Methods: We performed 40 consecutive LTxs in 32 patients between November 1984 and May 1988. Twenty-four grafts were from DCDs and 16 grafts from HBDs. All DCDs met the criteria of brain death and were in Maastricht class Category III (controlled DCD). Donor and recipient parameters, operative parameters, postoperative peak laboratory liver values, follow-up liver biopsies and supervening postoperative complications were analyzed.

Results: Recipients of HBD grafts comprised more females and more preoperative hospitalizations. There was no difference regarding donor and operative parameters between the groups. Significantly more hepatic artery thrombosis and biliary complications occurred in the DCD group ($P < 0.01$ and $P < 0.05$, respectively). Graft and patient survival did not differ between the groups. Numerically better graft survival in non-malignant than malignant patients was seen, though this did not reach statistical significance. Multivariate analysis disclosed cold ischemia time and post-LTx peak ALT to be independent predictive factors for graft survival in the DCD group. In the 11 livers surviving 20 years or more, follow-up biopsies were performed 18–20 years post-LTx ($n = 10$) and 6 years post-LTx ($n = 1$). Signs of chronic rejection were seen in 3 cases, with no difference between DCD and HBD.

Conclusion: Our 20-year follow-up analysis suggests that controlled DCD liver grafts might be a feasible option to increase the donor pool.

OP17 RESULTS OF LIVER TRANSPLANTATION FROM DONORS AFTER UNEXPECTED CARDIAC DEATH (DCD)

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Objective: To report clinical results using livers from unexpected DCD systematically maintained with normothermic ECMO prior to extraction.

Patients and methods: DCD were included 12/02–12/09. Donors met the following criteria: <65 years, no contraindication for donation, and <30 min of cardiac arrest without advanced CPR. Once death was declared, the donor was placed on a cardio compressor. Femoral vessels were cannulated to establish cardiopulmonary bypass, which was run with oxygenated blood at 37ordm; C. During NECMO, flows were maintained >1.7 l/min, and initial and final transaminases were <3 and <4 x ULN, respectively. After consent for donation was obtained, NECMO was maintained until organ recovery.

Results: Of 85 potential donors, 26 transplants were performed. DCD livers were rejected for the following reasons: poor perfusion 19 (32%), steatosis 13 (22%), biliary ischemia 8 (14%), prolonged organ ischemia 4 (7%), and other 15 (25%). The average NECMO time was 183 min and average cold ischemic time 396 min. Mean age and MELD scores of the recipients were 55 years (25–75% interquartile range 49–58 years) and 20 (17–23), respectively. Implanted grafts failed due to ischemic cholangiopathy ($n = 2$), primary non-function ($n = 1$), hepatic artery thrombosis ($n = 1$), and autoimmune hepatitis recurrence ($n = 1$); all the recipients were successfully re-transplanted. Six recipients died due to sepsis/multi-organ failure ($n = 3$), HCV recurrence ($n = 2$), and diffuse Kaposi sarcoma ($n = 1$). At 22-mos median follow-up, patient and graft survival was 75 and 64%, respectively.

Conclusions: Using NECMO to maintain unexpected DCD until extraction allows us to obtain good-quality grafts for transplant.

OP18 SEVERE HEPATITIS C VIRUS (HCV) RECURRENCE IN TRANSPLANTED LIVERS USING ALLOGRAFTS FROM DONATION AFTER CARDIAC DEATH (DCD) DONORS

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Currently, the reported 1-year graft survivals of liver transplants from DCD and DBD donors are 69% and 82% respectively. Despite evidence in the literature, observations have suggested that in HCV recipients, DCD grafts tend to have even lower rates of 1-year graft survival compared to patients transplanted with DBD organs. Early-onset with severe HCV recurrence may be associated with this trend.

To determine the onset, severity and outcomes of HCV recurrence in HCV recipients of DCD transplants compared to those with DBD grafts. We retrospectively reviewed our experience of 26 DCD liver transplants, of which 13 were transplanted in HCV recipients between 2006 and 2009. Patient outcomes were analyzed in comparison to a matched cohort of 78 DBD liver transplants of which 33 were in HCV recipients. Patient characteristics were similar including hepatitis C genotype. Recurrent HCV infection was defined as biochemical graft dysfunction with histological findings of stage 2 fibrosis or greater within the 1st-year post liver transplant (LT). Severe HCV recurrence rate was 73% within 1-year of transplantation in patients who received a DCD graft compared to 7% who received a DBD graft ($P < 0.05$). Graft survival at 1-year in the DCD-HCV transplant recipients was 77%, compared to a 1-year graft survival of 93% in HCV transplant recipients who received a DBD graft (P = NS). HCV recurrence was observed to be severe, more frequent and progressed rapidly in HCV recipients who received grafts from DCD donors compared to HCV recipients who received DBD organs. Even though the 1-year graft survival difference was not statistically significant, our findings suggest that patients with HCV may be at a significantly higher risk of severe hepatitis C viral recurrence with subsequent DCD graft failure.

OP19 THE IMPACT OF SEVERE HCV RECURRENCE AND BILIARY (BC) COMPLICATIONS FOLLOWING DONATION AFTER CARDIAC DEATH LIVER TRANSPLANTATION (DCD-LT)

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Background: The course of Hepatitis C (HCV) recipients and the long-term effects of BC after DCD-LT are not clearly defined.

Objectives: Compare LT outcomes between HCV and non-HCV DCD-LT. Determine severe HCV recurrence (sHCVr) rate and to examine the effects of BC on survival.