OS27- DCD IN LIVER TRANSPLANTATION

O227 DCD LIVER TRANSPLANTATION CONFERS A SIGNIFICANT SURVIVAL BENEFIT COMPARED TO WAITING LONGER FOR A DBD ORGAN

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Background: In the context of shortage of suitable organs for transplantation, it is often not clear whether a patient should receive a "marginal" organ from a DCD donor which might adversely impact survival, or remain on the waiting list for a more "optimal" liver from a DBD donor. We thus aimed to examine the consequence of waiting for an "optimal" organ by comparing the survival of patients after a DCD transplant to those who had a DBD transplant or remained on the waiting list (DBD/WL).
Method: Patients placed on the liver transplant waiting list in Cambridge between 1st January 2008 and 31st December 2011 were identified from a prospectively maintained database. For patients previously transplanted, only the current status was considered (DCD or DBD/WL). A Kaplan-Meier plot and log-rank test were used to compare survival time from listing between DCD and DBD/WL patients. To compare survival from time of transplantation, DCD patients were individually matched to up to 3 DBD/WL patients chosen at random. These DBD/WL patients had to be on the waiting list for the same length of time or longer to the matched DCD patient. Data was analysed using a Cox regression model stratified on matched sets to obtain a hazard ratio, adjusted for age at listing, UKELD score and HCC status. The matching process was repeated 1000 times from which a distribution of hazard ratios was obtained.
Results: Fifty-two DCD patients and 386 DBD/WL patients were included in the analysis. A significant difference was detected between the survival time distributions from listing between the DCD and DBD/WL groups (log rank test $p = 0.040$; figure 1). Using a stratified Cox proportional hazards model, the risk of death was 79% lower in the DCD group than the DBD/WL group (HR=0.207 [95%CI: 0.045, 1.004]).
Conclusion: Receiving a liver transplant from a DCD donor confers a significant survival benefit compared to remaining on the waiting list for an "optimal" DBD organ to become available.

O228 DONATION AFTER CIRCULATORY DEATH LIVER TRANSPLANTATION: IS DONOR AGE AN ISSUE?

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Background: Donation after circulatory death (DCD) donors >55 years are usually not considered suitable for liver transplantation (LT). At our institute, age is not an absolute exclusion criterion to refuse DCD liver grafts. We retrospectively compared the transplant outcome of patients receiving older DCD liver grafts to the younger ones.
Methods: Seventy DCD liver transplants have been performed from 2003 to 2012, which includes 32 liver grafts from younger donors <55 years (group A), 20 between 56 and 69 years (group B), and 18 from older donors ≥70 years (group C). The three groups were compared in terms of donor and recipient demographics, procurement and transplantation conditions, peak laboratory values during the first post-transplant week and results at 1 and 3 years. Results are expressed as median ± IQR.
Results: No difference other than age in donor and recipient characteristics as well as procurement conditions was noted between both groups. Median donor age of the group A was 44 (38–45) years, in group B 62 (60–64) years and 73 (71–75) in group C. Median primary warm ischemia time (WIT) were 20 (17–22), 21 (19–25) and 19 (16–23) min, respectively (NS). Median cold ischemia time (CIT) was 236 (229–294), 245 (227–290) and 210 (195–277) min, respectively (NS). Peak AST (UI/ml) was 1162 (1072–3971), 1416 (1006–2752), and 1067 (902–4037), respectively (NS). There was no primary nonfunction and one patient needed retransplantation for artery thrombosis. Biliary complications occurred similarly in both groups, without graft loss secondary to ischemic cholangiopathy. Graft and patient survivals were not different at one and three years.
Conclusion: This study shows comparable results between DCD liver transplants from younger and older donors. Therefore donor age >55 years should not be a contraindication to DCD liver transplantation if other donor risk factors (such as WIT, CIT) are minimized.

O229 LIVER TRANSPLANT WITH UNCONTROLLED DONORS: INCREASING EXPERIENCE AND IMPROVING RESULTS. THE MADRID EXPERIENCE

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Background: There is a consistent experience in liver transplant with the use of grafts from donors after controlled cardiocirculatory death criteria (DCD), however, reliable information about liver transplantation with uncontrolled DCD (uDCD) is still scarce. In this study, the widest experience in liver transplant in the uncontrolled DCD setting is reported.
Methods/Materials: During the period from January 2006 to September 2012, after 454 extrahospital protocol activations (donor transfer after unsuccessful resuscitation), 58 liver transplant candidates were transplanted on, with grafts obtained from uDCD, under stringent criteria (Group 1). We considered 48 of them eligible for this study. Simultaneously, a control group, consisting of 266 liver transplant recipients, transplanted on with donors after brain death (BDD), during the same period of time, was designed (Group 2). A minimum 6 months follow up time was accomplished.
Results: Both groups 1 and 2 were homogeneous and comparable without relevant differences, but in donor age (donors were younger in group 1, range 18–55 years). HCV cirrhosis was found to be the most prevalent indication for liver transplant in both groups (50% of HCV in Group 1 and 43.6% in Group 2). Eight patients were retransplanted on in goup 1, five of them because of primary nonfunction and other two because of ischemic colangiopathy. No significant differences were observed between the groups when 1 and 3 year recipient survival (85.2% and 69.3% in group 1 vs. 82.4% and 74.5% for group 2 respectively, $p = 0.841$) or graft survival (72.5% and 62% in group 1 vs. 80.5% and 72.1% for group 2, $p = 0.116$) were compared.
Conclusion: uDCD donation, under stringent criteria, has proven to offer a safe and effective source in order to expand the donor pool for liver transplant.

O230 RESULTS USING LIVER GRAFTS FROM DONORS OVER 80 YEARS OLD: A SINGLE-CENTRE RETROSPECTIVE ANALYSIS

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Background: Many liver transplant (LT) centers have adopted the use of extended criteria donors to limit the gap between recipients and available grafts. The use of old donors is the most common strategy to increase the donor pool but it is associated with a higher risk of graft non-function and worse long term results, especially in HCV positive recipients. We analyze our results using grafts from 80 years or older donors in LT.
Patients and methods: Single-center retrospective review of LT performed between January 2001 and December 2010 at the Cisanello Hospital – University of Pisa. LT were divided in four groups based on donor age: below 60 years old; between 60 and 69; between 70 and 79; 80 years old and over. Recipient and donor characteristics, early and late graft loss and graft survival were analyzed.
Results: During the study period we performed 929 orthotopic LT. After excluding retransplantations, ABO incompatible LT and LT for acute liver failure we analyzed 842 LT. There were 348 LT (41.3%) using donors younger than 60 years old, 176 LT (20.9%) between 60 and 69 years old, 233 LT (27.7%) between 70 and 79 years old and 85 LT (10.1%) older than 80. Global early graft loss was 5.1%, mainly from PNF, and there were no differences between groups. There were no differences observed when comparing graft survival by donor age (5-years graft survival under 80 vs. 80 years and over: 78% vs. 77.1%, $p = 0.377$), Young grafts (from donors under 60 years) versus old grafts (from donors of 80 years and over) had similar 5-years graft survival (78.5% vs. 77.1%, $p = 0.308$). In the group of donors over 80 group graft survival in HCV positive recipients we was lower than in HCV negative (3-year survival: 65.4% vs. 85.7%, $p = 0.034$).
Conclusions: Grafts from donors older than 80 years may provide optimal results when using good donor selection and allocation policies.