FG027 IMPACT OF MELD-NA COURSE (DELTA MELD-NA) ON OUTCOME AFTER LIVER TRANSPLANTATION

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Background: Currently, MELD Score listing is state of the art for liver transplant recipients. Our department could show by our own institutional data and confirmed by an Eurotransplant cohort that dynamic MELD deterioration (Delta MELD) during waiting time has a significant impact on postoperative survival. Aim of this study was to analyze the risk prediction of posttransplant survival by adding recipient Sodium values to Delta MELD (Delta MELD-Na).
Method: More than 22,000 patients of the UNOS data base were analyzed, who were transplanted in the US from 2012 to 5/2016.

MELD-Na was calculated according to this formula

MELD − Na − [0.025 × MELD × (140 − Na)] + 140 (na ranges from 125 to 140)

Delta MELD-Na was defined as MELD-Na at listing minus MELD-Na at transplantation: Delta MELD = MELD-Na (ON) − MELD-Na (TX)

Delta MAX was the highest MELD-Na deterioration between two observation time points.

Delta LAST was the alteration between forelast and last observation before transplantation.
Results: 69.7% of patients showed a stable MELD Na during waiting time for transplantation with a maximum increase of 4 points. In 15.4% of patients an increase of 5–9 points was observed. Further 14.8% of patients showed an increase of 10 and more points. Statistical significant factors for posttransplant survival were MELD Na ON (p = 0.007), MELD Na TX (p = <0.001) and Delta MELD-Na and Delta MELD-Na MAX (both p = <0.001). Delta MELD-Na LAST did not show statistical significance (p = 0.35).
Conclusion: A severe deterioration of MELD- Na during waiting time results in significantly poor posttransplant survival in liver transplantation. Also temporary deterioration during waiting time showed similar risk.

FG028 MINIMIZING RISKS ASSOCIATED WITH STEATOTIC DONOR LIVERS BY MATCHING TO PREFERRED RECIPIENTS

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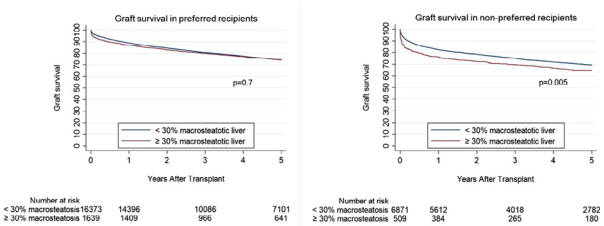
Introduction: Donor livers with ≥ 30% macrosteatosis represent a possible expansion to the donor pool, but are frequently discarded as they are associated with an increased risk of graft loss. We hypothesized that there are certain patient phenotypes that would tolerate donor macrosteatosis well, and are therefore best suited to receive these grafts.
Methods: Using US national registry data from the SRTR between 2005 and 2017, we compared 2,148 recipients of ≥ 30% macrosteatotic grafts to 23,244 recipients of < 30% macrosteatotic grafts. We defined donor steatosis as any liver with ≥ 30% macrosteatotic on biopsy, and other livers were considered non-steatotic. We then identified recipient factors that amplified the effect of donor steatosis on graft loss using interaction analysis. Recipients without these factors (i.e. without risk factors that amplified the negative effect of steatotic donor livers) were classified as preferred recipients. We used Kaplan-Meier analysis to compare outcomes between preferred and non-preferred recipients.
Results: Preferred recipients of steatotic livers were determined to be first-time recipients with a MELD < 35, without primary biliary cirrhosis or peritonitis, and not on life support prior to transplant. Preferred recipients had similar graft survival when using steatotic donor livers, compared to using non-steatotic livers (3-year graft survival: 80.6% vs. 79.8%, p = 0.7). In contrast, non-preferred recipients had worse graft survival when using steatotic donor livers, compared to non-steatotic livers (3-year graft survival: 69.5% vs. 75.1%, p = 0.005). Similarly, preferred recipients had equivalent patient survival when using steatotic donor livers (3-year survival 82.6% vs. 83.1%, p = 0.5), whereas non-preferred recipients had worse patient survival when using steatotic donor livers (3-year survival 72.8% vs. 77.9%, p = 0.005).
Conclusion: The risks of steatotic donor livers could be minimized by appropriate recipient matching.



FG029 CLINICAL OUTCOMES OF DCD TYPE V LIVER TRANSPLANTATION: DONATION AFTER EUTHANASIA

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Introduction: Due to shortage of donor organs, physicians and surgeons are forced to accept livers from donation after circulatory death (DCD) donors. One special group of DCD organs are those obtained after euthanasia (DCD type V). To create more awareness on the possibility of organ donation after euthanasia, it is important to evaluate the results of transplantation with this type of graft. The aim of our study was to evaluate the outcome of DCD type V liver transplantation (LT) in the Netherlands and Belgium.
Methods: All DCD type V LT performed until 2018 in all three Dutch LT centers and four out of six Belgian LT centers, were included in this study. Grafts that have been preserved with machine perfusion were excluded. Continuous data are expressed as median (IQR), categorical data as number (percentage).
Results: Until 2018, 44 DCD type V LT have been performed. Five cases in which the liver was preserved by machine perfusion were excluded. Median age of donor and recipient was 51 years (42–58) and 56 years (48–64), respectively. A neurological disease was the most common underlying disease in donors requesting euthanasia, followed by psychiatric disorders. Median time between administration of the euthanatics and cold perfusion was 19 min (14–25). Peak AST and ALT levels in the recipients were 904 U/l (586–2,478) and 709 U/l (448–1,841) respectively. One-, three- and five-year patient survival was 90%, 83% and 83%, respectively (figure 1). Five patients (13%) required a retransplantation, due to PNF (n = 1), HAT (n = 1) or post-transplant cholangiopathy (n = 3), the majority within the first year after the prior LT.
Conclusion: Liver transplantations with grafts from donors who underwent euthanasia yield satisfying results during the relatively short follow up period that is currently available. Comparison of these results with DCD type III LT and donation after brain death (DBD) LT is currently ongoing.

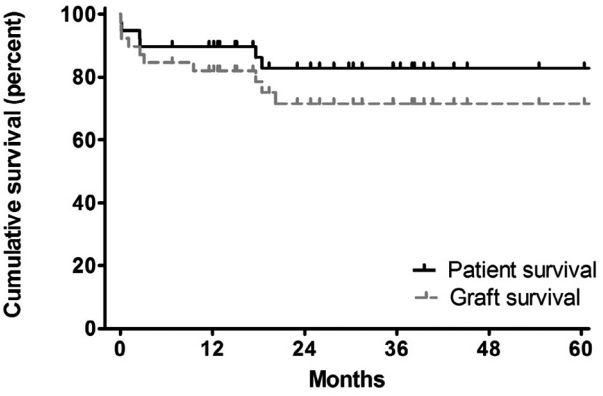

Figure 1: patient and graft survival after DCD-V LT