

MEETING ABSTRACT

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Optimization of long-term graft survival after liver transplantation: the role of donor age

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Background

Nowadays, several solutions have been proposed for the minimization of both organ shortage and prolonged waiting times: the expansion of the donor pool using aged donors represents a possible solution [1]. However, it is not completely clear if the use of "extreme" donors could cause unacceptable post-transplant adjunctive risks [2]. Starting from these grounds, the aim of this study is to evaluate the impact of donor age on long-term graft survival.

Materials and methods

From January 2001 to April 2009, 188 consecutive liver transplantations were performed at our Department. The entire cohort was stratified in 4 subgroups according to donor age: Group 1 (1st-2nd decade, n=34), Group 2 (3rd-4th decade, n=51), Group 3 (5th-6th decade, n=75) and Group 4 (7th-8th decade, n=28). Donor, recipient and transplantation characteristics were compared in the 4 groups. ANOVA test and Kruskal-Wallis test were used for the comparison of continuous and categorical variables. Kaplan-Meier test was adopted for survival analysis: log-rank test was used for comparison among the groups' survival rates.

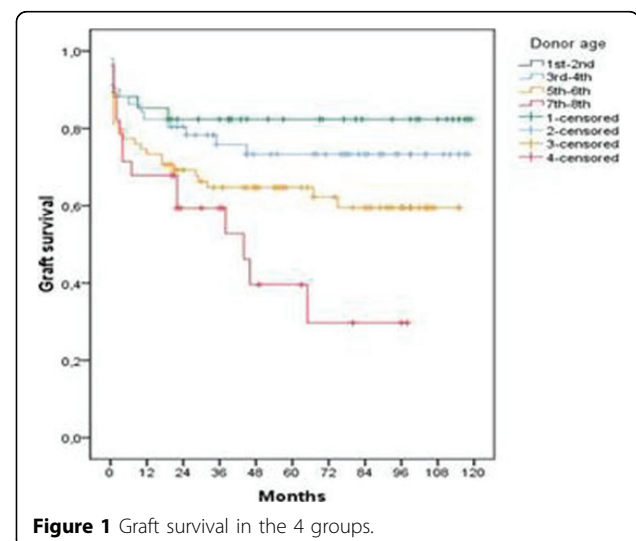
Results

As expected, donor age, percentage of cerebrovascular deaths, BMI and DRI resulted higher in the last group. The male gender was prevalent in the 1st Group, while macrovesicular steatosis resulted higher in the 3rd Group. Recipient and immediate post-transplant features resulted homogeneous among the groups. At survival analysis, 5-year graft survival rates were progressively

worsened among the groups (82.4 vs 73.3 vs 64.7 vs 39.6%, respectively). At log-rank analysis, statistical significance was observed between the first 2 Groups and 4th one (*p*-value 0.003 and 0.006, respectively), while a boundary statistical significance was observed between the 1st and 3rd Group. Figure 1.

Conclusions

In our experience, use of < 70 year-aged donors seems to be safe, while very aged (over 70) donors give poor long-term survival rates, despite similar initial post-transplantation results. We could speculate that grafts procured by very aged donors could be easier targets of viral recurrence, late ischemia-reperfusion damage and chronic rejection. A better allocation system for these organs may be improved, preferring HCC recipients who exceed transplant criteria to HCV ones [3].



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