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Older DCD Transplant Patients Have Worse 1-Year Outcomes

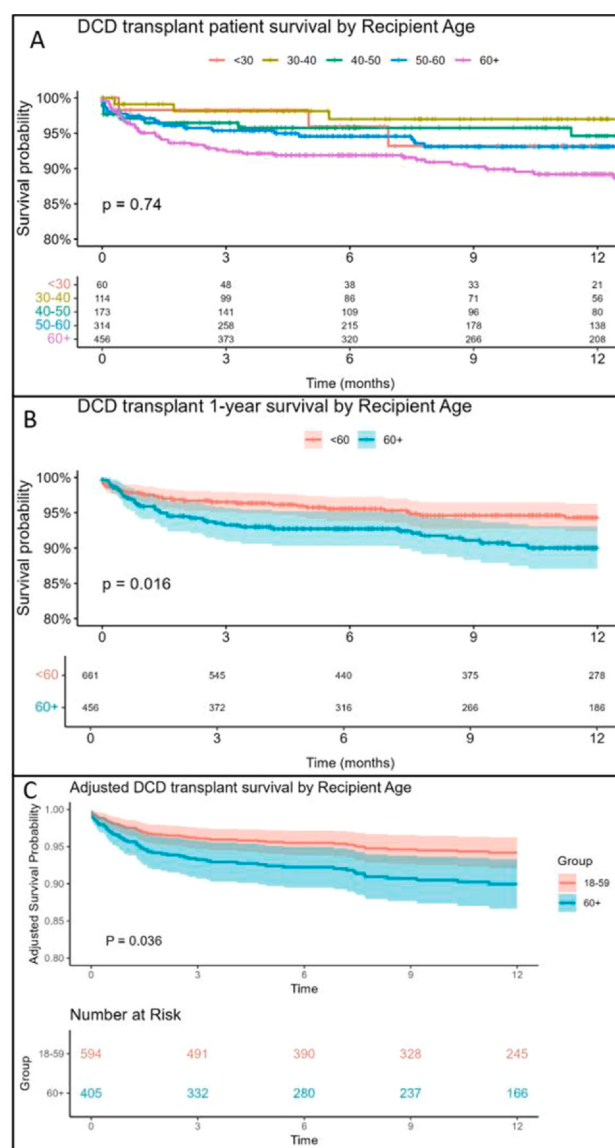
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Purpose: As donation after circulatory death (DCD) transplants have increased, the effect of recipient age on outcomes and the impact of adjuncts to traditional organ procurement, including normothermic regional perfusion (NRP) and organ care systems (OCS) have yet to be fully elucidated. This study examined the effects of older recipient age and procurement approach on DCD heart transplant outcomes.

Methods: United Network for Organ Sharing (UNOS) was queried for adult (≥ 18 yo) DCD heart transplants from 12/1/2019 to 12/31/2023. Loss to follow-up, multiorgan and prior heart transplants were excluded. Primary outcome was overall survival, with secondary outcomes of acute rejection, 30-day and 1-year mortality.

Results: 1117 patients received DCD heart transplants: 661 < 60 yo and 456 ≥ 60 yo. Median follow-up was 11.2 mo. The older group was more male (83% vs. 78%, $p = 0.043$), white (77% vs 62%, $p < 0.001$), diabetic (27% v 35%, $p = 0.006$), transplanted for ischemic cardiomyopathy and with less status 1-3 (48.7% vs. 62.1%, $p < 0.001$). Older recipients had more use of NRP (37.4% vs 30.6%, $p = 0.029$). Older patients had greater 1-year mortality (8.6% vs 4.8%, $p = 0.018$, Fig 1A,1B) but decreased pre-discharge treatment for rejection (5.9% vs. 10.7%, $p = 0.007$), hospitalizations for rejection (7.0% vs. 11.5%, $p = 0.013$). MV cox regression for 1 yr mortality showed significant association with age > 60 HR 1.76 (95%CI 1.04, 2.96 $p = 0.034$) and NRP HR 0.39 (95%CI 0.17, 0.90 $p = 0.028$). Adjusted survival analysis confirmed the association for older age ($p = 0.036$) (Fig. 1C). On subgroup analysis, there was no association with 1 year mortality for older NRP patients, but for non-NRP transplants, older age was significantly associated HR 1.96 (95%CI 1.13, 3.39 $p = 0.017$).

Conclusion: DCD recipients over 60 have worse outcomes at 1 year. Subgroup analysis by type of DCD procurement suggests that this association does not hold true for transplants following procurement via NRP. Further information is needed to determine the interaction between NRP, recipient age and longer-term outcomes.



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Donor Coronary Angiography and Allograft Survival in Heart Transplantation

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Purpose: Guidelines emphasize need for a coronary angiogram in heart donors at high risk of coronary artery disease (age > 45 years, diabetes, or tobacco or illicit drug use), and organs are generally declined if angiography is unavailable. We investigated post-transplant survival among heart donors with and without a pre-transplant donor angiogram when stratified by calculating their 10-year atherosclerotic cardiovascular disease (ASCVD) risk.

Methods: We evaluated heart transplant recipients in the contemporary allocation policy United Network for Organ Sharing (UNOS) database (October 2018-December 2023) and stratified donors based on 10-year ASCVD risk ($\leq 5\%$ or $> 5\%$). Post-transplant graft or patient survival was analyzed using Cox models (adjusted for donor and recipient age, sex, and UNOS status).

Results: Among 5,157 recipients, 714 (13.8%) received a heart from a donor with a calculated ASCVD risk $> 5\%$. Coronary angiograms were performed in 663 (92.9%) with estimated ASCVD risk $> 5\%$ and also in