



DCD and Legal Aspects

TUE.CO28.03 - What Is the Potential Increase of the Heart Graft Pool by Cardiac Donation after Circulatory Death?

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Background: Heart transplantation remains to date the only definite treatment option for end-stage heart diseases. Currently only heart procured from brain death (DBD) donors are used. Combined with an increasing demand, the constant heart graft shortage leads to an increase of deaths on cardiac transplantation waiting lists. The use of hearts procured after donation after circulatory death (DCD) could help to partly decrease the heart graft shortage. The aim of this study was to evaluate the potential increase of heart graft pool by development of DCD heart transplantation.

Methods: The authors retrospectively reviewed their local donor database for the period 2006-2011, and screened the complete controlled DCD donor population for potential heart donors, using the same criteria as for DBD heart transplantation. The acceptable warm ischemic time (WIT) was limited to 30min from life support withdrawal to aortic cannulation.

Results: During the analyzed timespan, 177 DBD and 70 DCD were effectively performed. From the 177 DBD, a total of 70 (39.5%) hearts were procured and transplanted locally or in another center. Out of the 70 DCD, 8 (11%) donors fulfilled the criteria for heart graft procurement and had a WIT of less than 30 minutes. During the same period, 82 patients were newly listed for heart transplantation, of which 53 were transplanted, 20 died or were unlisted, and 9 were still awaiting transplantation.

Conclusions: Based on our database and a WIT of less than 30min, it could be estimated that 11% of the DCD might be heart graft donors, representing a 11% increase in heart graft procurement, as well as potential reduction of the deaths on the waiting list by 40%.