

Preliminary Results of Heart-beating and Non-heart-beating Donor Kidney Transplants—The Singapore Experience

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Abstract

Renal transplantation is the ideal renal replacement therapy for treatment of end stage kidney failure but its limitation is the constant shortage of cadaveric donors. While the traditional source of cadaveric kidneys is procurement from heart-beating donors, organ procurement from non-heart-beating donors (NHBD) would help in coping with the rising demand for organs. However various important legal, logistic and technical constraints have limited the implementation of such a procurement programme. Nevertheless, prolonged warm ischaemic times in procuring kidneys from NHB donors may affect the viability of these organs and adversely affect overall outcome after transplant.

Fifty-three consecutive patients who underwent renal allotransplantation (Tx) between January and December 1994 at the Singapore General Hospital were retrospectively reviewed. Outcomes after renal transplantation among 25 heart-beating donor (HBD) and 28 NHBD were compared. Despite significant differences in donor age (23.7 ± 11.0 and 34.1 ± 7.9 , $P = 0.001$), first warm (0 and 22.2 ± 9.0 minutes) and cold ischaemic times (12.8 ± 6.7 and 5.2 ± 5.0 hours, $P = 0.001$) between the HBD and NHBD groups, the two-year patient and graft survivals were very similar in both groups (100% versus 98% and 98% versus 96%). The incidence of delayed graft function (DF) was also comparable between the HBD (41%) and the NHBD (50%) Tx. These results suggest that NHBD is a viable source for kidney transplants and comparable patient and graft survivals can be achieved if the first warm and cold ischaemic times are kept to the minimum.

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