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COMPARISON OF KIDNEY TRANSPLANTATION OUTCOMES BETWEEN DONORS AFTER CONTROLLED CIRCULATORY DEATH AND BRAIN DEATH DONORS IN CATALONIA, SPAIN

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The number of kidney transplants (KT) from controlled cardiac death donors (cDCD) has exponentially increased in Spain during the last years. Results from cDCD KT have been reported to be comparable to brain-death donors (DBD) KT in countries with long tradition of retrieving organs from cDCD. No studies have compared KT outcomes between these two types of donors in Spain, a country without this activity until recent years.
Observational retrospective analysis including 1374 DBD KT and 458 cDCD KT , performed from January 2013 to December 2017 in Catalonia, Spain. Data obtained from Catalonian Registry of Renal Patients (RMRC) including donors, recipients and process of transplantation. Median follow-up was 20 months. A multivariate analysis was performed to identify risk factors for graft loss.
Results: Both donors and recipients mean ages were significantly higher in the cDCD group compared to DBD group. (61 ± 13 vs. 58 ± 17 for donors, p<0,001; 60 ± 12 vs. 56 ± 15 for recipients, p <0,001). Delayed graft function (DGF) was higher in cDCD group (40.1% vs 22.9%, p<0.001) without differences in primary non-function rates (2% vs 0.8%, p=0.12). No differences in death-censored graft survival were observed. Renal function was slightly better in DBD group (eGFR 51.6 ml/min vs 46.9 ml/min, p=0.012). In multivariate analysis, recipient age >75 yr and previous cardiovascular disease were independent risk factors for patient death (RR 10.06 and 2.24, respectively). DGF (RR 1.67) and cPRA>50% (1.66) increased graft loss. The type of donation (cDCD vs DBD) was not an independent risk factor neither for patient survival nor graft loss.
Conclusions: In a contemporary recent cohort, graft survival from both cDCD and DBD donors is comparable. Type of donation does not impact on patient and graft survival. Recipient age >75 years, DGF and cPRA>50% are risk factors for graft loss.