HCV+	91,9	89,6	86,5	86,5
HBsAg+HCV+	100	100	100	100
HCV+HBcAb+	100	100	100	100
HBcAb+	87,8	82,6	77,1	76,5
Meningitis	84,6	76,2	66,6	66,6
Bacteremia	88,8	76,6	72,1	72,1
Kidney	%	%	%	%
All transplanted sample	96,9	96,1	95	93,7
HBsAg+	100	100	96,2	96,2
HCV+	98,5	98,5	98,5	98,5
HCV+HBcAb+	100	100	100	100
HBcAb+	96,7	95,8	95,6	94,8
Meningitis	100	100	100	100
Bacteremia	94,5	94,5	94,5	94,5

Table 2.

Conclusion: Graft and recipient survival appears to be satisfying in every risk category; whilst data regarding HBcAb+ category are several, those regarding the other categories are quite few. The positive issues of this study, along with the improvements in trating these infections, should encourage to enlarge the range of organ choice in order to increase organ procurement.

65 IDENTIFICATION OF ORGAN CHARACTERISTICS UNSUITABLE FOR IMPLANTATION IN THE UNITED STATES

T. Mone[1], M. Nowicki[2], M. Stadtler[1], V. Simmons[1], C. Chinchilla[2], R. Mendez[2], R. Mendez[2], T. Shah[2], Y. Cho[2], S. Takemoto[2]

[1]OneLegacy, [2]National Institute of Transplantation

As a possible consequence of public disclosure of center survival rates in the United States, organs from consenting donors may not be utilized because of a low expected benefit to the recipient. This study examines the reasons for non-utilization with the aim of identifying characteristics of organs not suitable for transplantation in the United States, which could possibly be implanted elsewhere.

Reasons for non-procurement and discard were examined in a retrospective record review of 2,136 potential deceased donors for whom consent was obtained from 2001-2006. Cases with consent for organ donation but blood tests indicating positive serology may not be procured or reported to the national registry so we augmented data from the local organ procurement agency with results from the serologic laboratory. Statistical significance was tested using two-tailed chi-square.

During the period of study, procurement records indicate consent was obtained for 4,223 kidneys, 76% (n=3,231) were transplanted, 6% were not recovered (n=237) and 18% (n=751) were discarded after procurement. The most common reason given for non-transplantation was histological findings in the biopsy accounting for 475 (51%) of the non-transplanted kidneys. Organ quality (n=96, 10%). virology (n=111, 12%). donor history (n=48, 5%). ischemia (n=32, 4%). anatomic (n=25, 3%). no recipient available (n=4, 0.5%) were other reasons given for non-transplantation.

CMV virology results were reported for 1,514 of the 2,136 donors in the procurement database. Results were positive for 69% (n=1,046). The discard rate was 26% when positive compared to 23% for CMV negative donors (P=0.11). Hepatitis serology (HCV and/or HBV) was positive in 10% (n=145) of reports with a 37% discard rate when positive versus to 24% (P=0.001) when negative. There were no reported positive HIV results and 4 positive for HTLV-I/II with organs from 2 of these donors discarded.

Review of serology data obtained testing donors ('shut down cases') identified 372 additional donors with positive serology for hepatitis viruses (HCV and/or HBV). 7 for HIV and 32 for HTLV-I/II. These results indicate an additional 393 donors have not been procured because of positive serology indicating infection with one or more viruses.

Retrospective examination of records in a single procurement region in the United States suggests that over 6 years, as many as 1,732 additional kidneys were not transplanted (54%). The majority of kidneys were discarded because of biopsy or, to lesser degree, virology serology findings. Other studies have indicated histologic evaluation may not accurately distinguish poor and good kidney function after transplantation. Furthermore, certain viruses, HTLV-II in particular, may not have an immediate impact on the recipient health. Some of the donors maybe considered even if some serologies are positive (i.e. HTLV-II) or a compatible recipient (HBV+ or HBV vaccinated) is available. These results indicate dramatic increases in deceased donor organ transplantation may be achieved by utilizing kidneys that are currently discarded.

66 FACTORS PREDICTIVE OF THE DISCARD OF ECD KIDNEYS DO NOT PREDICT OUTCOME

F.L. Delmonico[1], K. O'Connor[1], R. Pietroski[2], K. Meyer[4], G. Lipkowitz[3], J. Stoff[1], D. Schaubel[4], R. Merion[4], F. Port[4], A.B. Leichtman[4]

[1]New England Organ Bank, [2]Gift of Life Michigan, [3]LifeChoice Donor Services, [4]Arbor Research Collaborative for Health

Extending the opportunity of transplantation of kidneys from expanded criteria donors (ECD) has been limited by the high rate of ECD discard. We investigated the relationship between donor characteristics that are highly predictive of kidney discard and post-transplant outcomes.

Methods: As part of a U.S. Health and Human Services sponsored research grant (1 H39 OT 00123-01). factors predictive of ECD discard were determined using Logistic Regression models adjusted for multiple donor and recipient factors. The predictive value of those factors were then tested against several post-transplant outcomes, including delayed graft function (DGF). graft loss, length-of-stay (LOS). and a combined outcome (of delayed graft function, graft loss or death during the first post-operative year).

Results: Five factors were statistically predictive of discard: percent glomerulosclerosis (GS) 10-19% compared to GS equal to 0% (OR=2.07, p=0.013); GS > 20% compared to GS equal to 0% (OR=4.61, p<0.0001); a final pulsatile perfusion pump resistance > 0.4 compared 0-0.2 (OR=2.95, p=0.005); age > 70 years compared to 50-59 (OR=3.27, p=0.0020); and the presence of kidney cysts (OR=1.89, p=0.005). Of these factors, none was predictive of DGF, LOS, or the combined outcome. Only age > 70 was predictive of graft failure counting death as an event (HR=1.91, p=0.034, and only age > 70 (HR = 2.38, p=0.025) and GS > 20% (HR=3.22, p=0.022) were predictive of death censored graft failure. However, 55 of 256 (22%) kidneys recovered from ECD under the age of 70 years, and with a resistance less than 0.4 and GS less than 20% were discarded.

Conclusions: Reflecting widely held beliefs within the kidney transplant professional community, GS, resistance and age are highly predictive of ECD kidney discard. However, this study disputes the misperception of a relationship between those factors predictive of discard and several post-transplant outcomes. Transplant centers should reexamine the criteria by which decisions to discard ECD kidneys are being made.

67 EARLY RESULTS OF A CONTROLLED NON-HEARTBEATING PROGRAMME

J.A. Akoh, S.B. Bradshaw, M.B. Walker, J.B. Barwell, M.D. Denton, T. Rana

Plymouth Hospitals NHS Trust

Introduction: The continued mismatch between supply and demand for organs has led to the development of controlled non-heart beating donation (CNHBD) programmes. Between April 2006 and March 2007, 159 CNHBD yielded 307 kidneys in the UK. Key considerations in establishing a CNHBD programme include the difficulty in prediction of asystole, logistical issues relating to the process and outcomes of CNHBD organs. We present our experience of CNHBD in a University Hospital with a mixed critical care unit a transplant centre serving a population of 2.2 million.

Methods: Prior to implementation of CNHBD, a steering group determined that the programme was feasible and an implementation committee produced protocols covering all aspects of the programme. All referrals for CNHBD between January 2005 and January 2008 are included in this analysis. The cause of death, withdrawal-to-asystole, machine perfusion, organ usage, warm and cold ischaemia times, delayed graft function, early and late graft function were analysed.

Results: During the period, 79 patients were referred resulting in 35 proceeding to retrieval and 61 kidneys being successfully transplanted. Forty-four patients did not proceed because of delayed asystole (15). declined/no assent (10). medical unsuitability (14). early asystole (4) with one becoming brain stem dead prior to withdrawal of treatment. Of the 35 donors, 18 had intracranial haemorrhage, 10 hypoxic brain damage and 7 traumatic brain injury. The median time from withdrawal of futile life-sustaining therapy to asystole was 15 min (IQR 10.0-23.0). The median primary warm ischaemic time (systolic blood pressure <50 mmHg to perfusion) was 20 min (IQR 16.0-27.0) and the median cold ischaemic time was 18 hours (IQR 11.7-20.00). Forty one percent (16/39) kidneys preserved by machine perfusion showed delayed graft function compared to forty-five percent (10/22) of kidneys preserved in cold storage. The median time to halving of serum creatinine was 7 days.