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Effect of Recipient Race on Waiting Time for Renal Transplantation at the University of Pittsburgh

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IN 1990, the Inspector General of the United States Department of Health and Human Services released a report claiming that the waiting time for kidney transplantation was twice as long for black as for white recipients nationwide.[1] This news made headlines in newspapers around the country. Renal transplantation is a field where there is restricted availability of a scarce resource, and the current allocation system is based on the concept of equal access to all patients, regardless of race, sex, age, or socioeconomic status.[2] Thus, allegations of inequitable allocation must be examined seriously. We looked at waiting time in kidney transplant recipients at the University of Pittsburgh over the past 6 years in an effort to assess our own experience.

MATERIALS AND METHODS

The records of 1115 patients undergoing renal transplantation at the University of Pittsburgh between 1 January 1987 and 1 November 1992, were studied. Waiting time, donor and recipient race, and panel-reactive antibody were analyzed in 893 cadaveric recipients for whom the waiting time was known (this information was unavailable in some of the earlier cases). Waiting time was defined as the time from activation on the waiting list until transplantation.

RESULTS

The mean waiting time for all patients was 6.6 ± 9.0 months; for black recipients it was 7.8 ± 8.9 months, and for nonblack recipients it was 6.5 ± 9.2 months (P = NS). Although there was a small numerical difference, there was no statistical difference in waiting time, in part because of the large variability (Table 1).

When the waiting time was broken down according to recipient race and panel-reactive antibody (PRA), no significant effect of race was seen (Table 1). Waiting time was increased in patients with high PRAs, as would be expected. For the most highly sensitized patients, waiting time for whites was numerically longer than for blacks, but not statistically different.

Waiting time was also examined with regard to donor race. One hundred thirty-two (90%) blacks received kidneys from nonblack donors, while 15 (10%) blacks received kidneys from black donors. Nine hundred eight (94%) nonblacks received kidneys from nonblack donors, and 60 (6%) nonblacks received kidneys from black donors. When waiting time was examined for these four subgroups, there was no statistical difference, although the shortest waiting time was for black recipients of organs from black donors (Table 1).

Table 1. Waiting Time for Kidney Transplantation

	Waiting Time (months + SD)
Overall	6.6 ± 9.0
Blacks	7.8 ± 8.9
Nonblacks	6.5 ± 9.2
PRA <10%	
Blacks	6.5 ± 7.5
Nonblacks	4.7 ± 4.9
PRA >10%, <40%	
Blacks	9.2 ± 8.3
Nonblacks	6.0 ± 5.3
PRA >40%	
Blacks	11.5 ± 12.1
Nonblacks	13.9 ± 18.0
Black donors	
Black recipients	5.4 ± 6.0
Nonblack recipients	6.3 ± 8.9
Nonblack Donors	
Black recipients	8.1 ± 9.2
Nonblack recipients	6.4 ± 9.0

DISCUSSION

At the University of Pittsburgh, waiting time for kidney transplantation is not significantly different between blacks and nonblacks. Although there are some trivial numerical differences that go both ways, none reached statistical significance. There is enormous variability in waiting time which tends to obscure any differences between groups.

Ninety percent of the kidneys transplanted into black recipients came from nonblack donors; while blacks made up some 13% of the recipient population (reflecting the percentage of blacks on the waiting list), they made up only 6% of the donor population. It is noteworthy that black recipients tended to receive a greater percentage of kidneys from black donors (20% of the kidneys from black donors went to black recipients) than did nonblack recipients, and that the shortest waiting time, 5.4 months, was in the subgroup of black donor/black recipient. Since matching is, at present, the driving force for kidney allocation in this country,[2] the effect of different antigens in blacks may be playing a role here.

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It is not clear what the reason is for the discrepancy in waiting time data between the Pittsburgh experience and that published by the Inspector General. It has been claimed that consent rates for organ donation are lower nationally for blacks than for whites,[3] but in Pittsburgh, they are nearly identical.[4] This may be a factor in the lack of waiting time discrepancy.

It would be worthwhile for other individual centers to examine their own data with regard to these issues. A public perception of fairness in the allocation of scarce organs for transplantation is critical to the continuing support for transplantation. Data suggesting that the system is in fact basically fair is important news and will serve to contribute to the perceived legitimacy of organ transplantation in this country.

REFERENCES

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