

Renal transplantation for patients from ethnic minorities

Rudge CJ, Johnson RJ, O'Neill J, Fuggle SV, Forsythe JLR
On behalf of the UK Transplant Kidney and Pancreas Advisory Group

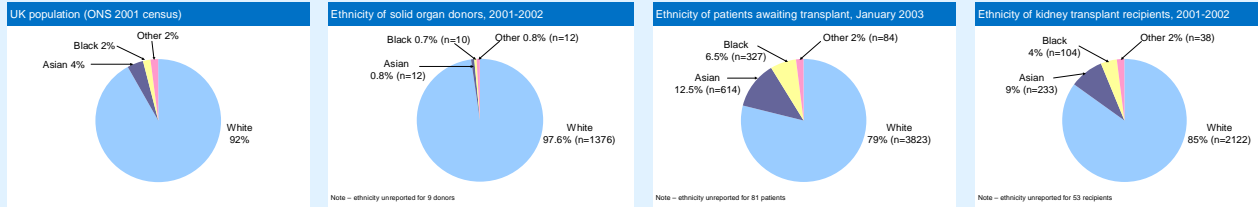
Background

Kidney allocation in the UK is based on matching two principal biological characteristics between donor and recipient: blood group and HLA phenotype. It is recognised that these characteristics differ according to ethnicity which has implications for allocation to ethnic minority patients as organ donors are almost exclusively White. This study examines the differences between White and ethnic minority patients in relation to access to and outcome of kidney transplantation in the UK.

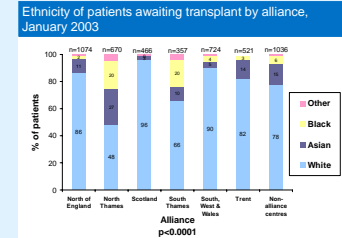
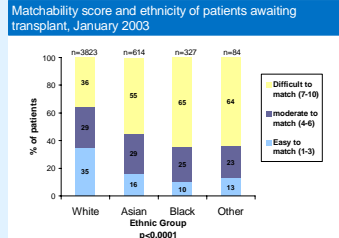
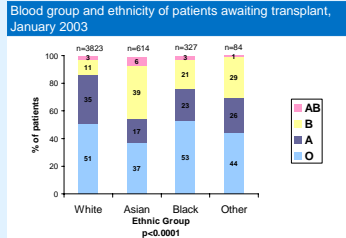
Data and methods

The ethnicity of adult cadaveric heartbeating and non-heartbeating solid organ donors (2001-02), kidney waiting list patients (Jan 2003) and kidney transplant recipients (2001-02) was compared. The groups considered were White, Asian, Black and "other". For patients awaiting transplant, ethnic differences with regard to blood group, HLA "matchability" and geographical area were analysed. Median waiting times were also compared. For transplanted patients, HLA matchgrades and transplant survival were investigated.

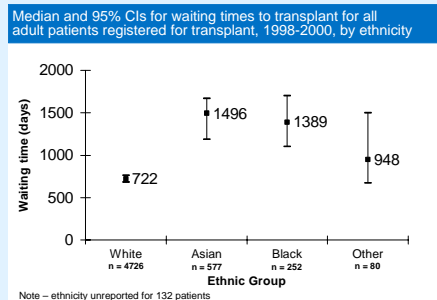
Results (1)



Compared with the normal UK population (8% ethnic minorities), ethnic minority patients are under-represented among donors (2%) and over-represented among patients awaiting transplant (21%).

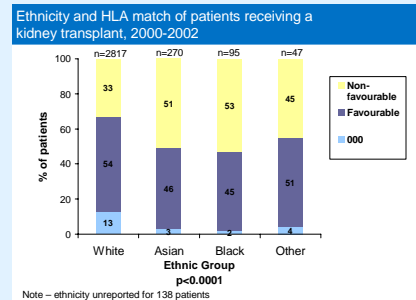


Investigation of patients awaiting transplant showed significant ethnic differences according to blood group, patient "matchability" and geographical area ($p < 0.0001$).

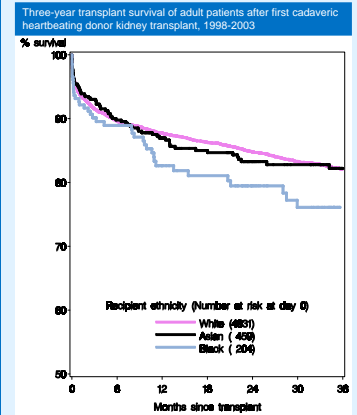


Median waiting times of patients listed for transplant in 1998-2000 showed that ethnic minority patients wait longer for transplant than White patients.

HLA matchgrades of transplants in ethnic minority patients were significantly inferior ($p < 0.0001$).



Results (2)



Analysis of three-year transplant survival for first cadaveric heartbeating donor kidney transplants in adults (1998-2003) showed no difference between White and Asian patients but some evidence of inferior survival in Black patients ($p = 0.06$). This effect was also apparent after risk-adjustment for recipient and donor age and HLA match ($p = 0.03$).

Summary

The study showed that ethnic minority groups are under-represented among donors and that potential recipients from minority groups wait longer for transplant. Once transplanted, ethnic minority patients were found to have inferior HLA matchgrades. There are major initiatives to increase organ donation in ethnic minority groups. In addition, the national Kidney Allocation Scheme is under review and any proposed new scheme will seek to increase the availability of cadaveric kidneys for patients from the ethnic minorities.