



3rd Annual Quality & Patient Safety Conference Improving the Healthcare Journey for Patients & Staff



TITLE

Antibody-Incompatible Matching Program for Kidney Transplant Patients

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ABSTRACT

INTRODUCTION

Highly sensitised potential kidney transplant recipients (HSPs) have antibodies to $\geq 95\%$ of the population. 104/494 (21%) of patients on the kidney transplant waiting list are HSPs currently. These patients experience significantly increased waiting times for an antibody compatible transplant. They also suffer an increased risk of morbidity and mortality with longer times spent on dialysis. Antibodies which are no longer present can be identified by detailed review of a patient's antibody profile and 'delisting' antibodies, but this is time consuming, requires regular updates, and is not feasible for large numbers of patients.

METHODOLOGY

A computer program was developed to identify acceptable risk antibody-incompatible matches for HSPs.

AIM

The antibody-incompatible matching program aims to increase access to transplant for HSPs without the need to 'delist' antibodies, and without a significant increase in donor crossmatch turn-around times (TAT).

CHANGE IMPLEMENTED

The Remote Monitoring programme provides supported discharge to ensure patients are improving after discharge from hospital and identifies those at risk of deterioration who require escalation of care and a fast track to the Respiratory team for those requiring readmission.

MEASUREMENT

Renal allograft survival data for each transplant recipient was collated, along with creatinine levels (umol/L) and graft biopsy data. TATs for on-call donor testing were regularly audited.

RESULTS

- 48 patients have been transplanted to date.
- All had historic donor-specific reactivity with cMFI ranging from ~ 1000 -50000.
- 24/48 (50%) patients were donor-specific antibody (DSA) negative at time of transplant.
- 24/48 (50%) had circulating DSA with cMFI of 525-7181.
- The average waiting time of the transplanted patients was 78 months (4-222 months).
- All grafts were functioning at time of follow-up (1-44 months).
- Two patients developed antibody mediated rejection, 1 of whom only had historic DSA.

VALUE

Access to transplantation for the longest waiting kidney transplant patients has increased, with one patient transplanted after 18.5 years. Donor-recipient pair assessment work has integrated seamlessly into on-call procedures, although significantly increases on-call workload for senior scientists and consultants. However no alternative strategy has been identified.

SUSTAINMENT

The average waiting time for a kidney transplant has reduced from 37 months at implementation to 29 months in January 2022. All HSPs are now enrolled in the program. Measures to make on-call workload sustainable are being developed.

ADDITIONAL INFORMATION

The next version of the matching program is in development, aiming to increase access for the most difficult-to-match patients.