KIDNEY ADVISORY GROUP

HLA DONOR DISCREPANCY MONITORING – 2019

Concordance between donor HLA types submitted to Organ Donation and Transplantation (ODT) from different laboratories is monitored.

BACKGROUND INFORMATION

A donor HLA type is submitted to ODT Hub-Operations from the offer laboratory on the ODT form, 'NHS Blood and Transplant HLA Report Form' (FRM4365). The form is provided electronically and the HLA type is manually typed into fields on the form. In some laboratories the ODT form has been replicated in the local laboratory system and the HLA type automatically downloads into the fields required, reducing the risk of transcription errors.

Pre-allocation

Deceased donor HLA types received by ODT-Hub Operations undergo automated consistency checks when entered onto the national database. This occurs before a 'matching run' is initiated and applies 5 basic rules:

1. There is consistency between HLA Broad/ split antigens/ alleles and valid WHO nomenclature is used
2. No more than 2 antigens/alleles can be reported at a single locus
3. Bw4/Bw6 antigen associations must be consistent with HLA-B locus antigens/alleles
4. DR51/51N/52/53/53N antigen associations must be consistent with HLA-DR locus antigens/alleles
5. DRB3/4/5 allele associations must be consistent with HLA-DR locus antigens/alleles and DR51/51N/52/53/53N antigens.

If a donor HLA type fails the checks, the National Transplant Liaison Co-ordinator contacts the laboratory, giving details of the reason for failure. The HLA type is then reviewed and resolved by the laboratory prior to initiation of the matching run.

Anomalies detected by this automatic consistency checking do not impact on allocation.

Post allocation

Discrepancies in the HLA type may be identified after the organs have been allocated. It is possible that the laboratory may revise the HLA type after the offer type has been sent and contact ODT Hub-Operations with a 'Revised HLA type'. A discrepancy may also be detected if the donor is re-typed at the recipient centre laboratory.

Investigation and reporting

All anomalies/discrepancies are reported to the laboratory concerned and investigated. Laboratories respond giving reasons for the anomalies/ discrepancies and measures taken to minimise the risk of future occurrences. Reports are prepared for the ODT Clinical Audit, Risk And Effectiveness Group (CARE).

Summary of Anomalies/Discrepancies
A summary of the results of the monitoring from 2017-19 is shown in **Table 1**. Anomalies were detected prior to allocation in 0.2% of offer types in 2019, compared to 0.05% in 2018 and 0.2% in 2017. Discrepancies detected after organ allocation occurred in 0.4% of donor types in 2019, compared to 0.27% in 2018 and 0.8% in 2017. The reasons given for the anomalies/discrepancies in 12/2250 (0.5%) donor offer types in 2019 are summarised in **Table 2**.

Pre-allocation (n=4)
2/4 (50%), resulted from Technical/Interpretation/Nomenclature errors and 2/4 (50%) from clerical errors.

Post-allocation (n=8)
5/8 (63%), resulted from Technical/Interpretation/Nomenclature errors and 3/8 (37%) from clerical errors. None of these cases had an impact on allocation.

Table 2 Anomalies/Discrepancies in Donor HLA types, 2019

Reason	**Pre- allocation** n= (%)	**Post allocation** n= (%)	**Overall** n= (%)
Clerical	2 (50%)	3 (33%)	5 (42%)
Technical/ Interpretation/ Nomenclature	2 (50%)	5 (67%)	7 (58%)
ODT Data Entry	0 (0%)	0 (0%)	0 (0%)
Total	**4**	**8**	**12**

Summary and Action
Over the last three years the level of discrepant donor HLA types reported and used for allocation ranged between 0.27% and 0.8%. This information is particularly important when transplanting sensitised patients following a virtual crossmatch and will be communicated to Directors of all Transplant Units and H&I Laboratories, so that all are aware of the discrepancy rate.

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