NHS BLOOD AND TRANSPLANT

KIDNEY ADVISORY GROUP

TIMING OF CROSSMATCH

SITUATION

1 A pre-transplant crossmatch (antibody compatibility assessment) is required in all cases of renal transplantation. For deceased donors, timely availability of these results is critical in minimising cold ischaemia time. In support of this an initiative in 2019 led to production of BSHI/BTS guidelines on crossmatching prior to deceased donor kidney transplant. These guidelines recommend that wherever possible a crossmatch result should be available prior to the organ(s) arriving at the recipient centre enabling a quick response to direct the kidney to another transplant centre if required

2 Data is not currently available to allow us to evaluate how often this occurs.

BACKGROUND

3 The crossmatch is a checkpoint test required for a decision to proceed to transplantation: without this result the patient should not be anaesthetised. Early crossmatch reporting can shorten cold ischaemia times, particularly in the event of reallocation. In the case of a positive crossmatch result that vetoes the transplant (around 20 cases pa), the early reporting allows testing of a backup recipient without significantly compromising the integrity of the donor organ (in the primary accepting unit) or timely transfer of the organ to another centre for transplantation into an alternative recipient (the secondary accepting unit). The H&I laboratories met and agreed that this could be achieved by the use of Virtual Crossmatching or the use of Peripheral Blood (as opposed to Spleen), which could be sent in advance, if a laboratory crossmatch was required.

ASESSMENT

4 Data on the timing of arrival of the organ and the timing of the crossmatch result are required to assess how often the crossmatch result is available when the kidney arrives, but NHSBT does not routinely collect either of these data items.

5 Time of arrival of the organ can be extracted from transport data. This data includes timings of kidneys received at 22 centres (not used by Manchester or Newcastle). This typically accounts for around 2000 out of 2250 transplanted kidneys annually.

6 Collection of data on the timing of crossmatch would require a change to the kidney transplant record form (FRM4128). Making a change to the form and incorporating electronic data capture, would be dependent on other IT projects and likely to take at least a year. As an alternative, the Information Services team have agreed to capture this information via a spreadsheet for cases where a paper form is returned. Currently, all but 3 centres return this information on paper.

7 This data collection would not account for cases where the kidney moved from one centre to another following reallocation but would give a reasonable indication of adherence overall.

RECOMMENDATION

8 KAG members are asked to consider an amendment to the paper kidney transplant record form for a pilot period of 3 months, starting in early 2021. Based on typical activity over 3 months and the centres who would be able to provide data, we would expect to capture data on around 450 kidneys in the study, based on data over the last 5 years. The pilot will inform how often the crossmatch result is available on arrival of the kidney and whether any further work is needed to improve performance. The pilot will also inform whether further data collection is required going forward.

Matthew Robb, Chris Callaghan and Tracey Rees **November 2020**