Reviewer’s report

Title: Do We Need a Different Organ Allocation System for Kidney Transplants When Using Paired Kidneys From Donors After Circulatory Death?

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Reviewer: Patrick Coates

Reviewer’s report:

This manuscript has at its premise that the prolongation of cold ischaemic time in DCD kidneys will result in worse graft outcomes. The authors have studied 129 paired kidney transplants. The important finding is that in most cases the second kidney transplanted had a longer cold ischaemia time compared to the first kidney – this finding remained even when kidneys were transplanted at separate centres. This is a well written and timely document that addresses important issues in kidney allocation and is a situation that many units worldwide face as most centres have only one surgical team and logistically are unable to mount two surgeries at once. I have minor specific questions for the authors and only minor comments, which I hope will clarify this useful audit experience for the readers.

Minor essential revisions:

1. Can the authors please clarify what the UK allocation system is for DBD donors (line 1 page 4) – is this HLA based?

2. It would be useful to provide the reader with an estimate of HLA mismatching in these transplants – I presume that these allocations are all waiting time based and therefore there will be little matching. As extended criteria kidneys have poorer long term outcomes and presumably there is no matching here this would further impair long term graft outcomes.

Minor discretionary revisions:

3. The authors propose that an alternative allocation system be used for these kidneys – can they speculate what they would suggest? Within the greater London district could a rota system be practical – eg could kidneys actually be retrieved to other centres to meaningfully reduce the cold ischaemia time for the second kidney – in other words what are the distances between the centres? A frequent problem with DCD donors is receiving physician refusal of DCD offer – would the authors propose a potential separate list for patients that are deemed suitable for DCD donor kidneys?

4. The authors have not commented on whether retrieval biopsies are performed to evaluate the donors – is this practiced in the Pan Thames area?

5. Given that there is usually forwarning of DCD donors, would the authors support the idea of admitting potential recipients to hospital before donation has occurred to further reduce potential ischaemia – bearing in mind that sometimes
this might result in an admission without a transplant.

6. Are double transplants practiced in the Pan Thames area and could this be a way of utilizing some of the kidneys and reducing ischaemia?

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests to declare