

NHS BLOOD AND TRANSPLANT
CARDIOTHORACIC ADVISORY GROUP
HEART UTILISATION INITIATIVE

INTRODUCTION

1. NHSBT in collaboration with the Solid Organ Advisory Groups are developing several organ utilisation initiatives. The aim of these primarily is to identify donor organs that were offered and not accepted but potentially could have been, and ultimately increase utilisation rates through shared learning.
2. The ideal lung initiative, which began in January 2018 (with some preliminary work before then), is described below, as well as the abdominal organ initiative which started in 2017. It is hoped that a heart utilisation initiative can be introduced, along the same lines as these existing initiatives. Suggestions have been made for how to define a “standard heart donor”. The potential criteria are shown below.

IDEAL LUNG INITIATIVE

3. Professor John Dark has led on this initiative. It was decided that the “French criteria” would be used as a definition of the “ideal lung donor”, which are:
 - a. Age<56 years
 - b. DBD
 - c. Non-Smoker
 - d. Chest X-ray described as “normal”
 - e. At least one arterial PO₂ >40KpA
 - f. No history of Aspiration
4. The number of potential donors meeting all of these criteria (except history of aspiration as data completeness was poor), where the lungs were offered, were extracted from the UK Transplant Registry and the utilisation rate was observed to be low, in particular compared with the French experience.
5. At CTAG in September 2017, a Lung Utilisation Subgroup was formed of representatives from the 6 units and agreed to hold monthly teleconferences to discuss ideal lung donors that were declined by all centres.
6. Each month, 40-70 DBDs are offered, with 5-12 of these meeting the ideal lung donor criteria (14%). The utilisation rate of ideal lung donors is about 50% so there are usually less than 5 donors to discuss per month. Representatives are asked to refer to their notes on these donors before the call in order to discuss why they declined the donor.
7. There have been three teleconferences to date and the group now comprises surgeons and transplant coordinators as well as physicians. Learning points so far will be described by Professor Dark in the CTAG Lung meeting.

ABDOMINAL EXPERIENCE

8. The Ideal Donor project was successfully rolled out for kidneys in November 2017. Potential Ideal Kidney Donors are identified using data from the Core Donor Data Form (CDDF) using a set of pre-defined criteria.
9. Of these, the potential Ideal Kidney Donors for which at least one decline was recorded during the offering process are selected. These kidneys may have gone on to be transplanted or may have been used for research or discarded.
10. A spreadsheet containing donor and offering data for each of these declined potential Ideal Kidney Donors is sent to the Clinical and Support Services (CSS) team who download an anonymised pdf of the corresponding CDDFs.
11. CSS send the spreadsheet and pdfs to Mr Chris Callaghan as National Clinical Lead for Abdominal Organ Utilisation who reviews each case.
12. If a kidney is deemed 'Ideal' using this information, a letter is sent to the centre that declined the organ asking for further detail as to why it was declined.
13. All cases for which letters were sent are logged on to a database by CSS along with the responses from centres.
14. This process is repeated on a weekly basis. The number of cases per week fluctuates between approximately 2 to 12.
15. The process is being rolled out to livers and pancreases over the next few months.

POTENTIAL CRITERIA FOR A "STANDARD HEART DONOR"

16. The Heart Allocation Sub-Group (HASG) of CTAG has preliminarily suggested the following criteria for a standard heart donor:
 - a. Age < 56 years
 - b. DBD
 - c. No history of cardiac disease or cardiac surgery
 - d. Inotropic support < 10µg/kg/min (dopamine or dobutamine)
 - e. ECG described as normal
 - f. Ejection fraction (if available) > 40% and posterior wall thickness < 14mm
 - g. Negative serology (if available) (hepatitis B surface antigen, hepatitis C virus and human immunodeficiency virus)

ACTION

17. CTAG are asked to comment on the criteria, on the preferred model to follow (lung or kidney) and to nominate an individual to lead the heart utilisation initiative, working with Statistics and Clinical Studies and the other transplant units to move this forward.

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