

Tissue and Eye Services Requests: For Discussion at the National Retrieval Group Meeting

Introduction

The purpose of this document is to seek support from the NRG for:

- i) Improving the quality of tissue allografts retrieved during organ retrieval
- ii) The retrieval of new types of tissue allograft during organ retrieval.
- iii) Dissemination of this information to organ retrieval teams.

Improving the quality of current allografts

Currently, whole hearts are retrieved by organ retrieval teams and sent to heart valves banks for processing. Aortic and pulmonary valves, with associated vessels, are banked.

Length of pulmonary artery

It is important that longer lengths of pulmonary artery are left attached to hearts taken for valve donation, ideally to include the pulmonary trunk, bifurcation and at least 2 cm of each pulmonary artery. Based on our data from April-October 2015, 15% of pulmonary grafts obtained from hearts retrieved by organ retrieval teams were too short (<1cm) to be of clinical use. There is an unmet clinical need for this type of graft, which are used for repair of congenital defects of the RVOT. Every graft discarded for this reason is logged with the ODT clinical incident reporting system. This is a widespread issue, not one particular organ retrieval team.

Length of aorta

It is also important that longer lengths of aorta to are left attached to hearts taken for valve donation, ideally including the thoracic aorta to the level of the diaphragm. We currently bank aortic arch and superficial femoral artery grafts, however an intermediate diameter size graft is also required, and descending aorta would be suitable. Sufficient length (at least 5mm) of each intercostal artery must be left attached to the thoracic aorta to allow for ligation.

New Grafts

We have been receiving requests for bifurcated abdominal aorta including iliac arteries for the replacement of infected prosthetic vessels. Invariably if these are retrieved from deceased tissue donors in a mortuary they are contaminated, and therefore it would be helpful if these could be retrieved at the time of organ retrieval. Ideally we would like to keep 3-5 grafts in the bank.

In addition, unused iliac vessels taken at the time of organ donation could be sent to us for cryopreservation within 48 hours of cross clamp, to support organ transplantation.

Whole trachea and larynx, including sections of bronchii are required for the preparation of life saving acellular tracheal allografts. This is a new service, we have provided trachea for clinical use from deceased donors, and the surgeons have requested that tracheas from organ donors also be considered. If this is feasible, I will speak to the SNODs regarding consenting appropriate donors.

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