

NHS BLOOD AND TRANSPLANT
CARDIOTHORACIC ADVISORY GROUP
CLINICAL AUDIT GROUP CHAIRMAN'S REPORT

SUMMARY

- 1 This paper provides a summary of the work of CTAG Clinical Audit Group since the last CTAG meeting. As always, I would like to acknowledge contributions of the Audit Group members and particularly Dr Jenny Lannon.

INTRODUCTION

- 2 The Clinical Audit Group held a teleconference on 4 June 2015 and, subsequently, a face-to-face meeting on 19 August 2015. Member attendances at Audit Group telecons and meetings are summarised in **Appendix A**.

CLINICAL AUDIT FELLOWS

- 3 Summaries of the work carried out by Sanjeet Singh (NHS Scotland Clinical Fellow/principal supervisor Prof Al-Attar) and Aravinda Page (NHS England Clinical Fellow/principal supervisor Mr Tsui) are provided in the **Appendix B**.

ACTIVE PROJECTS

- 4 Long-term VAD outcomes
A number of different outcomes are being analysed including: urgent listing, heart transplant, device explant and death, as well as the incidence of complications (GI bleeding, infection, stroke and pump thrombosis). The next telecon will be scheduled following analysis of the additional collected data on pump thrombosis.
- 5 Outcomes from listing for lung transplantation
Progress after the last teleconference requires the development of risk adjusted models for 1) time to transplant, 2) death on the list and 3) survival from listing. The results from these models will be separated by centre and by disease group.
- 6 Effect of ischemia time upon post lung transplant survival
A paper is being drafted by John Dark and Jennifer Lannon based on the results that were presented at ISHLT in April 2014.

- 7 **ACHD project**
Amy Taylor has completed her MSc project which looks at outcomes of adult congenital heart disease patients versus heart transplant patients with acquired heart disease. An abstract has been written which is to be submitted to British Congenital Cardiac Association meeting and also to ISHLT. A second abstract on paediatric congenital heart disease patients is also planned for ISHLT submission.
- 8 **Interval between Brain Stem Death to organ retrieval**
This analysis is dependent upon the newly developed risk models for post-transplant survival. The current heart post-transplant survival models do not include ischaemia time as a risk factor. However for this study, cases where the OCS has been used will be excluded, allowing the risk model to be modified. An abstract will be submitted for ISHLT.
- 9 **Comparison of LVAD implantation and Heart Transplantation as treatments for advanced heart failure**
A telecon is being scheduled for September/October. Two representatives from each centre have been recruited to the project group. It is expected that this study may be a descriptive clinical study rather a highly statistical project due to the overlap and bias in the LVAD cohort and the heart transplant cohort.

DATA APPLICATIONS

- 10 Mr Sukumaran Nair (Newcastle). “Is there equipoise of survival with long-term left ventricular assist device therapy versus heart transplantation in patients awaiting heart transplantation in the UK?”
The Audit Group agreed with Mr Nair that this project should be conducted as a project overseen by a national project group – see paragraph 11 above.
- 11 Dr Adnan Sharif (Birmingham). Epidemiology of Cancer after solid Organ Transplantation – EPCOT study. This data application should be approved

DASHBOARD PROJECT

- 12 Draft metrics for a Dashboard project were produced last year while the project, led by external contractors METHODS, was governed by the Heart and Lung Transplant CRG. Following the cessation of the CRG, the Audit Group decide that it will not carry out further until a clinical governance structure is in place. The Group have suggested to METHODS that CTAG would be the most appropriate governing body and a reply is awaited

NHSBT ORGAN SPECIFIC REPORTS

- 13 The draft Annual Cardiothoracic Organ Specific Report has been sent to centre directors for review with a deadline for comments of 28 September. The report includes new risk adjustment models that have been developed for 30-day, 1-year and 5-year post heart transplant survival and for 90-day, 1-year and 5-year post lung transplant survival. The models were developed with advice from the Clinical Audit Group.
- 14 The VAD Annual Report is currently being drafted and will be sent to centre directors for review later this month. The format has been modified to address the recommendations made after the previous report by CTAG and CTAG Audit.

ISCHAEMIA TIME DATA COLLECTION

- 15 It was an action from the last CTAG meeting for the Audit Group to define a range of durations and acceptable thresholds associated with ischaemia time. This will be used in future to audit reported ischaemia time durations, once a data collection process has been implemented. A proposal for hearts has been discussed at the CTAG Heart meeting today and once agreement has been reached, a similar process will be followed for lungs.

Nick Banner
Chair CTAG Audit

September 2015

Appendix A

	21 August 2014 meeting	30 October 2014 telecon	4 February 2015 meeting	4 June 2015 telecon	19 August 2015 meeting
Dr Nicholas Banner	Y	Y	Y	Y	Y
Dr Jayan Parameshwar	Y	Y	Y	Y	Y
Dr Richard Thompson	Y	Y	Y	Y	Y
Mr Rajamiyer Venkateswaran	Y	N	N	N	Y
Prof Mike Burch	Y	Y	Y	Y	N
Dr Jenny Lannon	Y	Y	Y	Y	Y

Appendix B

Aravinda Page – NHS England Clinical Fellow (full-time as of 5 August 2015)

Scout Project Phase II

We have edited the data collection form to improve the accuracy of data entry. Over the next month I will be looking to personally engage with the scout champions from the different centres to aid in improving the accuracy and return rate of timely filled, complete data sets. The data has been promising so far, and a complete data set with more data points will allow for meaningful conclusions.

Optimisation of poorly functioning donor heart

I am being trained on setting up a donor heart for ex-vivo perfusion and have completed the home office animal courses to attain my personal license from the Society of Biology. We are currently collaborating with the Department of Experimental Medicine and Immunotherapeutics to set up small and large animal models to look at resuscitating the donor heart. This project will form the basis for the submission of a PhD application to the University of Cambridge.

Sanjeet Singh – NHS Scotland Clinical Fellow

Research

Finalising our 2nd draft for the protocol to pilot a feasibility study for remote ischaemic preconditioning in donors prior to cardiac transplantation. Adding ELISA assay for SMARCAL-1 detection (SWI/SNF related, matrix associated, actin dependent regulator of chromatin) in collaboration with the University of Glasgow. SMARCAL-1 is a biomarker predictor of Primary Graft Dysfunction.

Audit

Collecting inotropic scores for the patients to complete the retrospective study on the incidence of Primary Graft Dysfunction according to the new ISHLT guidelines in Scotland.

Rolling out this audit to the other centres and aiming to change NHSBT data collection forms to include Right Atrial Pressure, Transpulmonary Gradient, Pulmonary Artery Pressures to allow prospective PGD grading.