

ANNUAL MEETING

9TH TO 12TH
MARCH 2008

Edinburgh
International
Conference Centre



Society for
Cardiothoracic Surgery
in Great Britain and Ireland



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binding sites**

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in animal studies**

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The Society for Cardiothoracic Surgery in Great Britain and Ireland

2008 ANNUAL MEETING

Edinburgh International Conference Centre

President

Professor Sir Bruce Keogh (2006-2008)

Honoured Guests

W. Randolph Chitwood, Jr., MD, FACS, FRCS (England)

Sr. Associate Vice Chancellor, Health Sciences Division

Director, East Carolina Heart Institute

Professor and Chief, Division of Cardiothoracic and Vascular Surgery

Department of Cardiovascular Surgery

East Carolina University Brody School of Medicine

Greenville, North Carolina, USA

Douglas J. Mathisen, MD

Chief of Cardiothoracic Surgery

Massachusetts General Hospital

USA

Professor Paul Sergeant, MD, PhD

Cardiac Surgery Department

Gasthuisberg University Hospital, Belgium

Ms Maura Buchanan

President

Royal College of Nursing



Programme sponsors



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Sorin

Please look after this programme.

Replacement programmes will cost £19, which is payable at the registration desk

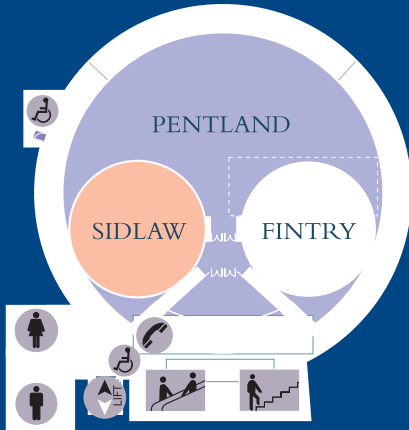
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VENUE MAPS Edinburgh International Conference Centre

Level 3



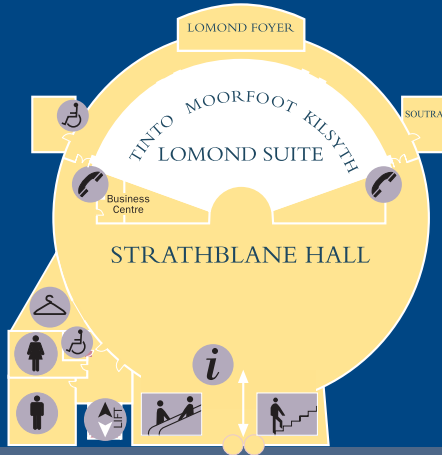
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3 Carrick 3 is the speakers room

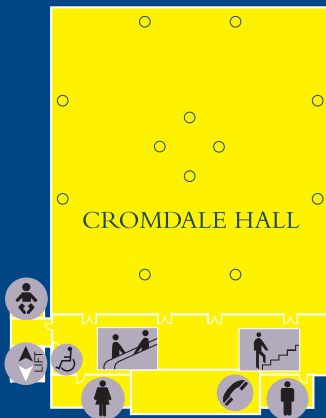
Level 2 Toilet Facilities Only

Level 0



MAIN ENTRANCE

Level -2



Level -1
Telephone Facilities Only

OUTLINE PROGRAMME

SUNDAY 9th March

12.30-13.30	STRATHBLANE	Trainees and Assistants Lunch
13.30-16.00	SIDLAW	Cardiothoracic Surgical Trainees Meeting - presentations and debate on Article 14, Specialty exam, bullying and harrassment and update on ISCP
	HARRIS	Association of Cardiothoracic Surgeons' Assistants
	CARRICK	Society of Clinical Perfusionists
16.00-16.45	SIDLAW	Pre and Post Conditioning the Normal and Diabetic Heart Professor Derek Yellon, University College London
	HARRIS	ACSA Annual General Meeting (Sponsored by Covidien)
	CARRICK	Society of Clinical Perfusionists
16.45-17.00	STRATHBLANE	Tea
17.00-18.00	PENTLAND	Pulse Lecture: Dr Ranny Chitwood- New Technology in Cardiothoracic Surgery
18.00-19.30	PENTLAND	Annual Business Meeting
	HARRIS	ACSA Workshop in Endoscopic Vein Harvesting
19.30-20.30	STRATHBLANE	Welcome Reception

MONDAY 10th March

07.00-08.00	HARRIS	Vascutek Symposium
08.00-08.50	OCHIL	Scientific Oral Presentations
08.50-10.00	PENTLAND	Forum Presentations
10.00-10.45	CROMDALE	Coffee
10.45-11.45	PENTLAND	Cardiac Presentations: Percutaneous Valve Replacement
	SIDLAW	Ethicon Nurses Forum: Ms Maura Buchanan President RCN
	HARRIS	3rd Annual Database Managers Meeting (with CCAD)
	OCHIL	Cardiac Presentations
11.45-12.30	PENTLAND	Heart Research UK Lecture incorporating the Hunterian lecture Dr Randolph Chitwood
	HARRIS	3rd Annual Database Managers Meeting (with CCAD)
12.30-13.30	CROMDALE	Lunch
13.30-15.00	PENTLAND	UK Cardiac and Thoracic Activity: Professor Roger Boyle, Heart Tsar
15.00-15.45	CROMDALE	Tea
15.45-16.55	PENTLAND	Cardiac Presentations: Revascularisation
	SIDLAW	Nurses Forum: Papers and How to conduct research
	OCHIL	Thoracic Symposium: UK Resection Rates: Dr Mick Peake Training in Thoracic Surgery: Dr Doug Mathisen
17.00-18.30	PENTLAND	St Jude Post Graduate Session: Optimal Strategies for Coronary Revascularisation: Prof David Taggart, Dr Paul Sergeant and Dr Mark deBelder, President of BSIC
	OCHIL	Thoracic Oral Presentations
18.30-20.00	HARRIS	Edwards Percutaneous Valve Symposium

TUESDAY 11th March

08.00-08.50	OCHIL	Cardiac Presentations: Aorta and aortic valve
	HARRIS	Symposium
08.45-10.00	PENTLAND	Thoracic Presentations
	SIDLAW	Ethicon Nurses Forum: Papers and How to conduct research
	CARRICK	Congenital Presentations
	OCHIL	Cardiac Presentations: Mitral valve
10.00-10.45	STRATHBLANE	Coffee
10.45-11.45	PENTLAND	Thoracic Presentations
	SIDLAW	Ethicon Nurses Forum: NICE guidelines
	CARRICK	Congenital Anatomy Workshop
	HARRIS	Workshop on Peri-operative TOE
11.45-12.30	PENTLAND	Thoracic Lecture: 'Complex Thoracic Surgery' Dr Doug Mathisen
	SIDLAW	Paper presentations and results from survey of workforce planning
	CARRICK	Congenital Meeting
	HARRIS	Workshop on Peri-operative TOE
12.30-13.30	CROMDALE	Lunch
13.30-15.00	PENTLAND	Update on Post Operative Atrial Fibrillation Mr Samer Nashef and Dr Andrew Grace
	OCHIL	Thoracic Cases: 'How to do It'
	HARRIS	Exhibitor's Meeting
10.00-10.45	CROMDALE	Tea
15.45-17.00	PENTLAND	Thoracic Oral Presentations
	SIDLAW	Ethicon Nurses Forum: Consent
	OCHIL	Transplant Presentations
17.00-18.00	PENTLAND	President's Address incorporating the Tudor Edwards Lecture
19.30 -	Caledonian Hotel	Annual Dinner (Black Tie) Prohibition Theme. Presentations of Lifetime Achievements, Scholarships and Prizes

WEDNESDAY 12th March

9.00-12.30	SIDLAW	Executive and Unit Representatives Meeting
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Society for
Cardiothoracic Surgery
in Great Britain and Ireland

**ANNUAL
MEETING**
9TH TO 12TH
MARCH 2008
Edinburgh
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MEETING PROGRAMME

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Meeting Programme

Sunday 9th March 2008

12:30-13:30 Association of Cardiothoracic Surgical Practitioners, Society for
Harris Clinical Perfusion Scientists of GB and Ireland and Trainees Lunch

Sunday 9th March 2008

13:30-16:00 **Cardiothoracic Surgical Trainees Meeting**
Sidlaw Moderators: Ms Farah Bhatti, Mr Sunil Bhudia, Mr Tim Graham,
Mr Steven Hunter, Mr Bob Jeffrey

13:30-14:30 **Trainees' Meeting (Trainees only)**

14:30-14:50 Update from the SAC
Tim Graham

14:50-15:10 **Selection into Cardiothoracic Surgery**
Steven Hunter

15:10-15:30 **Intercollegiate Surgical Curriculum Programme**
Steven Livesey

15:30-16:00 **The Future of the NHS**
Professor Sir Bruce Keogh

Sunday 9th March 2008

13:30-16:45 **ACSA-Association of Cardiothoracic Surgical Practitioners**
Moderator: Mr Tony Jessop
Sponsored by Syneture (Division of Covidien)

13:30-13:45 **Welcome to ACSA:**
Professor Sir Bruce Keogh, Mr Leslie Hamilton

13:45-14:15 **Update on Exam**
Mr Samer Nashef
Chairman of Exam Board Surgeons Assistants

14:15-14:30 Tea and coffee delivered to room

14:30-16:30 **AGM-ACSA**

Sunday 9th March 2008

13:30-16:45 **Society of Clinical Perfusion Scientists of GB and Ireland**
Carrick Committee meeting
Carrick Suite

Sunday 9th March 2008

16:00-16:45 **Professor Derek Yellon**
Sidlaw **Pre and post conditioning the normal and diabetic heart**
Moderators: Professor Sir Bruce Keogh, Dr David Chambers

Sunday 9th March 2008

16:45 - 17:00

Strathblane Tea and Refreshments

Sunday, 9 March, 2008

17:00-18:00

Pulse Lecture: Dr Randolph Chitwood

Pentland

New Technology in Cardiothoracic Surgery

Moderators: Professor John Pepper, Mr Roberto Casula

Sunday 9th March 2008

18:00-19:30

Annual Business Meeting

Pentland

Moderators: Professor Sir Bruce Keogh, Mr James Roxburgh, 6 elected trustees

Sunday 9th March 2008

18:00-19:30

ACSA-workshop on Endoscopic Vein Harvest

Harris

Moderators: Mr Tony Jessop, Mr Malcolm Dalrymple-Hay

Sunday 9th March 2008

19:30-20:30

Welcome Reception

Strathblane

Monday 10th March 2008

07:00-08:00

Vasutek Breakfast Symposium

Harris

BioValsalva - The Biological Bentall - 1st Year Experience

Chairman: Mr A Rashid, The Cardiothoracic Centre, Liverpool, UK

Monday 10th March 2008

08:00-08:50

Session 1

Ochil

Scientific Oral Presentations

Moderators: Mr Domenico Pagano, Dr David Chambers

1

Abnormal APTT Waveform Profile is Associated with Increased Risk of Infection & Mortality following Cardiac Surgery

J Lu¹; C Toh²; A Grayson¹; M Jackson¹; C Downey²; J Lloyd²;

W Dihmis¹; B Fabri¹

¹The Cardiothoracic Centre NHS Trust, Liverpool, United Kingdom;

²Department of Haematology University of Liverpool, Liverpool, United Kingdom

2

NADPH Oxidase-derived Superoxide Generation Contributes to Venous Endothelial Dysfunction in Human Heart Failure.

A Momin; R Dworakowski; S Walker; M Kearney; A Shah

Guy's, King's & St Thomas' School of Medicine King's College, London, United Kingdom

- 3 Peri-adventitial Application of Slow Release Rapamycin-eluting Microbeads Inhibits Vein Graft Disease in a Large Animal Model
T Rajathurai; S Rizvi; A Newby; G Murphy
Bristol Heart Institute, Bristol, United Kingdom
- 4 The Novel Peroxytrite Decomposition Catalyst Fp15 Improves Cardiac & Pulmonary Function after Cardiopulmonary Bypass
G Szabó; T Radovits; C Beller; M Karck
University of Heidelberg, Heidelberg, Germany
- 5 Effect of Foreign Surface Pacification with Albumin, Aprotinin, Propofol & High Density Lipoprotein
M Poullis
Cardiothoracic Centre, Liverpool, United Kingdom

Monday 10th March 2008

08:50-10:00

Session 2

Pentland

Oral Presentations with Forum and ACSA

Moderators: Professor Sir Bruce Keogh, Ms Tara Bartley, Mr Tony Jessop

- 6 **The Effect of Varying Doses of Statins on the Development of Atrial Fibrillation following Cardiac Surgery**
A Kourliouros; N Roberts; A De Souza; O Valencia; A Marciniak; J Camm; M Jahangiri
St George's Hospital, London, United Kingdom
- 7 **Aprotinin Does Not Adversely Affect Survival Following Cardiac Surgery**
N Howell⁴; B Keogh³; N Freemantle¹; D Cunningham²; R Bonser⁴; T Graham⁴; J Mascaro⁴; S Rooney⁴; I Wilson⁴; D Pagano⁴
¹University of Birmingham, Birmingham, United Kingdom; ²NHS Health and Social Services Information Centre, Leeds, United Kingdom; ³National Institute for Clinical Outcomes Research, London, United Kingdom; ⁴University Hospital Birmingham NHS Foundation Trust, Birmingham, United Kingdom
- 8 **Randomised Prospective Study Comparing Conventional Subcuticular Skin Closure With Dermabond Skin Glue**
B Krishnamoorthy; P Reddy Kola; I Kadir; N Yonan; P Waterworth
University Hospital of South Manchester Wythenshawe Hospital, Manchester, United Kingdom
- 9 **A Randomised Controlled Trial of Cell Salvage in Routine Cardiac Surgery**
A Klein¹; S Nashef¹; L Sharples²; M Dyer³; F Bottrill³; J Armstrong¹; A Vuylsteke¹
¹Papworth Hospital, Cambridge, United Kingdom; ²MRC Biostatistics Unit, Cambridge, United Kingdom; ³Health Economics Research Group at Brunel University, Uxbridge, United Kingdom
- 10 **The Effect of Seasonal Variation on Cardiac Surgical Outcomes**
J Shuhaiber; K Goldsmith; S Nashef
Papworth Hospital NHS Trust, Cambridge, United Kingdom

- 11 **Should Cardiac Surgery be Delayed in Patients Who are known MRSA Carriers?**
D Healy¹; E Duignan¹; M Tolan¹; V Young¹; B O'Connell²; E McGovern¹
¹Keith Shaw Cardiothoracic Surgery Unit St James University Hospital, Dublin, Ireland; ²National MRSA Reference Laboratory St James University Hospital, Dublin, Ireland
- 12 **An Outreach Service for Cardiac Surgery Patients**
B Oughton; S Balachandran
University Hospital Of Wales, Cardiff, United Kingdom

Monday 10th March 2008

10:00-10:45 Tea and Refreshments
Cromdale

Monday 10th March 2008

- 10:45-11:45 **Session 3**
Ochil
- 13 **Cardiac Oral Presentations**
Moderators: Mr Vipin Zamvar, Mr Mark Jones
- 13 **Measured Creatinine Clearance is a Better Predictor of Renal Dysfunction than both Serum Creatinine & Estimated Creatinine Clearance**
M Baghai; L John; J Desai; A El-Gamel; O Wendler
King's College Hospital, London, United Kingdom
- 14 **The Impact of Off-pump Coronary Artery Bypass Surgery on Postoperative Renal Function**
A Shahir¹; L Yu¹; C Choong²; M Navaratnarajah¹; Y Abu-Omar²; D Taggart¹
¹University of Oxford, Oxford, United Kingdom; ²University of Cambridge, Cambridge, United Kingdom
- 15 **Abstract Withdrawn**
- 16 **Early & Mid Term Survival following Isolated Coronary Artery Bypass Surgery in Patients with Chronic Dialysis Dependent Renal Failure**
U Dandekar¹; A Sachithanandan¹; R Bonser¹; T Graham¹; B Keogh²; J Mascaro¹; S Rooney¹; I Wilson¹; P Nightingale¹; D Pagano¹
¹University Hospital Birmingham, Birmingham, United Kingdom; ²The Heart Hospital, London, United Kingdom
- 17 **Rapid Detection of Acute Renal Dysfunction by Serum & Urinary Neutrophil Gelatinase-associated Lipocalin (NGAL) after Cardiopulmonary Bypass**
S Tuladhar; R Bogle; P Punjabi
Hammersmith Hospital, London, United Kingdom

- 18 **Chronic Kidney Disease Stage Predicts In-hospital Mortality Mid-term Survival following Cardiac Surgery**
 N Drury¹; N Howell¹; B Keogh²; D Cunningham³; R Bonser¹; T Graham¹;
 J Mascaro¹; S Rooney¹; I Wilson¹; D Pagano¹
¹University Hospital Birmingham NHS Foundation Trust, Birmingham,
 United Kingdom; ²National Institute for Clinical Outcomes Research,
 London, United Kingdom; ³NHS Health and Social Services Information
 Centre, Leeds, United Kingdom

Monday 10th March 2008

- 10:45-12:30 **Database Managers: 3rd Annual Meeting.**
 Harris
 Moderators: Ms Tracey Smailes, Mr Ben Bridgewater, Mr David
 Cunningham
 CCAD

Monday 10th March 2008

- 10:45-11:45 **Forum**
 Sidlaw
 Moderators: Professor Sir Bruce Keogh, Georgina Aldous
 Ethicon
- 10:45 – 10:50 **Opening Remarks**
 Tara Bartley
- 10:50 – 11:05 **Keynote Speaker Opening Remarks**
 Maura Buchanan
- 11:05 – 11:25 **Cardiac Advanced Life Support, The Guidelines**
 Joel Dunning
- 19 **Cardiothoracic Service Provision Post Modernising Medical Careers (MMC). A Response to the Apocalypse**
 J Tambiah¹; C Bannister¹; C Blauth¹; G Venn¹
¹Guy's and St Thomas' NHS Foundation Trust, London, United Kingdom;
²King's College London, London, United Kingdom

Monday 10th March 2008

- 10:45-11:45 **Cardiac Oral Presentations Percutaneous Valve Replacement**
 Pentland
 Moderators: Mr Malcolm Dalrymple-Hay, Professor John Pepper
- 20 **Minimally Invasive Aortic Valve Replacement**
 I Saeed; K Mandal; N Roberts; S Brecker; M Jahangiri
 St George's Hospital, London, United Kingdom
- 21 **First UK Experience of Percutaneous Aortic Valve Replacement (pAVR) in Severe Calcific Aortic Stenosis**
 H Jilahiawi¹; T Spyt¹; D Chin¹; E Logtens¹; J Laborde²; J Kovac¹
¹Glenfield Hospital, Leicester, United Kingdom; ²Clinique Pasteur,
 Toulouse, France
- 22 **TBA**

- 23 **Does Minimal Access Aortic Valve Replacement offer Clinical Benefits to Patients?**
B Murtuza¹; J Pepper²; R DeL Stanbridge¹; A Darzi³; T Athanasiou³
¹St Mary's Hospital, London, United Kingdom; ²Royal Brompton Hospital, London, United Kingdom; ³Department of Biosurgery Imperial College, London, United Kingdom
- 24 **The Management of Patients Referred for Consideration of Transcatheter Aortic Valve Replacement**
M Gosh-Dastidar; M Mullen; A Kelleher; S Davies; N Moat
Royal Brompton Hospital, London, United Kingdom
- 25 **Transapical Transcatheter Aortic Valve Replacement**
M Baghai; O Wendler; P MacCarthy; M Thomas; M Monaghan; K Wilson;
E Alcock; R Kailasam; A El-Gamel
King's College Hospital, London, United Kingdom

Monday 10th March 2008

11:45-12:30 **Hunterian Lecture: Dr Randolph Chitwood**
Pentland Moderators: Professor Sir Bruce Keogh, Mr Leslie Hamilton
Heart Research UK

Monday 10th March 2008

12:30-13:30 Lunch
Cromdale

Monday 10th March 2008

13:30-15:00 **UK Activity. Cardiac and Thoracic Surgery**
Pentland Moderators: Professor Sir Bruce Keogh, Mr James Roxburgh,
Mr Ben Bridgewater, Professor Roger Boyle, Heart Tsar
"Where Next with the Heart Programme?"

Monday 10th March 2008

15:00-15:45 Tea and Refreshments
Cromdale

Monday 10th March 2008

15:45 -16:55 **Thoracic Surgery Symposium**
Ochil Dr Mick Peake, Clinical Lead Lung Cancer, Health Care Commission
Lung Cancer Resection Rates in the UK – Past, Present and Future.

Dr Doug Mathisen
Training in Thoracic Surgery
Moderators: Mr Jim McGuigan, Mr Richard Steyn

Monday 10th March 2008

15:45-16:55

Forum

Sidlaw

Moderators: Mr Tim Graham, Mr Calum Buchanan

26

F.O.R.W.A.R.D. with Weaning: An Initial Case Study of the Focussed Oxford Respiratory Weaning & Response Direction Tool

P Hinchley; D Quayle

John Radcliffe Hospital, Oxford, United Kingdom

27

7 Day Physiotherapy Service in Cardiothoracic Surgery

B Paradza

Cardiothoracic Division James Cook University Hospital, Middlesbrough, United Kingdom

28

Plenary Session

"Every Path has its Puddle"

J Sanders

The Heart Hospital, London, United Kingdom

Monday 10th March 2008

15:45-16:55

Session 4

Pentland

Cardiac Oral Presentations: Revascularisation.

Moderators: Professor Paul Sergeant, Mr Christopher Munsch

29

Randomised Trial Comparing Survival following Bilateral Internal Mammary Artery (IMA) Grafting versus Single IMA: The Arterial Revascularisation Trial (ART)The ART Investigators¹; D Taggart²¹Care of the Royal Brompton Hospital, London, United Kingdom; ²John Radcliffe Hospital, Oxford, United Kingdom

30

Comparison of Mid-term Outcome in Unselected Consecutive Patients with Three Vessel and/ or Left Main Disease Undergoing PCI & CABG Surgery

E Biryukova; F M Williams; O Valencia; S J Brecker; M Jahangiri

St George's Hospital, London, United Kingdom

31

Early & Late Survival after Surgical Revascularization for Ischaemic Ventricular Fibrillation/ tachycardia

D Ngaage; A Cale; M Cowen; S Griffin; L Guvendik

Castle Hill Hospital, Kingston-Upon-Hull, United Kingdom

32

Diabetic Patients Should have Internal Thoracic Artery Harvested Skeletonized

F Moraes; E Cardoso; R Machado; C Moraes

Heart Institute of Pernambuco, Recife, Brazil

33

Effects of Off-pump Versus On-pump Coronary Artery Bypass Grafting on Early & Late Right Ventricular Function

T Pegg; T Karamitsos; R Arnold; J Francis; S Neubauer; J

Selvanayagam;

D Taggart

University of Oxford, Oxford, United Kingdom

- 34 **Does Off-pump Re-do Coronary Surgery Decrease Morbidity & Mortality?-A Propensity Case-matched Analysis**
K Mandal; O Valencia; I Bailes; R Kanagasabay; J Smith; M Sarsam; M Jahangiri; V Chandrasekaran
St George's Hospital, London, United Kingdom
- 35 **Multi-vessel Off Pump Coronary Artery Bypass Grafting via a Small Left Anterior Thoracotomy (ThoraCAB)**
G Murphy; G Angelini
Bristol Heart Institute, Bristol, United Kingdom

Monday 10th March 2008

17:00-18:30

Session 5

Ochil

Thoracic Oral Presentations

Moderators: Mr Kieran McManus, Mr Pala Rajesh

- 36 **Prognostic Significance of Cleaved Parp Expression in Gastro-oesophageal Cancer**
K Sillah²; S Thornton³; S Pritchard¹; I Welch²; H Valentine³; P Price³; C West³
¹Departments of Histopathology University Hospital of South Manchester NHS Foundation Trust, Manchester, United Kingdom;
²Departments of Gastrointestinal Surgery University Hospital of South Manchester NHS Foundation Trust, Manchester, United Kingdom;
³Academic Radiation Oncology University of Manchester Christie Hospital, Manchester, United Kingdom
- 37 **Serum Proteomic Analysis of Resectable Non-small Cell Lung Cancer: Impact of the Smoking, Histology, Stage of Disease & Surgery**
S Rathinam¹; D Ward²; A Alzetani¹; S Nyangoma²; J Starczynski¹; A Martin²;
P Johnson²; N James²; P Rajesh¹
¹Birmingham Heartlands Hospital & ²Cancer Research UK Institute for Cancer Studies, Birmingham, United Kingdom
- 38 **Measurement of Extravascular Lung Water (EVLW) following Lung Resection**
V Dronavalli; B Naidu; P Rajesh
Heartlands Hospital, Birmingham, United Kingdom
- 39 **Prognostic Implication of Improved CT Detection of Pulmonary Metastases in Patients Undergoing Pulmonary Metastectomy**
E Belcher; S Sathianandan; S Letafat; E Lim; P Goldstraw; S Jordan
The Royal Brompton Hospital, London, United Kingdom
- 40 **Systemic Chemotherapy Improves Long Term Survival after Extrapleural Pneumonectomy for Malignant Mesothlioma: A 20 Year Series**
D West¹; D Prakash¹
¹Hairmyres Hospital, East Kilbride, United Kingdom; ²Edinburgh Royal Infirmary, Edinburgh, United Kingdom

- 41 **Preoperative versus Postoperative Chemotherapy for Patients Undergoing Resection for Lung Cancer. Systematic Review & Indirect Comparison Meta-analysis of Randomised Trials**
G Harris¹; A Patel¹; I Adachi¹; L Edmonds²; F Song³; E Lim¹
¹Royal Brompton Hospital, London, United Kingdom; ²Papworth Hospital, Cambridge, United Kingdom; ³University of East Anglia, Norwich, United Kingdom
- 42 **Clinical Upstaging of Non-small Cell Lung Cancer that Extends Across the Fissure: Implications for the Current TNM Classification System**
V Joshi; J McShane; A Soorae; R Page; M Carr; N Mediratta; M Shackcloth;
M Poullis
The Cardiothoracic Centre, Liverpool, United Kingdom
- 43 **Pre-operative Chemotherapy in Patients with Resectable Non-small Cell Lung Cancer. MRC Lu22 / Nvalt / Eortc 08012 Multi-centre Randomised Trial**
E Lim¹; P Golstraw¹; D Gilligan²; M Nicholson³; M Nankivell⁴; C Pugh⁴; R Stephens & Investigators⁴
¹Royal Brompton Hospital, London, United Kingdom; ²Addenbrookes Hospital, Cambridge, United Kingdom; ³Aberdeen Royal Hospitals Trust, Aberdeen, United Kingdom; ⁴MRC Clinical Trials Unit, London, United Kingdom

Monday 10th March 2008

17:00-18:30 **Strategies for Coronary Revascularisation. St Jude Postgraduate**
Pentland
Lecture: Professor Paul Sergeant
Moderators: Dr Nick Boon, Dr Mark deBelder, Professor David Taggart

Monday 10th March 2008

18:30-21:00 **Edwards Symposium**
Harris
How to build a Transcatheter Heart Valve Program

Tuesday 11th March 2008

07:45-08:50 **Novadaq/Cardiologic Breakfast Symposium - Real Time Intra-Operative Imaging**
Harris
Chairman: Professor David Taggart
Speakers: Professor David Taggart - John Radcliffe Hospital Oxford, UK
Dr Nimesh Desai, University of Toronto, Canada
Mr Joseph Zacharias, Lancashire Cardiac Centre, Victoria Hospital Blackpool, UK

Tuesday 11th March 2008

08:00-08:50 **Session 6**
Ochil
Cardiac Oral Presentations: Aorta and Aortic Valve
Moderators: Professor Malcolm Underwood, Professor Bob Bonser

- 44 **Early Results of Valve-sparing Aortic Root Replacement Using the New Valsalva Conduit in Marfan Syndrome Patients**
I Elahi
Eoin O'Malley National Centre For Cardiothoracic Surgery, Dublin, Ireland
- 45 **Outcome following Bioprosthetic Root Replacement with Gelweave Valsalva & Biovalsalva Grafts**
K Gubbi; M Field; V Arera; M Kuduvali; A Oo; A Rashid
The Cardiothoracic Centre, Liverpool, United Kingdom
- 46 **Experience with Extra Anatomical Bypass for Treatment of Arch & Descending Thoracic Aneurysms**
K Mandal; N Roberts; J van Besouw; M Thompson; M Jahangiri
St Georges Hospital, London, United Kingdom
- 47 **Aortic Valve Replacement in Patients with Bicuspid Aortic Valve Disease is Not followed by Progressive Aortic Root Dilatation**
A Ali; A Patel; D Freed; Y Abu-Omar; A Sheikh; Z Ali; A Rostron; T Athanasiou;
J Pepper
Royal Brompton Hospital, London, United Kingdom
- 48 **Carotid Artery Diameter, Plaque Morphology & Haematocrit in Addition to Percentage Stenosis, Predict Reduced Cerebral Perfusion Pressure during CPB**
M Poullis¹; Z Ghogawala²
¹Cardiothoracic Centre, Liverpool, United Kingdom; ²Yale, New Haven, United States

Tuesday 11th March 2008

08:45-10:00

Session 7

Carrick

Congenital Oral Presentations

Moderators: Mr Marcus Haw, Mr Kevin Watterson

- 49 **The Morphological Left Ventricle that Requires Training by PA Banding Prior to Double Switch for Congenitally Corrected TGA is at Risk of Late Dysfunction**
D Quinn; S McGuirk; C Metha; J de Giovanni; R Dhillon; P Miller; J Wright;
O Stumper; D Barron; W Brawn
Birmingham Childrens Hospital, Birmingham, United Kingdom
- 50 **Should Every Paediatric Cardiac Surgery Centre have an Active Extracorporeal Life Support Program?**
J McGuinness; C Smith; J Redmond; A Wood; L Nolke
Our Lady's Childrens Hospital Crumlin, Dublin, Ireland
- 51 **Use of Tissue Microdialysis to Investigate Hyperlactataemia following Paediatric Cardiac Surgery**
R Hosein; K Morris; J Stickley; S Laker; P Davies; T Jones; D Barron; W Brawn
Birmingham Childrens Hospital, Birmingham, United Kingdom

- 52 **Modelling Aortic Coarctation & Elimination of Concomitant Cardiovascular Defects to Assess Severity: A Mathematical Model**
M Poullis
Cardiothoracic Centre, Liverpool, United Kingdom
- 53 **Right Ventricular Dyssynchrony as a Potential Mechanism of Right Heart Dysfunction following Congenital Heart Surgery**
E Peng; S Lilley; B Knight; D Young; F Lyall; K MacArthur; J Pollock; M Danton
Royal Hospital for Sick Children, Glasgow, United Kingdom
- 54 **Critical Oxygen Delivery during Cardiopulmonary Bypass & Early Renal Function after Paediatric Cardiac Surgery**
A Vassalos; D Young; K MacArthur; J Pollock; F Lyall; M Danton
Royal Hospital for Sick Children, Glasgow, United Kingdom
- 55 **A Case Series of Unilateral Agenesis of the Pulmonary Artery**
K Redmond; L Mansfield; N Griffin; A Nicholson; P Goldstraw; M Dusmet
Royal Brompton Hospital, London, United Kingdom

Tuesday 11th March 2008

- 08:45-10:00 **Thoracic Oral Presentations**
Pentland Moderators: Mr M Cowan, Mr David Waller
- 56 **Outcome of Radical Surgery for Adenosquamous Carcinoma of The Lung**
M Asif; A Martin-Ucar; L Beggs; E Black; J Duffy; F Beggs
Department of Thoracic Surgery Nottingham University Hospitals NHS Trust City Hospital Campus, Nottingham, United Kingdom
- 57 **Skills Assessment of Cardiothoracic Surgery a Study of 27 Trainees R Vaughan**
Heartlands Hospital, Birmingham, United Kingdom
- 58 **It's Friday, It's Five O'clock the Chest Physicians are on the Phone with another Bubbling Chest Drain**
W Kent; H El-Sayed; J McShane; N Chaudhuri; M Poullis; N Mediratta; M Carr;
R Page; M Shackcloth
The Cardiothoracic Centre, Liverpool, United Kingdom
- 59 **Surgery Significantly Improves Survival in Stage Three Non-small Cell Lung Cancer & Reduces Local Recurrence following Induction Chemotherapy**
N Mc Gonigle¹; J McAleese²; R Johnston²; K McManus¹
¹The Royal Victoria Hospital, Belfast, United Kingdom; ²The Cancer Centre, Belfast, United Kingdom
- 60 **Development of Risk Models in Surgery for Primary Lung Cancer: The Way Forward for Patient Selection & Consent**
R Page; S Shah; J McShane; M Jackson; N Mediratta; M Shackcloth; M Carr
The Cardiothoracic Centre, Liverpool, United Kingdom

- 61 **Prognostic Factors for Long-term Survival after Pulmonary Metastasectomy in Sarcoma Patients : A 12-year Experience**
E Belcher; S Letafat; S Sathianandan; P Goldstraw; S Jordan
The Royal Brompton Hospital, London, United Kingdom
- 62 **Monitoring Individual Thoracic Surgeons Mortality Figures**
M Poullis
Cardiothoracic Centre, Liverpool, United Kingdom

Tuesday 11th March 2008

09:00-10:00

Session 8

Ochil

Cardiac Oral Presentation: Mitral Valve

Moderators: Mr Frances Wells, Mr Brian Fabri

- 63 **PTFE Neochordae as the Primary Repair Strategy to Facilitate a High Rate of Repair in Patients with Mitral Regurgitation**
F de Robertis; A Kelleher; K Fogg; S Price; N Moat
Royal Brompton Hospital, London, United Kingdom
- 64 **Patient-prosthesis Mismatch in Mitral Replacement: Incidence & Outcomes**
T Barker¹; N Howell¹; A Ranasinghe¹; B Keogh²; R Bonser¹; T Graham¹;
J Mascaro¹; S Rooney¹; I Wilson¹; D Pagano¹
¹Queen Elizabeth Hospital, Birmingham, United Kingdom; ²The Heart Hospital, London, United Kingdom
- 65 **A Simple Method for Successful Use of Artificial Chords in Mitral Valve Repair**
S Livesey¹; N Viola¹; A Lipnevicius²
¹Southampton General Hospital, Southampton, United Kingdom; ²Vilnius University Cardiac Surgery Centre, Vilnius, Lithuania
- 66 **Optimizing the Timing of Surgery in Asymptomatic Patient with Severe Mitral Regurgitation using Strain Rate Imaging**
A Marciniak; G Sutherland; M Marciniak; A Kourliouros; B Bijmens; M Jahangiri
St George's Hospital, London, United Kingdom
- 67 **A Novel Method For a Simplified Mitral Valve Repair**
K Kotidis; Y Vali; N Parbat; J Swanevelter; T Spyt
University Hospitals of Leicester Glenfield Hospital, Leicester, United Kingdom
- 68 **Mitral Valve Reconstruction with Autologous Glutaraldehyde-fixed Pericardium**
J Chikwe; A Anyanwu; P Rahmanian; J Castillo; F Filsoufi; D Adams
Mount Sinai Medical Centre, New York, United States

Tuesday 11th March 2008

09:00-10:00

Forum

Sidlaw

Moderators: Mr Jim McGuigan, Ms Linda McKee
Ethicon

- 69 **Autologous Platelet Gel: Does it Have a Place in Post-operative Cardiothoracic Surgical Wounds?**
J Tyrrell; S Bateman
Cardiothoracic Division James Cook University Hospital, Middlesbrough, United Kingdom
- 70 **Impact Of Nurse-led Chest Drain Clinic in the Efficacy of a Regional Thoracic Unit**
P Law; T Cantlin; S Rathinam; P Keogh; M Jan; L Jones; P Rajesh
Birmingham Heartlands Hospital, Birmingham, United Kingdom
- 71 **The Management of Atrial Fibrillation after Coronary Artery Bypass Graft Surgery**
K Prime
Barts and the London NHS Trust, London, United Kingdom

Tuesday 11th March 2008

10:00-10:45 Tea and Refreshments
Cromdale

Tuesday 11th March 2008

- 10:45-11:45 **Session 9**
Ochil **Scientific Oral Presentations**
Moderators: Dr David Chambers, Mr Alex Shipolini
- 72 **Abstract Withdrawn**
- 73 **Use of Skin Blister Model to Assess Extravasated Monocyte Activation following CABG Surgery With CPB & OPCAB Techniques**
B Evans¹; C Landis²; K Taylor¹
¹Imperial College, London, United Kingdom; ²Univeristy of West Indies, Bridgetown, Barbados
- 74 **The Effect of Transfusion of Leuco-depleted Red Cells on the inflammatory Response in Patients Undergoing Coronary Artery Bypass Graft Surgery**
C Rogers; N Panayiotou; R Ascione; M Caputo; G Angelini; G Murphy
Bristol Heart Institute, Bristol, United Kingdom
- 75 **Development of Novel Synthetic Serine-protease Inhibitors to Reduce Postoperative Blood Loss after Cardiac Surgery: First Experimental Results**
G Szabó; G Veres; T Radovits; M Karck
University of Heidelberg, Heidelberg, Germany
- 76 **The Role Of Acute High Shear Stress on Inflammatory Responses in Venous Versus Arterial Endothelial Cells**
M Zakkar²; P Evans¹
¹Hammersmith Cardiothoracic Unit and the Unit of Cardiovascular Medicine, London, United Kingdom; ²Hammersmith Cardiothoracic Unit and BHF Cardiovascular Sciences Unit, London, United Kingdom

- 77 **Leptin is an Endothelial Independent Vasodilator in Humans with Coronary Artery Disease: Evidence for Tissue Specificity of Leptin Resistance**
A Momin¹; A Shah¹; J Desai²; A El-Gamel²; M Kearney¹
¹The Cardiovascular Division GKT School of Medicine King's College, London, United Kingdom; ²The Cardiothoracic Department Kings College Hospital, London, United Kingdom

Tuesday 11th March 2008

- 10:45-12:30 **Forum**
Sidlaw Moderators: Mr Ben Bridgewater, Mrs Rachel Cooper
Nice Guidelines for 18/52 wait and the Patient Pathway Discussion
Gill Mathews
NICE
- 78 **Protocol Led Discharge**
J Mills; G Fiona
Royal Victoria Hospital, Belfast, United Kingdom
- 79 **Travelling the Assistant Practitioner Pathway. The Assistant Practitioner within the Cardiothoracic Surgical Unit**
C Roberts
Sheffield Teaching Hospital Trust, Sheffield, United Kingdom
- 12:05-12:30 National Survey Workforce Planning Results
Tara Bartley

Tuesday 11th March 2008

- 10:45-12:30 **Congenital Meeting & Anatomical Workshop**
Carrick Moderator: Mr Andrew Parry

Morphologist-Dr Andrew Cook
The Current State of Antidysrhythmic Surgery in Congenital Heart Disease

To mini debates including:
Post-cardiotomy Salvage Extracorporeal Life Support is Standard of Care for a Modern Cardiac Surgical Programme - A Debate

Tuesday 11th March 2008

- 10:45-11:45 **Thoracic Oral Presentations**
Pentland Moderators: Mr Richard Steyn, Mr Joe Marzouk
- 80 **A Surgeon's Case Volume of Oesophagectomy for Cancer Does not Influence Operative Mortality in a Tertiary Referral Centre**
R Jeganathan; A Graham; K McManus; J McGuigan
Royal Victoria Hospital, Belfast, United Kingdom
- 81 **Routine Oesophagoscopy to Detect Anastomotic Leakage following Oesophagectomy**
R Page; D McWhirter; M Shackcloth
Tha Cardiothoracic Centre, Liverpool, United Kingdom

- 82 **Is ARDS/ Acute Lung Injury Common after Oesophagectomy? An Audit of Respiratory Complications**
S Rao; A Martin-Ucar; L Beggs; E Black; D Beggs; J Duffy
Nottingham City Hospital, Nottingham, United Kingdom
- 83 **Clinical Impact of Tumour Involvement of the Anastomotic Doughnut in Oesophagogastric Cancer Surgery**
A Sillah¹; E Griffiths¹; S Pritchard²; C West³; R Page⁴; I Welch¹
¹Department of Gastrointestinal surgery University Hospital of South Manchester, Manchester, United Kingdom; ²Department of Histopathology University Hospital of South Manchester, Manchester, United Kingdom; ³Academic Radiation Oncology University of Manchester Christie Hospital, Manchester, United Kingdom; ⁴The Cardiothoracic Centre Liverpool NHS Trust, Liverpool, United Kingdom
- 84 **Causes & Outcomes of Unplanned Intensive Care Admissions after Thoracic Surgery**
M Devbhandari; S Meraj; P Krysiak; M Jones; R Shah
University Hospital of South Manchester, Manchester, United Kingdom
- 85 **Implementing Real-time Ultrasound in a Thoracic Surgery Practice**
Coonar²; S Walker¹; J Hughes³; M de Perrot¹; A Pierre¹; T Waddell¹; G Darling¹; S Keshavjee¹
¹Toronto General Hospital, Toronto, Canada; ²Papworth Hospital, Cambridge, United Kingdom; ³Addenbrookes Hospital, Cambridge, United Kingdom

Tuesday 11th March 2008

10:45-12:30 **ACTA Workshop: Peri-operative Transoesophageal Echocardiography**
Harris
Moderators: Dr Niall O'Keefe, Mr Tom Spyt, Dr Henry Skinner,
Dr Justiaan Swanevelder

Tuesday 11th March 2008

11:45-12:30 **Thoracic Lecture: Dr Doug Mathisen, 'Complex Thoracic Surgery'**
Pentland
Moderators: Mr Jim McGuigan, Mr Rajesh Shah

Tuesday 11th March 2008

11:50-12:30 **Session 10**

Ochil **Cardiac Oral Presentations**

Moderators: Mr Afzal Zaidi, Mr Chandi Ratnatunga

- 86 **Successful Extra Corporeal Membrane Oxygenation support after Pulmonary Thromboendarterectomy**

M Berman¹; S Tsui¹; A Vuylsteke²; A Snell²; R Latimer²; R Hall²; J Arrowsmith²;

J Kneeshaw²; A Klein²; D Jenkins¹

¹Department of Cardiothoracic Surgery Papworth Hospital, Cambridge, United Kingdom; ²Department of Anaesthesia and Intensive Care, Papworth Hospital, Cambridge, United Kingdom

- 87 **Respiratory Failure & Not Tracheostomy is a Risk Factor for Deep Sternal Wound Infection**
J Chikwe; J Castillo; P Rahmanian; F Filsoufi; D Adams
Mount Sinai Medical Centre, New York, United States
- 88 **Predictive Accuracy of Euroscore: Is End-diastolic Dysfunction a Missing Variable?**
T Theologou; M Field; P Sastry; A Grayson; M Pullan; B Fabri
The Cardiothoracic Centre, Liverpool, United Kingdom
- 89 **Detection of Occult Left Ventricular Thrombus Using Contrast-enhanced CMR in Patients with Impaired Ventricular Function Undergoing Coronary Artery Bypass Surgery**
T Pegg¹; T Karamitsos¹; J Arnold¹; J Francis¹; S Neubauer¹; J Selvanayagam²;
D Taggart¹
¹University of Oxford, Oxford, United Kingdom; ²Flinders Medical Centre, Adelaide, Australia

Tuesday 11th March 2008

12:30-13:30 Lunch
Cromdale

13:30-15:00 **Symposium: Post-operative Atrial Fibrillation.**
Pentland Moderators: Mr Samer Nashef, Dr Andrew Grace

Tuesday 11th March 2008

13:30-15:00
Ochil

Session 11

Thoracic Surgery: Complex Cases – How to do it.

Moderators: Mr Frank Collins, Mr Jim McGuigan

- 90 **Sternal Resection For Malignant Disease**
D Eaton; S Jordan; P Goldstraw; G Ladas
The Royal Brompton Hospital, London, United Kingdom
- 91 **Modified Technique of Selective Lung Ventilation Through a Tracheostomy to Conservatively Treat Iatrogenic Tracheal Rupture**
E Belcher; M Conti; P Goldstraw; S Jordan
The Royal Brompton Hospital, London, United Kingdom
- 92 **A 20 Year Audit of Tracheobronchial Airway Stenting at a Single Institution**
K Redmond; E Lim; L Gurung; M Dusmet; G Ladas; P Goldstraw
Royal Brompton Hospital, London, United Kingdom
- 93 **Cervical Approach To Investigation Of Pleural Disease**
N Shah; D Tang; E Black
Nottingham City Hospital, Nottingham, United Kingdom
- 94 **Experience with Right Side Carinal Pneumonectomy in A Single Centre**
H Parissis; E McGovern; V Young
St James's Hospital, Dublin, Ireland

- 95 **Bilateral Thoracoscopic Sympaticotomy**
R Jeganathan; K McManus; P Sidhu; M Jones; A Graham; J McGuigan
Royal Victoria Hospital, Belfast, United Kingdom
- 96 **Combined Chest Wall & Spinal Resection & Reconstruction**
B Naidu; F Collins
Heartlands Hospital, Birmingham, United Kingdom

15:00-15:45 Tea and Refreshments
Cromdale

Tuesday 11th March 2008

- 15:45-17:00 **Session 12**
Pentland **Thoracic Oral Presentation**
Moderators: Mr Bill Walker, Mr Peter Goldstraw
- 97 **Minimally Invasive Radical Lymphadenectomy for Early Stage Lung Carcinoma**
B Witte; M Huertgen
Katholisches Klinikum, Koblenz, Germany
- 98 **Hands Off or Quick & Dirty? VATS Lobectomy versus Open Segmentectomy for Stage 1 NSCLC in COPD**
I Lyons; M Chamberlain; A Martin-ucar; A Nakas; D Waller
Thoracic Surgery Department Glenfield Hospital, Leicester, United Kingdom
- 99 **A Randomized Controlled Trial Comparing Pericardial Buttress versus Stapling With Bioglue in Preventing Airleaks in Lung Volume Reduction Surgery**
S Rathinam; B Naidu; P Nanjaiah; M Loubani; M Kalkat; P Rajesh
Birmingham Heartlands Hospital, Birmingham, United Kingdom
- 100 **The Role of Surgery in the Treatment of Limited Disease Small Cell Lung Cancer**
E Belcher; Y Yap; N Andrew; P Goldstraw; E Lim
The Royal Brompton Hospital, London, United Kingdom
- 101 **Does Failed Video-assisted Lobectomy for Lung Cancer Prejudice Immediate & Long-term Outcomes?**
R Jones; G Casali; W Walker
The Royal Infirmary of Edinburgh, Edinburgh, United Kingdom
- 102 **Active Treatment Rate for Lung Cancer Patients at the University Hospital of South of Manchester: Are we doing Enough?**
M Devbhandari; K Piotr; R Shah; M Jones
University Hospital of South Manchester, Manchester, United Kingdom
- 103 **Intraoperative Talc Pleurodesis may be Inappropriate for Young Patients**
N Shah; A Martin-Ucar; L Beggs; F Beggs; J Duffy; E Black
Nottingham University Hospitals NHS Trust, Nottingham, United Kingdom

Tuesday 11th March 2008

15:45-17:00

Transplant Oral Presentations

Ochil

Moderators: Mr Ian Wilson, Mr Steve Large

104

The Validation & Role of Extra Vascular Lung Water Measurement in the Potential Lung Transplant Donor

R Venkateswaran¹; V Patchell²; I Wilson¹; J Mascaro¹; R Thompson¹; J Coote²;

R Bonser¹

¹University Hospital Birmingham NHS Foundation Trust, Birmingham, United Kingdom; ²University of Birmingham, Birmingham, United Kingdom

105

Assessment of 20 Consecutive Lung Allografts from Donation After Cardiac Death

C Wigfield¹; J Lindsey¹; R Love²

¹University of Wisconsin Hospitals, Madison, WI, United States;

²Loyola University Medical Center, Maywood, ILL, United States

106

The Effect of Methylprednisolone on the Pro-inflammatory Post-brain Stem Death Environment

R Venkateswaran¹; V Dronavalli¹; P Lambert²; I Wilson¹; J Mascaro¹; R Thompson¹; R Bonser¹

¹University Hospital Birmingham NHS Foundation Trust, Birmingham, United Kingdom; ²Aston University, Birmingham, United Kingdom

107

The Non-heart Beating Donor for Heart Transplantation: A New & Evolving Source of Organs

A Ali¹; P White²; K Dhital³; M Ryan²; S Tsui³; S Large³

¹Stanford University, USA, ²Addenbrookes Hospital, Cambridge, United Kingdom, ³Papworth Hospital, Cambridge, United Kingdom;

108

Assessment & Transplantation of Cardiac Allografts Using Continuous Blood Perfusion via The Organ Care System (Transmedics): A Single Centre Experience

A Barker; K Dhital; D Jenkins; M Berman; C Sudarshan; J Dunning; S Large; S Tsui

Papworth Hospital, Cambridge, United Kingdom

109

Donor Cardiac Troponin I: A Biochemical Surrogate of Heart Function but Not a Predictor of Outcome

R Venkateswaran; R Steeds; J Ganesh; V Dronavalli; I Wilson; J Mascaro;

R Thompson; R Bonser

University Hospital Birmingham NHS Foundation Trust, Birmingham, United Kingdom

110

Mathematical Modelling to Identify Patients who Should Not Undergo Left Ventricular Volume Reduction Surgery

M Poullis¹; R Poole²

¹Cardiothoracic Centre, Liverpool, United Kingdom; ²University Engineering Department, Liverpool, United Kingdom

Tuesday 11th March 2008

- 15:45-17:00 **Forum**
Sidlaw Moderators: Mr Samer Nashef, Ms Helen Munday
Consent, the National Review and Impact Upon Practice
Ms Wendy Gray
- 111 **(31865) The Impact Of Oesophagectomy For Carcinoma On Health Related Quality Of Life.**
S Deacon; A Martin Ucar; L Beggs; J Duffy; E Black; D Beggs
Nottingham University Hospitals NHS Trust City Campus, Nottingham, United Kingdom
- 112 **How To Establish a Catheter Based Aortic Valve Replacement Program: Early Experience with the Partner Trial**
O Wendler; M Baghai; P MacCarthy; M Thomas; M Monaghan; K Wilson; E Alcock; R Kailasam; A El-Gamel
King's College Hospital, London, United Kingdom
Tara Bartley
- 113 **An Audit of Post-operative Pain Management of Patients undergoing Thoracotomy**
N Kiely; M Kingston; M Buckley
Advanced Nurse Practitioners, Cardiothoracic Surgery
St James's Hospital, Dublin, Ireland
- 114 **The Less Time in ICU the Better**
M Buckley
Advanced Nurse Practitioner
Cardio-thoracic Surgery, St. James's Hospital, Dublin, Ireland
- 16:55-17:00 **Closing Remarks**

Tuesday 11th March 2008

- 17:00-18:00 **President's Address incorporating the Tudor Edward's Lecture**
Pentland Moderators: Mr Leslie Hamilton, Mr James Roxburgh

Tuesday 11th March 2008

- 19:30-23:45 **Annual Dinner**
Caledonian Black Tie and Prohibition Theme
Hotel Moderator: Professor Sir Bruce Keogh presenting Lifetime Achievements, Prizes and Scholarships

Wednesday 12th March 2008

- 09:00-12:30 **SCTS Executive and Unit Representatives Meeting**
Sidlaw Moderators: Mr Leslie Hamilton, Mr Graham Cooper

TREASURE HUNT

For your chance to win one of three prizes, all you will need to do is visit each stand and provide your name & contact details to the exhibitors.

Prizes on offer are:

- 1 x iPod Nano
- 1 x £50 Wispress book token
- 1 x bottle of champagne

For further information, please ask at the registration desk



Society for
Cardiothoracic Surgery
in Great Britain and Ireland

**ANNUAL
MEETING**
9TH TO 12TH
MARCH 2008
Edinburgh
International
Conference Centre

**FORUM & DATABASE
PROGRAMME**

Monday 10th March

- 08:45-10:00 **Multidisciplinary Shared Session from science, nursing and surgical care practitioners**
Moderators: Professor Sir Bruce Keogh, Tara Bartley, Tony Jessop
- 10:00-10:45 Tea and refreshments
- 10:45-10:50 **Opening Remarks: Tara Bartley**
- 10:50-11:05 **Key Note Speaker Opening Remarks**
Maura Buchanan
- 11:05-11:25 **Cardiac Advanced Life Support: The Guidelines**
Joel Dunning
- 11:25-11:45 **Paper 1: Cardiothoracic service provision post Modernising Medical Careers.**
A response to the Apocalypse (abstract 19)
C Bannister
Guy's and St Thomas' NHS Foundation Trust, London
- 11:45-12:30 **Heart Research Presentation by Dr Randolph Chitwood, Joint Session**
Moderators: Professor Sir Bruce Keogh, Georgina Aldous
- 12:30-13:30 Lunch
- 13:30-15:00 **UK Activity Joint Session**
- 15:00-15:45 Tea and refreshments
- 15:45-16:05 **Paper 2: F.O.R.W.A.R.D with Weaning: An initial study of the focuses Oxford Respiratory Weaning and Response Direction tool (abstract 26)**
D Quayle; P Hinchley
John Radcliffe Hospital, Oxford, United Kingdom
- 16:05-16:25 **Paper 3: 7 Day Physiotherapy Service in Cardiothoracic Surgery (abstract 27)**
B Paradza
Cardiothoracic Division James Cook University Hospital, Middlesbrough, United Kingdom
- 16:25-16:55 **Conducting Research: How to Get Started, Carry it Out & Get Published**
J Sanders
The Heart Hospital, London, United Kingdom

17:00-18:30 **CABG versus stenting**
Professor David Taggart , Professor Paul Sergeant
Moderators: Tim Graham, Calum Buchanan

Tuesday 11th March

09:00-09:20 **Paper 4: Autologous Platelet Gel: Does it have a place in Post-operative Cardiothoracic Surgical Wounds? (abstract 69)**
S Bateman
Cardiothoracic Division James Cook University Hospital, Middlesbrough, United Kingdom

09:20-09:40 **Paper 5: Impact of Nurse-led Chest Drain Clinic in the Efficacy of a Regional Thoracic Unit (abstract 70)**
S Rathinam
Birmingham Heartlands Hospital, Birmingham, United Kingdom

09:40-10:00 **Paper 6: The Management of Atrial Fibrillation after Coronary Artery Bypass Graft Surgery (abstract 70)**
K Prime
Barts and the London NHS Trust, London, United Kingdom
Moderators: Jim McGuigan, Linda McKee

10:00-10:45 Tea and refreshments

10:45-11:25 **Nice Guidelines for 18/52 wait and the Patient Pathway & Discussion**
Gill Mathews
National Institute for Clinical Excellence (NICE)

11:25-11:45 **Paper 7: Protocol Discharge (abstract 78)**
J Mills
Royal Victoria Hospital, Belfast, United Kingdom

11:45-12:05 **Paper 8: Travelling the Assistant Practitioner Pathway (abstract 79)**
C Roberts
Sheffield Teaching Hospital Trust, Sheffield, United Kingdom

12:05-12:30 **National Survey Workforce Planning Results.**
T Bartley
Nursing Representative, SCTS
Moderators: Ben Bridgewater, Rachel Cooper

12:30-13:30 Lunch

- 13:30-15:00 **AF Symposium Joint Session**
- 15:00-15:45 Tea and refreshments
- 15:45-16:15 **Consent, the National Review and Impact Upon Practice**
- 16:15-16:35 **Paper 9: The Impact of Oesophagectomy on health related Quality of Life (abstract 111)**
S Deacon
Nottingham University Hospitals NHS Trust City Campus, Nottingham,
United Kingdom
- 16:35-16:55 **Paper 10: How to Establish a Catheter based Aortic Valve Replacement programme (abstract 112)**
M Baghai
King's College Hospital, London, United Kingdom
Chairs: Samer Nashef, Helen Munday
- 16:55-17:00 **Closing Remarks: Tara Bartley**
- 17:00-18:00 **The Presidential Address: Professor Sir Bruce Keogh**

2008 Annual Dinner, The Caledonian Hotel, Edinburgh

Poster presentations will be displayed in the Strathblane Hall throughout the meeting.



DATABASE MEETING PROGRAMME

Harris Suite

Moderators: Tracey Smailes, Ben Bridgewater

Time:	Title	Speaker
10:45- 10:50	Welcome and Introduction	Tracey Smailes, Cardiothoracic Surgery Audit Lead, James Cook University Hospital, Middlesbrough
10:50-11:10	CCAD Portal data analysis recent developments outlined and demonstrated	Mr James Roxburgh, Secretary, SCTS
11:10-11:30	An update from CCAD	David Cunningham, CCAD
11:30-11:50	Whose data is it anyway? A Database Managers perspective	Colin Evans, Cardiac Information Manager, John Radcliffe Hospital, Oxford
11:50-12:10	How to get the best from your data: A Database Manager's perspective	David Finch, Clinical Audit and Information Manager, Bristol Royal Infirmary
12:10-12:30	Database Managers Network progress	Tracey Smailes
13:30-15:00	UK Activity Joint Session	
13:30-14:00	Thoracic Surgery	
14:00-14:30	Cardiac Surgery	
14:30-14:00	'Where Next with the Heart Programme?'	Professor Roger Boyle



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**ANNUAL
MEETING**
9TH TO 12TH
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ABSTRACTS

The Society would like to thank the following Session sponsors:

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Monday 10th March Session 1
08:00 – 08:10 Ochil

Abstract No. 1

Abnormal aPTT Waveform Profile is associated with Increased Risk of Infection & Mortality following Cardiac Surgery

Authors: J Lu¹; C Toh²; A Grayson¹; M Jackson¹; C Downey²; J Lloyd²; W Dihmis¹; B Fabri¹

Author's Institution: ¹The Cardiothoracic Centre NHS Trust, Liverpool, United Kingdom; ²Department of Haematology University of Liverpool, Liverpool, United Kingdom

Objectives: Abnormal biphasic transmittance waveform in the aPTT coagulation assay is due to the formation of a calcium-dependent complex of C-reactive protein with very low density lipoprotein. This is a marker for impending infection, sepsis and disseminated intravascular coagulopathy for general ITU patients. We examined whether similar relationship exists between abnormal aPTT waveform profiles and cardiac surgical patients.

Methods: Between October 2005 and March 2006, 562 normal and 183 abnormal aPTT waveforms were identified in patients. We used logistic regression to develop a propensity score for matching normal and abnormal aPTT group membership and performed a propensity-matched analysis. Chi-square, Fisher's exact, and Wilcoxon rank sum tests were used as appropriate

Results: The logistic EuroSCORE for the normal and abnormal aPTT groups was 3 and 6 respectively ($p < 0.001$). 284 normal patients were successfully matched with 142 abnormal aPTT patients (2:1 matching). The logistic EuroSCORE after matching was similar (4 versus 4.3; $p = 0.31$). Patients with abnormal aPTT waveforms had a higher incidence of septicaemia (2.8% vs. 0.3%, $p = 0.044$), deep sternal wound infection (2.8% vs. 0%, $p = 0.012$), chest infection (15.5% vs. 5.3%, $p < 0.001$) and mortality (7.7% vs. 2.5%, $p = 0.011$).

Conclusions: Patients with abnormal aPTT waveform profiles have an increased incidence of infection and mortality. This relationship is important in the pre-emptive management of infection in cardiac surgical patients. Patients who are septic and have abnormal aPTT waveform profile may require activated protein C in addition to appropriate antibiotics to successfully treat this condition.

Monday 10th March Session 1
08:10 – 08:20 Ochil

Abstract No. 2

NAPDH Oxidase-derived Superoxide Generation Contributes to Venous Endothelial Dysfunction in Human Heart Failure.

Authors: A Momin¹; R Dworakowski¹; S Walker¹; M Kearney¹; A Shah¹

Author's Institution: ¹GKT School of Medicine King's College, London, United Kingdom

Objectives: Venous endothelial dysfunction contributes to the pathophysiology of human heart-failure, by altering venous capacitance, vascular volume and ventricular preload. The aim of this study was to compare venous endothelial function in human subjects with and without heart-failure and to investigate potential underlying mechanisms.

Methods: Segments of saphenous vein harvested from consecutive CABG patients, 18 had heart failure diagnosed by conventional criteria and 34 had preserved LV (Control). Vascular function assessed in organ-baths from vasomotor dose-response curves to acetylcholine and sodium nitroprusside (endothelium-dependent and independent agonists). The mRNA-expression of NADPH-oxidase components (Nox1, Nox2, Nox4, p47, p67) and eNOS in venous segments was quantified by real-time PCR using the SYBR-Green and standard-curve method. Superoxide production in venous homogenates measured by lucigenin-enhanced chemiluminescence. All patients had measurement of lipids, glucose, CRP, interleukin-1 and TNF-alpha levels.

Results: Patients with heart failure had greater endothelial dysfunction than controls (16 ± 3 vs $40\pm8\%$; $p<0.05$), increased CRP-levels (8.2 ± 2.6 vs 2.6 ± 0.4 mg/L; $p<0.05$), and increased NADPH-dependent superoxide generation in venous homogenates (4.2 ± 0.8 vs 2.1 ± 0.3 Integrated-Light-Units; $p<0.05$; $n=32$). The latter was attributable to NADPH-oxidase rather than uncoupled NO-synthase or xanthine-oxidase. No significant differences were found in mRNA-expression between groups although there was a trend towards increased Nox2-expression in the heart-failure group. The level of superoxide production was positively correlated with heart failure NYHA-class ($r=0.623$, $p<0.05$) and CRP-levels ($r=0.478$, $p<0.05$, $n=30$).

Conclusions: This study shows for the first time that venous endothelial dysfunction in human heart failure is associated with increased NADPH oxidase-derived superoxide generation. The correlation of superoxide levels with CRP and NYHA class suggests that inflammatory mechanisms may be responsible for increasing NADPH oxidase-derived ROS generation in human heart failure.

Monday 10th March Session 1
008:20 – 08:30 Ochil

Abstract No. 3

Peri-adventitial Application of Slow Release Rapamycin-eluting Microbeads Inhibits Vein Graft Disease in a Large Animal Model

Authors: T Rajathurai; S Rizvi; A Newby; G Murphy

Author's Institution: Bristol Heart Institute, Bristol, United Kingdom

Objectives: To evaluate the effects of sustained release of the anti-proliferative agent rapamycin in porcine vein grafts in vivo.

Methods: Rapamycin eluting polyvinyl alcohol (PVA) microbeads suspended in vehicle (pluronic gel) were applied to the adventitial surface of porcine saphenous vein to carotid artery interposition grafts. Contralateral vein grafts (vehicle alone) served as controls. A low dose, 180µg rapamycin/cm², and a high dose, 380µg rapamycin/cm², were evaluated. Morphometric and immunocytochemical analyses were performed at 1 and 4 weeks post-grafting. Values are expressed as mean ± standard error. Serum and tissue rapamycin levels were assessed using high performance liquid chromatography.

Results: Neointimal thickness (102±15 rapamycin vs 210 ±29 µm control, n=8, p=0.005), medial thickness (231±18 vs 308±38 µm, p=0.09) and overall wall thickness (334±27 vs 518±65 µm, p=0.02) were reduced by low dose rapamycin-eluting microbead application in 4-week vein grafts. There was no difference between treated and control groups at the higher dose, possibly as a result of a systemic effect of rapamycin release. Immunocytochemical staining for DBA Lectin demonstrated no loss of endothelium in the microbead treated grafts at any dose when compared with controls.

Conclusions: Rapamycin-eluting microbeads, when applied in vivo, reduced neointima formation in porcine vein grafts at 28 days without significant endothelial denudation. These results demonstrate that microbeads may be used as a delivery vehicle for anti-proliferative agents at the time of aorto-coronary bypass grafting. Ultimately this may help in reducing the incidence of vein graft failure in cardiac surgery patients.



Monday 10th March Session 1

008:30 – 08:40

Ochil

Abstract No. 4

The Novel Peroxynitrite Decomposition Catalyst FP15 Improves Cardiac & Pulmonary Function after Cardiopulmonary Bypass

Authors: G Szabó; T Radovits; C Beller; M Karck

Author's Institution: University of Heidelberg, Heidelberg, Germany

Objectives: Peroxynitrite is highly active free radical species which plays a central role in ischaemia/reperfusion injury. We investigated the effects of FP15, a novel peroxynitrite decomposition catalyst on ischaemia/reperfusion injury in an experimental model of cardioplegic arrest and extracorporeal circulation.

Methods: Twelve anesthetized dogs underwent hypothermic cardiopulmonary bypass. After 60 minutes of hypothermic cardiac arrest, reperfusion was started after application of either saline vehicle (control, n = 6), or FP15 (0.1mg/kg n=6). Left ventricular end-systolic pressure volume relationship (Ees) was measured by a combined pressure-volume-conductance catheter at baseline and after 60 minutes of reperfusion. Left anterior descending coronary blood flow (CBF) and pulmonary blood flow (PBF), endothelium-dependent vasodilatation to acetylcholine (ACH) and endothelium-independent vasodilatation to sodium nitroprusside (SNP) and alveolo-arterial O₂ gradient were determined.

Results: The administration of FP15 led to a significantly better recovery (given as percent of baseline) of Ees 88±7 % vs. 46±6 %, p<0.05. CBF and was also significantly higher in the FP15 group (44±6 vs. 25±4, ml/min, p<0.05). While the vasodilatory response to SNP was similar in both groups, ACH resulted in a significantly higher increase in CBF (71±6% vs. 31±5%, p<0.05) and PBF (52±8% vs 36±6%, p<0.05) in the FP15 group. Alveolo-arterial O₂ gradient was significantly lower in the FP15 group (83±7 vs. 43±5 mmHg, p<0.05).

Conclusions: Application of FP15 improves myocardial, endothelial and pulmonary function after cardiopulmonary bypass with hypothermic cardiac arrest.

Monday 10th March Session 1
08:40 – 08:50 Ochil

Abstract No. 5

Effect of Foreign Surface Pacification with Albumin, Aprotinin, Propofol & High Density Lipoprotein

Authors: M Poullis

Author's Institution: Cardiothoracic Centre, Liverpool, United Kingdom

Objectives: To determine the relative degree of foreign surface pacification with albumin (HSA), aprotinin, propofol and high density lipoprotein (HDL).

Methods: A previously validated model involving a parallel plate glass slide technique was utilised. The effects of albumin (HSA), aprotinin, propofol and high density lipoprotein (HDL) were assessed by the ability to inhibit platelet adhesion to the glass slide surface. The experiment was repeated with collagen coated glass slides to reproduce the clinical effect of endothelial denudation. The interventions were then repeated on membrane oxygenators that are utilised for cardiopulmonary bypass.

Results: After 60 min 100% of the platelets attached to the glass and aprotinin coated surface, and $88\pm 8\%$, and $85\pm 3\%$ of the platelets attached to the HSA-coated, and propofol coated glass surfaces respectively. However, at 60 min, only $37\pm 12\%$ of the platelets attached to the HDL coated glass surface with the remaining platelets freely moving, $p < 0.05$.

The same effect was seen with membrane oxygenators that are utilised during cardiopulmonary bypass. HDL produced a significant reduction of neutrophil activation, $p = 0.035$, when utilised to coat a membrane oxygenator.

Conclusions: Foreign surface pacification with HDL may have beneficial effects as assessed by platelet adhesiveness in a parallel plate assay. Aprotinin had minimal effect, with propofol having an intermediate effect. The same results were obtained utilising membrane oxygenators, confirming the validity if the parallel plate technique as clinically valid.



Monday 10th March Session 2
08:50 – 09:00 Pentland

Abstract No. 6

The Effect of Varying Doses of Statins on the Development of Atrial Fibrillation following Cardiac Surgery

Authors: A Kourliouros; N Roberts; A De Souza; O Valencia; A Marciniak; J Camm; M Jahangiri

Author's Institution: St Georges Hospital, London, United Kingdom

Objectives: Atrial fibrillation (AF) is a common complication following cardiac surgery resulting in increased morbidity and prolonged hospital stay. We hypothesised that statins have a preventative effect on postoperative AF and that this effect is dose-related.

Methods: A retrospective analysis of 680 consecutive patients undergoing coronary artery bypass graft surgery (CABG) and/or aortic valve replacement (AVR) was carried out. Patients in preoperative AF, with permanent pacemakers, and on anti-arrhythmic medication (except beta-blockers) were excluded (n=57, 8.4%).

Results: From the 623 patients included, those on statins accounted for 87% of the study population (n=542) whereas patients not on statins for 13% (n=81). The incidence of postoperative AF was lower in the statin group compared with the no statin group (27% vs. 38%, OR 1.67, 95% CI 1.02 to 2.71, p=0.038). Multivariate logistic regression analysis demonstrated that increasing age and non-use of statins were independent risk factors for postoperative AF (p<0.001 & 0.03, respectively). However, low dose statins (atorvastatin 10 mg and simvastatin 10 mg) did not influence postoperative AF. Higher dose statins, atorvastatin 40 mg (OR 2.31, 95% CI 1.04 to 5.15, p=0.038), simvastatin 20 mg (OR 1.93, 95% CI 1.08 to 3.43, p=0.03) and simvastatin 40 mg (OR 3.35, 95% CI 1.74 to 6.44, p<0.001) significantly reduced the incidence of postoperative AF compared with no statins.

Conclusions: Statin therapy is associated with reduced risk of AF following cardiac surgery. This effect is mainly attributed to higher dose statins, indicating the preventative role of intensive statin therapy in postoperative AF.

Monday 10th March Session 2
09:00 – 09:10 Pentland

Abstract No. 7

Aprotinin does Not Adversely Effect Survival following Cardiac Surgery

Authors: N Howell⁴; B Keogh³; N Freemantle¹; D Cunningham²; R Bonser⁴; T Graham⁴; J Mascaro⁴; S Rooney⁴; I Wilson⁴; D Pagano⁴

Author's Institution: ¹University of Birmingham, Birmingham, United Kingdom; ²NHS Health and Social Services Information Centre, Leeds, United Kingdom; ³National Institute for Clinical Outcomes Research, London, United Kingdom; ⁴University Hospital Birmingham NHS Foundation Trust, Birmingham, United Kingdom

Objectives: The antifibrinolytic drug aprotinin has been the most widely used agent to reduce bleeding and its complications in cardiac surgery. Several randomised trials and metaanalyses have demonstrated it to be effective and safe. However, two recent reports from a single database have implicated the use of aprotinin as a risk for postoperative complications and reduced long term survival.

Methods: In this single institution observational study involving 7836 consecutive patients (1998-2006), we assessed the safety of using aprotinin in risk reduction strategy for postoperative bleeding.

Results: Aprotinin was used in 44% of patients. Multivariate analysis identified aprotinin use in risk reduction for reoperation for bleeding (odds ratio 0.51; 95% confidence interval 0.36 to 0.72 p=0.001) and need for blood transfusion postoperatively (odds ratio 0.67; 95% confidence interval 0.57 to 0.79 p=0.0002). The use of aprotinin did not affect in-hospital mortality (odds ratio 1.03; 95% confidence interval 0.71 to 1.49; p=0.73); intermediate term survival (median follow-up 3.4 years; range 0 to 8.9 years; hazard ratio 1.09; 95% confidence interval 0.93 to 1.28; p=0.30), incidence of postoperative haemodialysis (odds ratio 1.16; 95% confidence interval 0.73 to 1.85; p=0.49) and incidence of postoperative renal dysfunction (odds ratio 0.78; 95% CI 0.59 to 1.03; p=0.07).

Conclusions: This study demonstrates that Aprotinin is effective in reducing bleeding after cardiac surgery, is safe and does not affect short or medium term survival.

Monday 10th March Session 2
09:10 – 09:20 Pentland

Abstract No. 8

Randomised Prospective Study comparing Conventional Subcuticular Skin Closure with Dermabond Skin Glue.

Authors: B Krishnamoorthy; P Kola; I Kadir; N Yonan; P Waterworth

Author's Institution: University Hospital of South Manchester Wythenshawe Hospital, Manchester, United Kingdom

Objectives: The traditional method of closing the donor leg after removal of the long saphenous vein (LSV) is suturing. This often results in extensive scarring. The aim of this study was to investigate the use of Dermabond skin glue in reducing scarring, operating time and improving patient satisfaction.

Methods: 106 consecutive patients were prospectively randomised into two groups. Group 1: 53 patients whose LSVs were harvested by the standard bridging technique closed with 3/0 Biosyn suture. Group 2: 53 patients whose LSVs were harvested by a standard bridging technique were closed with Dermabond skin glue (2-octyl cyanoacrylate). The Hollander wound evaluation cosmetic grading scale (HWECS) was used to assess the appearance of the scar for first 7 days following surgery. The Vancouver scale was used to assess the scar at 6 weeks after surgery. The closure times for the two procedures was compared. The patients were asked for their overall satisfaction about the scar (satisfied, dissatisfied & very satisfied).

Results: The HWECS for the first 7 days was significantly better in dermabond group. The Vancouver scale scoring at 6 weeks was significantly better in the Dermabond group as indicated by congestion, colour and vascularity ($p=0.001$). The closure time for the dermabond group was significantly less than the suture group (p value 0.01). The dermabond group patients were more satisfied than the suture group (p value <0.001).

Conclusions: Patients whose legs were closed with dermabond skin glue show

1. Less scarring.
2. Reduced closure time.
3. Better patient satisfaction.

Monday 10th March Session 2
09:20 – 09:30 Pentland

Abstract No. 9

A Randomised Controlled Trial of Cell Salvage in Routine Cardiac Surgery

Authors: A Klein¹; S Nashef¹; L Sharples²; M Dyer³; F Bottrill³; J Armstrong¹; A Vuylsteke¹

Author's Institution: ¹Papworth Hospital, Cambridge, United Kingdom; ²MRC Biostatistics Unit, Cambridge, United Kingdom; ³Health Economics Research Group at Brunel University, Uxbridge, United Kingdom

Objectives: Reducing blood loss and blood usage is desirable in cardiac surgery. Anti-fibrinolytic therapy is efficacious but the role of routine cell salvage is controversial. This randomised, controlled trial examines the effect of cell salvage on blood and blood product transfusion, safety and cost effectiveness.

Methods: 213 patients were randomised to cell salvage (102) or control (111). All received tranexamic acid and a rigorous transfusion protocol was applied. In the trial group, blood shed in theatre and not returned to the heart-lung machine and chest drain blood up to 6 hours was processed by cell saver and returned to the patient. Blood loss, transfusion, adverse events and costs were monitored for the whole peri-operative period.

Results: Mean red cell volumes of 342 ml (theatre) and 80 ml (ICU) per patient were returned in the cell salvage group. There was no difference between the groups in the proportion of patients (32%) exposed to allergenic blood. When patients who had re-sternotomy for bleeding were excluded, the cell salvage group had significantly less blood transfusion (65 versus 100 units, relative rate 0.71 [95% CI 0.52-0.97] $p=0.04$). At current prices, cell salvage is more expensive.

Conclusions: In routine first-time cardiac surgery with a rigorous blood conservation programme, cell salvage does not further reduce the proportion of patients exposed to allergenic blood transfusion. However, patients who do not bleed excessively receive significantly fewer units of blood but this is at higher overall cost. Economic equipoise will be reached if the cost of a unit of blood were to double.

Monday 10th March Session 2
09:30 – 09:40 Pentland

Abstract No. 10

The Effect Of Seasonal Variation On Cardiac Surgical Outcomes

Authors: J Shuhaiber; K Goldsmith; S Nashef

Author's Institution: Papworth Hospital NHS Trust, Cambridge, United Kingdom

Objectives: The effect of seasonal variation on cardiac surgery outcomes is unknown. We investigated the effect of season on risk-adjusted hospital mortality and length of stay.

Methods: Prospectively collected data from cardiac operations at one centre between April 1996 and March 2006 were analyzed. Seasonal variation in outcomes was studied using multiple regression models which included EuroSCORE and year of surgery to adjust for risk profile and changes over time. Analysis was performed for two separate groups: coronary artery bypass grafting (CABG) only and complex (other or combined) surgery group.

Results: There were 16,290 patients that had a first record of cardiac surgery in the study period. 10,263 patients having CABG only and 6,027 undergoing complex procedures. There were increased odds of hospital mortality in patients having operations in winter as compared to the average across all seasons for both surgery groups, although this was only significant in the CABG only group (OR 1.29, 95%CI 1.01, 1.63, $p = 0.04$). There were decreased odds of death in the CABG only surgery group in summer (OR 0.76, 95% CI 0.60, 0.96, $p = 0.02$). ICU stay was 4% [95% CI 1-6%] longer in the CABG only group in winter and 3% [1-5%] shorter in summer than the average stay ($p = 0.003$ and 0.006). There were no differences in ICU stay in the complex surgery group by season.

Conclusions: Cardiac surgery outcomes are influenced by season. Hospital mortality and ICU stay following CABG was increased during the winter season compared to rest of the year.

Monday 10th March Session 2
09:40 – 09:50 Pentland

Abstract No. 11

Should Cardiac Surgery be Delayed in Patients who are known MRSA Carriers?

Authors: D Healy¹; E Duignan¹; M Tolan¹; V Young¹; B O'Connell²; E McGovern¹

Author's Institution: ¹Keith Shaw Cardiothoracic Surgery Unit St James University Hospital, Dublin, Ireland; ²National MRSA Reference Laboratory St James University Hospital, Dublin, Ireland

Objectives: Preoperative MRSA carriage is associated with higher rates of postoperative MRSA infection. Carriage can be eradicated but this requires delaying surgery. This presents a dilemma when the surgery is urgent. We analysed the incidence of preoperative MRSA carriage and the impact on postoperative outcomes.

Methods: Patient data was collected prospectively from 2000 to 2007 (n=3789) and compared to the hospital microbiology database. Two groups of MRSA carriers were identified: Patients who attended a preadmission clinic (n=22, Group 1), and the remainder whose first screening took place on admission (n=103, Group 2). This group consisted of intra- and inter-hospital transfers and direct admissions from home.

Results: There were 22 carriers in group 1. MRSA eradication measures prior to admission were successful in 21 of these. There were 103 carriers in group 2 and eradication measures were started on confirmation of carriage. There were no MRSA infections in group 1, but 11(10%) in group 2 ($p < 0.05$). While the ITU stay and mortality were significantly greater in group 2 ($p < 0.05$), this difference could be explained by their EuroSCORE.

Conclusions: These results suggest that outcomes in MRSA carriers are mainly determined by their EuroSCORE. Therefore urgent surgery should not be delayed in patients with MRSA carriage.

	Group 1	Group 2
Number	22	103
Log EuroSCORE	3.7(±2.9)	8.3(±12.9)
MRSA Infection	0	11(10.6%)
ITU stay (days)	2.09(±2.7)	3.97(±7.6)
Mortality	0	12(11.6%)

Monday 10th March Session 2
09:50 – 10:00 Pentland

Abstract No. 12

An Outreach Service for Cardiac Surgery Patients

Authors: B Oughton; S Balachandran

Author's Institution: University Hospital Of Wales, Cardiff, United Kingdom

Objectives: Following the publication of a document by the Department of Health in 2000 advocating outreach services in critical care, we have implemented an outreach service in our Cardiothoracic Intensive Care Unit (CITU).

The aim of this service is to facilitate discharge and hence throughput of patients and also to reduce unnecessary admissions.

Methods: All patients are reviewed by a consultant anaesthetist prior to discharge from CITU and if necessary referred for outreach. Referral criteria include a prolonged stay on CITU, post haemofiltration, renal impairment, raised inflammatory markers, tracheostomy patients and those with neurological deficit. These patients are followed up the next day by the consultant anaesthetist and senior nurse after the morning round. They are seen daily until the consultant discharges them from outreach. Advice and support are offered to the ward staff as necessary.

Results: For the first six months of 2007, 101 patients were referred to the outreach service as compared to 111 for the same duration in 2006. Main reasons for follow-up were renal impairment and raised inflammatory markers. 11 out of 21 patients (52%) readmitted to CITU were referred to outreach in 2007 as compared to 6 out of 16 (38%) in 2006. Patients readmitted without outreach were mainly for surgical interventions like sternal rewiring.

Conclusions: We believe this service is beneficial particularly for facilitating discharge and avoiding inappropriate readmissions. We have recently developed this service further by introducing an Early Warning System which is being piloted on the ward.

SCORE	3	2	1	0	1	2	3
PULSE	<40		41-50	51-100	101-120	120-140	>140
SYSTOLIC BP	<70	70-79	80-89	90-150	151-199	>200	
RESP	<6		7-8	9-20	21-25	26-35	>35
TEMP		<35	35-36	36.1-38	38.1 38.5	>38.5	
CNS	un responsive	responds to pain	responds to command	alert	new agitation /confusion		
URINE OUTPUT	<10ml/hr (for 2 consecutive hours)	<0.5ml/kg/hr					

Monday 10th March Session 3
10:45 – 10:55 Ochil

Abstract No. 13

Measured Creatinine Clearance is a Better Predictor of Renal Dysfunction than both Serum Creatinine & Estimated Creatinine Clearance

Authors: M Baghai; L John; J Desia; A El-Gamel; O Wendler

Author's Institution: King's College Hospital, London, United Kingdom

Objectives: Renal dysfunction is a well known risk factor for perioperative morbidity and mortality. Although serum creatinine (sCr) is an accepted marker for renal dysfunction, a number of patients with normal preoperative sCr suffer from postoperative renal failure. In this prospective longitudinal study, we compared the sensitivity and specificity of sCr versus measured creatinine clearance (mCrC) and estimated creatinine clearance (eCrC) as markers of renal dysfunction.

Methods: Data were collected prospectively for 2000 consecutive patients undergoing elective cardiac surgical procedures. A sCr and 24 hour urine collection were used for mCrC. eCrC performed using Cockcroft and Gault formula and corrected for age, weight and gender. Univariate & multivariate regression analysis were used to identify risks for mortality.

Results: In cardiac surgical patients there was no correlation between sCr, eCrC and mCrC. Measured CrC is the most specific and sensitive marker for renal dysfunction compared to sCr and eCrC. Overall mortality was 2.5 %. Patients with mCrC below 60 ml/min had significantly higher Mortality 5.7% versus 0.7% in patients with mCrC above 60 ml/min

Conclusions: A normal serum Creatinine and estimated Creatinine clearance do not exclude renal impairment in cardiac surgical patients. Reduced measured creatinine clearance is the most sensitive and specific marker for renal dysfunction and is independent risk factor for postoperative mortality.



The Impact of Off-pump Coronary Artery Bypass Surgery on Postoperative Renal Function

Authors: A Shahir¹; L Yu¹; C Choong²; M Navaratnarajah¹; Y Abu-Omar²; D Taggart¹

Author's Institution: ¹University of Oxford, Oxford, United Kingdom; ²University of Cambridge, Cambridge, United Kingdom

Objectives: A number of risk factors have been recognised for post-operative renal dysfunction following On-Pump CABG. There are however few studies that have evaluated the potential reno-protective effects of off-pump CABG (OPCAB) in the presence of other confounding risk factors. This study addresses this issue.

Methods: Serum creatinine values (pre-operatively, day 1, 2 and 4 post-operatively) and other clinical data were prospectively collected on 1580 consecutive patients who underwent first time CABG from 2002 to 2005. Creatinine clearance was calculated using Cockcroft and Gault equation. The effect of On-Pump vs. OPCAB on renal function was analysed, adjusting for age, gender, diabetes mellitus, left ventricular function and preoperative creatinine clearance, using multiple regression analysis.

Results: 1145 (73%) patients underwent On-Pump and 434 (27%) underwent OPCAB. The two groups were similar with respect to age, gender, diabetes and LV function. 274 (17%) patients were females and 274 (17%) patients had diabetes. Multivariate analysis demonstrated significantly lower creatinine clearance postoperatively in patients with diabetes ($p < 0.001$) and advanced age ($p < 0.001$). The On-Pump group had significantly lower postoperative creatinine clearance in comparison to the OPCAB group ($p = 0.01$). The effect remained consistent after adjusting for other factors in the multivariate analysis (Table).

Conclusions: Off-pump surgery is associated with a reduction in postoperative renal injury.

	Multivariate Analysis*	
Outcome	Estimated Difference	P value
On-Pump vs Off-Pump	-1.98 (-3.70,-0.25)	0.03
Age (per year)	-0.46 (-0.57, -0.35)	<0.0001
Female vs male	2.29 (0.26, 4.32)	0.03
Diabetes Mellitus	-3.90 (-5.93, -1.86)	<0.001
LVF		0.22
Poor vs Moderate	1.59 (-1.17, 4.34)	0.26
Poor vs Good	2.29 (-0.37, 4.95)	0.09

*All analyses were adjusted for baseline creatinine clearance

Multiple Regression Analysis

Monday 10th March

Session 3

11:05 – 11:15

Ochil

Abstract No. 15

Abstract Withdrawn



Monday 10th March Session 3
11:55 – 11:25 Ochil

Abstract No. 16

Early & Mid Term Survival following Isolated Coronary Artery Bypass Surgery in Patients with Chronic Dialysis Dependent Renal Failure

Authors: U Dandekar¹; A Sachithanandan¹; R Bonser¹; T Graham¹; B Keogh²; J Mascaro¹; S Rooney¹; I Wilson¹; P Nightingale¹; D Pagano¹

Author's Institution: ¹University Hospital Birmingham, Birmingham, United Kingdom;
²The Heart Hospital, London, United Kingdom

Objectives: To assess the impact of dialysis dependent renal failure (DDRF) on early and mid term survival following isolated coronary artery bypass grafting (CABG).

Methods: Prospectively collected data on 5601 consecutive patients who underwent isolated CABG between 1/4/1997 to 31/12/2005 was analysed. From this, 40 DDRF patients were identified of which 31 patients were compared with a matched population. 27 patient-related and peri-operative variables were analysed. Logistic regression analysis was used to calculate a propensity score for each patient. Late survival data was obtained from the UK Central Cardiac Audit Database (CCAD). Mean follow-up is 4.62 years.

Results: 30 day mortality was 5% (2/40) in DDRF patients and 2.6% (135/5183) in control group ($p=0.28$). Cox-Regression survival analysis with mean propensity score (co-variate) showed freedom from all-cause mortality in DDRF group at 1, 3 and 5 years was 89%, 82% and 74% respectively compared with 96%, 94%, and 90% in the control group [$(p=0.001)$ HR =2.95 95%CI (1.54-5.64)].

Conclusions: In this series there was no significant difference in early mortality, however, patients with DDRF have a reduced long term survival following CABG. Surgical revascularization in this subgroup warrants careful consideration.

Monday 10th March Session 3
11:25 – 11:35 Ochil

Abstract No. 17

Rapid Detection of Acute Renal Dysfunction by Serum & Urinary Neutrophil Gelatinase-associated Lipocalin (NGAL) after Cardiopulmonary Bypass

Authors: S Tuladhar; R Bogle; P Punjabi

Author's Institution: Hammersmith Hospital, London, United Kingdom

Objectives: Cardiopulmonary bypass (CPB) is associated with a significant risk of postoperative renal dysfunction. We studied the utility of a novel renal injury biomarker to predicting acute renal dysfunction (ARD) in adult patients undergoing cardiac surgery.

Methods: Blood and urine were obtained from 50 patients undergoing CPB-requiring surgery. Patients were divided into group A (n=41) and group B (n=9) who developed acute renal dysfunction (ARD) defined as an increase in serum creatinine of >0.5mg/dl within the first 48h post CBP. Serum and urinary NGAL was determined at baseline and 2 hours following CBP.

Results: There was a significant increase in serum and urinary NGAL 2 hours post CPB. In the ARD group, urinary NGAL (ng/mmol creatinine) increased from 7.13 ± 2.30 [95% CI: 2.5-11.8] to 2924 ± 786 [95% CI 1110-4739]). In the non-ARD group urinary NGAL increased from 1.6 ± 0.6 [95% CI 0.3-3.0] to 749 ± 179 ng/ml [95% CI 386-1113]. Receiver operator characteristics were determined for urinary and serum NGAL with area under the curve of 0.96 and 0.85 respectively. The post-CPB levels of urinary NGAL were significantly different in the ARD group ($p < 0.0001$) such that for a threshold urinary NGAL of 393ng/mmol creatinine the test had a sensitivity of 92.7% and specificity of 77.8% for the detection of post CBP renal dysfunction.

Conclusions: The present study demonstrated that CPB causes a significant increase in the concentration of serum and urinary NGAL. Measurement of this novel biomarker in the urine of patients in the first hours after CPB is predictive of subsequent renal dysfunction.

Monday 10th March Session 3
11:35 – 11:45 Ochil

Abstract No. 18

Chronic Kidney Disease Stage Predicts In-hospital Mortality & Mid-term Survival following Cardiac Surgery

Authors: N Drury¹; N Howell¹; B Keogh²; D Cunningham³; R Bonser¹; T Graham¹; J Mascaro¹; S Rooney¹; I Wilson¹; D Pagano¹

Author's Institution: ¹University Hospital Birmingham NHS Foundation Trust, Birmingham, United Kingdom; ²National Institute for Clinical Outcomes Research, London, United Kingdom; ³NHS Health and Social Services Information Centre, Leeds, United Kingdom

Objectives: To assess the impact of chronic kidney disease stage on in-hospital mortality and late survival outcome following adult cardiac surgery.

Methods: Prospectively collected data were analysed on 7621 consecutive patients not requiring preoperative renal-replacement therapy, undergoing CABG, valve surgery or combined procedures from 1/1/98-1/12/06. Pre-operative estimated glomerular filtration rate was calculated using Cockcroft-Gault formula. Patients were classified in the 4 Chronic Kidney Disease Stage Classes (CKD) defined by the National Kidney Foundation Disease Outcome Quality Initiative Advisory Board. Late survival data was obtained from the UK Central Cardiac Audit Database.

Results: There were 243 in-hospital deaths (3.2%). There was a stepwise increase in operative mortality with each CKD class independent of the type of surgery. Multivariate analysis confirmed CKD Class to be an independent predictor of in-hospital mortality (Class 2 OR1.45 95%CI 1.1-2.35 p=0.001; Class 3 OR2.8 95%CI 1.68-4.46, p=0.0001, Class 4 OR7.5 95% CI3.76-15.2, p=0.0001). The median follow-up after surgery was 42 months (IQR 18-74) and there were 728 late deaths. Survival analysis using a Cox regression model confirmed CKD class to be an independent predictor of late survival (Class 2 HR1.2 95%CI 1.1-1.6 p=0.0001, Class 3 HR1.95 95%CI 1.6-2.4, p=0.0001, and Class 4 HR3.2 95%CI 2.2-4.6, p=0.0001). The majority (98%) of patients had a preoperative creatinine < 200 µmol/L, which is not included as a risk factor in most risk stratification systems.

Conclusions: Mild renal dysfunction is an important independent predictor of in-hospital and late mortality in adult patients undergoing cardiac surgery.

Monday 10th March Forum
11:25 – 11:45 Sidlaw

Abstract No. 19

Cardiothoracic Service Provision Post “Modernising Medical Careers” (MMC). A Response To The Apocalypse

Authors: J Tambiah; C Bannister; C Blauth; G Venn

Author's Institution: Guy's and St Thomas' NHS Foundation Trust, London

In the UK, patients traditionally were admitted under the care of a consultant surgeon and a team, consisting of a registrar (SPR) and senior house officer (SHO). Since 1st August 2007, the advent of MMC replaced the existing two tier system with a single Specialty Trainee (ST) grade. The SHO grade was axed and ST's work shorter hours. Previously SHO duties included pre-operative patient assessment, organisation of tests, collection of test results, documentation in patient notes, conduit harvest, theatre assistance and overnight on call.

We have adopted a new model at St Thomas' Hospital where these SHO duties are performed by advanced nurse care practitioners (ANCPs). Although use of ANCPs in cardiac surgery is established, and other countries employ single tier junior doctor cover, this system where ANCP skills form the primary source of service provision encompassing pre-admission, peri-operative, and post-discharge patient care, seems unique in the UK.

A broad comparison to other units' adaptations to MMC in England and Wales is made. We seek to stimulate discussion of alternative models of care provision and their impact on surgical training, costs and patient perception.



Minimally Invasive Aortic Valve Replacement

Authors: I Saeed; K Mandal; N Roberts; S Brecker; M Jahangiri

Author's Institution: St George's Hospital, London, United Kingdom

Objectives: Minimal access aortic valve replacement (AVR) is increasingly used. We report our experience with this technique, highlighting some of the surgical pitfalls.

Methods: An ongoing analysis of 77 patients who underwent minimally invasive AVR between October 2005 and September 2007 was carried out. A limited upper T-sternotomy was used in all patients. Bypass was established by cannulation of ascending aorta and right atrium, using a flat venous cannula. All patients had external defibrillators and transoesophageal echocardiography placed prior to surgery.

Results: Median age was 63 years (26-87 yrs). The cross clamp and bypass times were 56 (42-63) and 72 minutes respectively. 16 (21%) operations were performed by trainees, no patient had a concomitant procedure. There was one death and one patient returned to theatre for bleeding and a further case was converted to full sternotomy due to resistant ventricular fibrillation secondary to incorrectly placed defibrillator pads. There were no sternal infections. Median ICU and hospital stays were 1 and 6 days respectively. Patients with poor respiratory function did particularly well.

Conclusions: Minimal access AVR is safe and feasible with excellent outcomes. The pitfalls include misplacement of defibrillators pads, insertion of pace wires, distension of the heart, bleeding from T-incision and collection of blood in the posterior pericardium. These complications can be avoided with necessary measures.

Monday 10th March Session 3
10:55 – 11:05 Pentland

Abstract No. 21

First UK Experience of Percutaneous Aortic Valve Replacement (pAVR) in Severe Calcific Aortic Stenosis

Authors: H Jilalhaw¹; T Spyt¹; D Chin¹; E Logtens¹; J Laborde²; J Kovac¹

Author's Institution: Glenfield Hospital, Leicester, United Kingdom; ²Clinique Pasteur, Toulouse, France

Objectives: Significant aortic stenosis is common in the elderly. However, such patients are often declined for or refuse surgery due to perceived risk. We report the first clinical experience in the UK of percutaneous aortic valve replacement via femoral route implanted in a high risk elderly population.

Methods: All patients treated had severe symptomatic AS (aortic valve area (AVA) < 1 cm²) and were considered high risk for conventional surgery. We used the CoreValve aortic revalving system, an 18 French system consisting of a porcine pericardial valve mounted on a self expanding nitinol stent-frame for percutaneous transfemoral delivery. Transthoracic echocardiography was used to assess valve function before and after the procedure.

Results: Between January and October 2007, pAVR was attempted in 21 patients. Mean age was 84.7±5.4years with a mean logistic EuroSCORE of 17.4±10.5%. Baseline EF was 50.6±10.3 %. Peak and mean AV gradients at baseline were 76.6±28.1mmHg and 45.3±18.5mmHg respectively with AVA 0.73±0.19 cm². Four cases were performed under local anaesthesia with sedation and the remainder under general anaesthesia. There was 100% procedural success with no procedural mortality. Average post-procedural time to discharge was 5.9±3.8 days. PredischARGE echocardiography revealed a peak gradient of 16.3±7.5 mmHg and a mean of 9.2±3.7 mmHg with AVA 1.5±0.3cm². There was 1 post-procedural death within 30 days attributed to the effects of general anaesthesia (5%). Significant improvements in NYHA status were observed early post procedure and sustained at follow-up.

Conclusions: Initial experience suggests that pAVR is an effective treatment for severe AS in high risk and elderly patients.



Monday 10th March Session 3
11:05 – 11:15 Pentland

Abstract No. 22

TBA

Monday 10th March Session 3
11:15 – 11:25 Pentland

Abstract No. 23

Does Minimal Access Aortic Valve Replacement offer Clinical Benefits to Patients?

Authors: B Murtuza¹; J Pepper²; R Del Stanbridge¹; A Darzi³; T Athanasiou³

Author's Institution: ¹St Mary's Hospital, London, United Kingdom; ²Royal Brompton Hospital, London, United Kingdom; ³Department of Biosurgery Imperial College, London, United Kingdom

Objectives: Although an established surgical technique, controversy surrounds the benefits of minimal access aortic valve replacement (AVR). Proponents of this approach cite reduced morbidity, mortality and cost in addition to improved cosmesis and patient satisfaction. Others have failed to demonstrate these benefits and the procedure has not widely been implemented in current routine cardiac surgical practice. The aims of this study were: to use meta-analytical methodology to quantify the effects of minimal access AVR compared with conventional AVR with respect to morbidity and mortality; to assess differences in important intraoperative variables between the two techniques; and to evaluate heterogeneity between studies and robustness of the findings by sensitivity analysis.

Methods: Four randomized controlled trials and 22 non-randomized comparative studies were included with a total of 4891 patients.

Results: Overall meta-analysis showed small benefits in perioperative mortality (4667 patients, odds ratio 0.72, $p=0.05$; 95% CI: 0.51-1.00), ICU stay, total hospital stay and ventilation time in the minimal access group, although cross-clamp, cardiopulmonary bypass and total operation times were longer. Sensitivity analysis with assessment of high-quality studies demonstrated that heterogeneity between existing studies and the apparent benefits on perioperative mortality were related to study quality, although the results for ICU and hospital stay were more robust.

Conclusions: This study suggests that minimal access AVR is a safe alternative to conventional AVR though the clinical benefits in terms of morbidity and mortality and possibly cost are modest. The procedure can be offered on the basis of patient choice and cosmesis rather than evident clinical benefit.

Monday 10th March Session 3
11:25-11:35 Pentland

Abstract No. 24

The Management of Patients Referred for Consideration of Transcatheter Aortic Valve Replacement

Authors: M Gosh-Dastidar; M Mullen; A Kelleher; S Davies; N Moat

Author's Institution: Royal Brompton Hospital, London, United Kingdom

Objectives: The advent of transcatheter techniques to replace the aortic valve may offer an alternative to conventional surgery or medical management in patients who are at high risk from conventional surgery. This aim of this paper is to describe the management of a consecutive series of patients referred for consideration of transcatheter aortic valve replacement.

Methods: Between April and October 2007, 62 consecutive patients were referred for consideration of transcatheter AVR. All patients were reviewed in a multidisciplinary forum to determine both clinical and anatomic suitability for a retrograde trans-arterial AVR with the Core-Valve (TM) system.

Results: 14 patients are still in some part of the assessment protocol. Of the remaining 48 the following course was adopted;

1. trans-catheter AVR, n=19 (17,trans-femoral; 2, trans-axillary)
2. conventional AVR, n=5
3. died during assessment process, n=6
4. clinically unsuitable (medical management), n=7
5. anatomically unsuitable (for available device), n=5
6. patient declined, n=2
7. patient deferred decision, n=4

The algorithms behind the decision making process will be presented. 19/48 (39%) of patients who have completed the assessment process received a trans-catheter AVR. All patients had some degree of post-procedural aortic regurgitation on TOE. The 30-day mortality in this group was 3/16 (18%).

Conclusions: A transcatheter technique to replace the aortic valve can offer an alternative to high risk conventional surgery in some patients.

Monday 10th March Session 3
11:35-11:45 Pentland

Abstract No. 25

Transapical Transcatheter Aortic Valve Replacement

Authors: M Baghai; O Wendler; P MacCarthy; M Thomas; M Monaghan; K Wilson; E Alcock; R Kailasam; A El-Gamel[†]

Author's Institution: King's College Hospital, London, United Kingdom

Objectives: Conventional open-heart aortic valve replacement is a routine and relatively low risk surgical procedure. Elderly patients with increasing co-morbidities face higher peri-operative morbidity and mortality. Alternative less invasive procedures may be more appropriate for this high risk group of patients.

Methods: This video will describe the pre-operative diagnostic imaging involved in assessing patients. There are also examples of how 3D real-time trans-oesophageal echocardiography and x-ray image intensifiers are used for precision valve deployment.

The surgical procedure for the trans-apical approach is described in detail including use of the relevant medical devices and the preparation of the valve prior to implantation.

Results: N/A

Conclusions: Transapical aortic valve replacement without cardiopulmonary bypass is a realistic alternative to conventional open-heart surgery in high risk patients. This video explains each step involved in the implantation process.



Monday 10th March Forum
15:45 – 16:05 Sidlaw

Abstract No. 26

F.O.R.W.A.R.D. With Weaning: An Initial Case Study of the Focussed Oxford Respiratory Weaning & Response Direction Tool

Authors: P Hinchley; D Quayle

Author's Institution: John Radcliffe Hospital, Oxford, United Kingdom

Objectives: To reduce the level of time a patient spends categorised as level 3, to reduce length of stay and to achieve an 80% target of measured successful weaning days

Methods: The authors have plotted graphical representations of respiratory mechanics, oxygen uptake and tissue perfusion, allocating different areas on the graph a colour code. Each colour leads to a flow chart of actions which a nurse may follow. Mixed methodology was used, collecting initial case histories, the patients colour codes throughout each 24 hour period they remained ventilated, and comments on the actions taken. This was followed up with focus group interviews to assess the wider perspectives of staff.

Data collected was measured against a retrospective cohort, measuring time ventilated from day three onwards. Successful weaning days (10% reduction in ventilatory support) were counted.

Results: A reduction in time ventilated and a in length of stay was noted between the pilot study group and the cohort.

Conclusions: This appears to offer an opportunity to streamline the weaning process. The research and depth of experience incumbent in the tool, allows all grades of staff with differing levels of knowledge and experience, to maintain momentum within the weaning process whilst ensuring the safety and security of the patient. The study was conducted on an average size cardiothoracic unit and whilst the initial results are encouraging the authors are aware of a need to broaden the exposure of the tool to further validate its benefits. The possibilities of a multi centre trail are currently being explored.

Monday 10th March Forum
16:05 – 16:25 Sidlaw

Abstract No. 27

7 Day Physiotherapy Service in Cardiothoracic Surgery.

Authors: B Paradza

Author's Institution: Cardiothoracic Division James Cook University Hospital, Middlesbrough, United Kingdom

Objectives: Current healthcare costs are challenging traditional delivery strategies like the 9-5 physiotherapy shift pattern popular across the NHS. The project aim was to design, implement and monitor an innovative service to meet current NHS reforms, creating a flexible and accessible 21st century therapist who could have an impact in reducing hospital length of stay (LOS).

Methods: 3 clinical audit cycles were completed involving 582 patients, a staffing of 6 therapists. LOS was outcome measure, benchmarked at 7 and 14 days as per locally agreed protocol at JCUH. Local database was used to prospectively collect information, varied by the audit team.

Audit 1 from 1 January-31 March 2006, 5 day physiotherapy service, n=177
7.5hr shift pattern

Audit 2 from 1 April – 30 June 2006, 7 day physiotherapy service, n=218
9hr shift pattern

Audit 3 from 1 July-30 Sept 2006, 5 day physiotherapy+ weekend cover, n=187
7.5hr shift pattern.

Results: An increased from 42% to 67% patients discharges with LOS.

Conclusions: 7 day physiotherapy is a safe and feasible alternative service strategy, which has reduced LOS, hotel costs through bed days impacting on bed numbers, cancellations and waiting lists.

Despite staffing challenges a pioneering service has replaced the on-call service benefiting patients, staff and meeting service demand.

Results (%)	5 day	5 day + w/e	7 day service	Total pts
Male (%)	71	73	70	
CABG (%)	59	64	57	
Valve (%)	22	11	14	
CABG + valve (%)	16	8	8	
Thoracic (%)	4	16	22	
LOS-Mean	11(days)	7(days)	7(days)	
Median	7(days)	5(days)	5(days)	
% pts <7days	42	67	71	
% pts <14days	85	93	89	n=582

Monday 10th March Forum
16:25 – 16:55 Sidlaw

Abstract No. 28

‘Every Path has its Puddle’

Author: J Sanders

Authors institution: *University College London, London, UK.*

All health care professionals have a responsibility to deliver care based on current evidence. Yet only 0.1% of nurses are employed in research-related posts and professors make up only 2.6% of the academic nursing workforce compared to 12% in other disciplines. So why don't nurses and allied health professionals conduct more research? Time, resources and a perceived lack of research expertise dissuade already stretched professions. But it doesn't have to be that difficult and it isn't necessary to try and change the world within one project! However, the rewards of undertaking research are numerous from both a patient care and personal/ professional development perspective.

The overall aim of this session is to demystify the jargon and process of undertaking a research project through concept to publication. This includes differentiating between audit, research and service evaluation, identifying the main research methodologies, tips on developing a protocol, the requirements of the ethics committee and the process of submission. Available sources of support will also be explored.

Monday 10th March

Session 4

15:45 – 15:55

Pentland

Abstract No. 29

Randomised Trial Comparing Survival Following Bilateral Internal Mammary Artery (BIMA) Grafting Versus Single IMA (SIMA): The Arterial Revascularisation Trial (ART)

Authors: The ART Investigators¹, D Taggart²

Author's Institution: ¹Care of the Royal Brompton Hospital, London, United Kingdom; ²John Radcliffe Hospital, Oxford, United Kingdom

Objectives: Standard CABG surgery uses a single internal mammary artery (SIMA) and supplemental vein or radial artery grafts. Several observational studies have suggested a survival benefit with two IMA grafts (BIMA) but this has not been tested in a randomized trial. The Arterial Revascularisation Trial (ART) is an MRC and BHF funded, multi-centre international trial comparing SIMA versus BIMA.

Methods: 28 centres in Australia, Austria, Brazil, India, Italy, Poland and the UK are randomizing 3000 CABG patients to SIMA or BIMA grafting. Supplemental grafts may be either saphenous vein or radial artery. CABG can be performed as an on-pump or off-pump procedure. The primary outcome is survival at 10 years and secondary end-points include clinical events, quality of life and cost effectiveness. The effect of age, LV function, diabetes and off-pump surgery are pre-specified subgroups.

Results: To date 2992 patients have been enrolled (recruitment is due to be completed by end 2007). Group data are available so far on 2760 patients. Mean age was 65 years (range 36-87) with 86% males. 41% of the CABG procedures were performed off pump. Thirty-day mortality was 1% (n=27 patients). Twenty-six patients (1%) have had sternal wound reconstruction. There were 60 re-explorations for bleeding (2%); 51 strokes (2%); 62 myocardial infarctions (2%); 107 (4%) required renal support therapy and 44 patients further revascularisation (2%).

Conclusions: ART is one of the first randomised trials to report on survival and clinical outcomes using BIMA compared to SIMA and will help to establish the gold-standard for CABG surgery.



Monday 10th March Session 4
15:55 – 16:05 Pentland

Abstract No. 30

Comparison of Mid-term Outcome in Unselected Consecutive Patients with Three Vessel and/ or Left Main Disease undergoing PCI & CABG Surgery

Authors: E Biryukova; F Williams; O Valencia; S Brecker; M Jahangiri

Author's Institution: St George's Hospital, London, United Kingdom

Objectives: Both coronary artery bypass graft surgery (CABG) and percutaneous coronary intervention (PCI) are effective treatment modalities for patients with coronary artery disease. However, the optimal treatment for patients with multivessel disease has recently become a matter of debate despite existing strong evidence supporting CABG in this setting. We set out to assess the outcomes of major adverse cardiac and cerebrovascular events and death in a “real-world”, unselected cohort of patients with multivessel disease undergoing PCI (including drug-eluting stents) and CABG in our hospital.

Methods: 646 consecutive patients, between Sep 2005 and Dec 2006, with three vessel and/or left main stem disease, were identified (333 CABG and 313 PCI). Median age was the same in both groups-69 years. Demographic, clinical, angiographic, and procedural data were prospectively collected. Telephone interview was conducted at 6 months and 1 year after the index procedure. Median follow-up was 12 months. Incidence of death, non-fatal myocardial infarction, repeat revascularization, cerebrovascular events, and recurrence of angina were compared between CABG and PCI, in hospital, at 6 months and one year. Subgroup analysis for diabetic patients was performed.

Results: Our findings favoured CABG over PCI regarding mortality and major adverse cardiac events (Table overleaf). Results for diabetic patients showed the same trends.

Conclusions: Compared to PCI with DES, CABG resulted in significant improvement in major adverse cardiac events in patients with three vessel and/or left main stem disease, particularly in diabetics.

	PCI, n (%)	CABG, n (%)	p value
In-hospital outcome	313 (100%)	333 (100%)	
Death	4 (1.4%)	8 (2.4%)	0.2
Stroke / TIA	0	8 (2.4%)	0.1
6 month follow-up	250 (80%)	276 (85%)	
Death	15 (4.9%)	6 (1.9%)	<0.001
Myocardial infarction	8 (3.2%)	0	0.03
Stroke / TIA	3 (1.2%)	1 (0.4%)	0.3
Reintervention	35 (14%)	2 (0.8%)	<0.001
Recurrent angina	53 (21%)	10 (4%)	<0.001
1 year follow-up	223 (71%)	256 (79%)	
Death	17 (5.5%)	9 (2.8%)	0.06
Myocardial infarction	9 (4%)	0	<0.001
Reintervention	49 (22%)	5 (2%)	<0.001
Recurrent angina	64 (29%)	13 (5%)	<0.001

Monday 10th March Session 4
16:05 – 16:15 Pentland

Abstract No. 31

Early & Late Survival after Surgical Revascularization for Ischaemic Ventricular Fibrillation/ tachycardia.

Authors: D Ngaage; A Cale; M Cowen; S Griffin; L Guvendik

Author's Institution: Castle Hill Hospital, Kingston-Upon-Hull, United Kingdom

Objectives: Ischaemic ventricular fibrillation/tachycardia (VF/VT) treated by myocardial revascularization, often with implantation of cardioverter defibrillator (ICD), prevents sudden cardiac death. Early series have suggested that recurrent VF/VT threatens survival even after treatment. As late outcome is unknown, we sought to determine if the early survival benefit is sustained.

Methods: From January 1999 through January 2007, 93 consecutive patients (75 male, 81%) presented with ischaemic VF/VT, 21% survived cardiac arrest, and underwent CABG at our institution. We analysed their early and late survival.

Results: Median age was 66 years (range 44 to 88). Clinical presentation included class III/IV angina (46%), controlled heart failure (43%), prior myocardial infarction (68%), left ventricular ejection fraction <0.30 (23%) and 0.30 to 0.50 (35%), left main stem (24%) and triple vessel disease (67%). CABG, mostly non-elective (urgent 73%, emergency 7%), was combined with AVR in 5 patients and LV pseudoaneurysm repair in 3. Mean number of diseased coronaries of 2.6 corresponded to the average number of grafts (2.5). Operative mortality was 6.5% (n=6, median Euroscore predicted mortality 9). Recurrent VF/VT was observed early postoperatively in 21 patients (24%). All patients had electrophysiologic studies postoperatively and ICD was implanted in 40%. Of 12 (16%) late deaths at a follow-up extending to 8 years, 4 (33%) were due to cardiac causes. The 5-year survival was 88%, equivalent to that (83-88%) reported for patients with sinus rhythm preoperatively.

Conclusions: Complete myocardial revascularization for ischaemic VF/VT yields excellent early and late results; 5-year survival is comparable to patients with preoperative sinus rhythm.

Monday 10th March Session 4
16:15 – 16:25 Pentland

Abstract No. 32

Diabetic Patients Should have Internal Thoracic Artery Harvested Skeletonized

Authors: F Moraes; E Cardoso; R Machado; C Moraes

Author's Institution: Heart Institute of Pernambuco, Recife, Brazil

Objectives: To analyse the impact in the sternal perfusion by scintigraphy, when bilateral internal thoracic arteries (ITA) were harvested by two different techniques.

Methods: 35 patients submitted to coronary artery bypass grafting (CABG) were divided into two groups: Group A (18) had both ITA harvested as skeletonized and group B (17) as pedicled. On the 7th pos-operative day patients were submitted to bone scintigraphy of the sternum. A quantitative and qualitative analysis of the images were performed. Statistical analysis was calculated using student t test.

Results: Results: Group A (skeletonized) showed higher perfusion (11.5%) of the sternum as a mean, than Group B (pedicled) patients, however this was not statistic significant ($p=0.127$). On the other hand, comparing the diabetic population, 7 in each group, there was a marked 47.4% higher perfusion of the sternum in Group A patients comparing to Group B and this difference reached statistical significance ($p=0.004$).

Conclusions: 1. In the general population, sternal perfusion is not affected significantly and is independent of the technique used to harvest both internal thoracic arteries. 2. In the diabetic population, a significant preservation of the perfusion of the sternum is observed when both internal thoracic arteries are harvested using a skeletonized technique.



Monday 10th March Session 4
16:25-16:35 Pentland

Abstract No. 33

Effects of Off-pump Versus On-pump Coronary Artery Bypass Grafting on Early & Late Right Ventricular Function

Authors: T Pegg; T Karamitsos; R Arnold; J Francis; S Neubauer; J Selvanayagam; D Taggart

Author's Institution: University of Oxford, Oxford, United Kingdom

Objectives: Off pump coronary artery bypass grafting (OPCAB) results in better preservation of left ventricular function in the peri-operative period than conventional on-pump coronary artery bypass grafting (ONCAB). There is conflicting evidence as to the effect of OPCAB and ONCAB on right ventricular (RV) function, possibly because of the complexity in measuring this.

Methods: In a single-centre randomized trial, 60 patients with normal left ventricular function undergoing coronary artery bypass grafting (CABG) were randomly assigned to OPCAB or ONCAB. Patients underwent cardiac magnetic resonance (CMR) imaging for assessment of RV function pre-operatively, early post operatively and at 6 months.

Results: Fifty one patients completed the first two scans, and 47 patients completed all three scans. Pre-operative characteristics and RV function did not differ significantly between the two groups, mean \pm SD RV stroke volume index: OPCAB 50 ± 15 ml.m², ONCAB 49 ± 9 ml.m², $p=0.7$. After surgery RV stroke volume index fell to 36 ± 7 ml.m² in the OPCAB group and 40 ± 12 ml.m² in the ONCAB group, but this did not differ significantly between the two groups, $p=0.2$. All markers of RV function recovered to pre operative levels by 6 months, with no long term difference between the surgical techniques.

Conclusions: Right ventricular function is impaired early after surgery but recovers by six months. The changes were similar in both the OPCAB and ONCAB groups.

Monday 10th March Session 4
16:35-16:45 Pentland

Abstract No. 34

Does Off-pump Re-do Coronary Surgery Decrease Morbidity & Mortality- A Propensity Case-matched Analysis

Authors: K Mandal; O Valencia; I Bailes; R Kanagasabay; J Smith; M Sarsam; M Jahangiri; V Chandrasekaran

Author's Institution: St George's Hospital, London, United Kingdom

Objectives: To compare hospital outcomes of off-pump and on-pump re-do coronary artery bypass surgery

Methods: Between 2002 and 2007, re-do coronary artery bypass graft surgery was performed in 58 (60%) patients off-pump and 38 (40%) patients on-pump. Propensity-modelling techniques were used. A non-parsimonious explanatory model was developed by bootstrap-bagging from baseline and operative variables. Greedy matching techniques were applied to match off-pump and on-pump cases to the nearest propensity scores and comparisons were made.

Results: The off-pump and on-pump groups were similar in EuroSCORE (7 ± 7 vs 10 ± 10 , $p=0.27$), age (67 ± 7 vs 68 ± 9 , $p=0.72$), male to female ratio ($p=0.7$), CCS and NYHA symptom class ($p=0.6$), left ventricular function ($p=0.64$), extent of coronary artery disease ($p=0.95$). The prevalence of diabetes, hypertension, smoking, COPD, carotid artery disease, peripheral vascular disease, previous MI were also similar in the two groups.

In the matched pairs the median number of bypass grafts was 2 in the off-pump group and 3 in the on-pump group ($p=0.004$). Despite a more complete revascularization in the on-pump group, they had a higher in-hospital mortality (OR-8.58, 95% CI 1.31-56.1, $p=0.009$), longer median stay in ITU (1 (1-1) vs 1 (1-2), $p=0.04$), increased incidence of chest/sternal infections and longer duration of postoperative ventilation (OR-5.75, 95%CI 2.06-16, $p=0.0004$) and higher need for postoperative IABP (OR 18.3, 95%CI 1.9-175, $p=0.001$).

Conclusions: Both off-pump and on-pump procedures produced good early clinical results. The use of off-pump technique for re-do coronary surgery is associated with lower early mortality and morbidity, although less complete revascularization induce uncertainty about long-term results.

Monday 10th March Session 4
16:45 – 16:55 Pentland

Abstract No. 35

Multi-vessel Off Pump Coronary Artery Bypass Grafting Via a Small Left Anterior Thoracotomy (ThoraCAB)

Authors: G Murphy; G Angelini

Author's Institution: Bristol Heart Institute, Bristol, United Kingdom

Objectives: We describe a novel surgical revascularisation approach that permits effective regional anaesthesia and where appropriate early extubation and shortened ITU and hospital stay.

Methods: Access is achieved through an incision in the left anterior 4th or 5th interspace. The left internal thoracic artery (LITA) is harvested under direct vision. The proximal vein graft anastomoses on the aorta are performed first. The right radial is used as a T graft from the pedicled LITA. Complete revascularisation is then readily achieved on the beating heart. Effective regional anaesthesia is achieved by local infiltration, intercostal blockade and insertion of a paravertebral catheter.

Results: Seventy three patients have undergone multi-vessel revascularisation via ThoraCAB, median age 63 years (interquartile range (IQR) 57-69), 12/73 female (19%). Median EuroSCORE was 2 (IQR 0-3). 20 patients (30%) were successfully extubated on the operating table or immediately on return to the Intensive Care Unit. Median time to extubation was 4 hours (IQR 1-6). Median hospital stay was 5 days stay (IQR 4-8). Postoperative morbidity included haemodynamic support 24/73 (33%), atrial fibrillation 10/73 (14%), respiratory complication 3/73 (4%).

Conclusions: Complete revascularization on the beating heart through an anterolateral thoracotomy is safe and feasible in patients requiring coronary artery surgery.

Monday 10th March Session 5
17:00 – 17:10 Ochil

Abstract No. 36

Prognostic Significance of Cleaved PARP expression in Gastro-oesophageal Cancer

Authors: K Sillah²; S Thornton³; S Pritchard¹; I Welch²; H Valentine³; P Price³; C West³

Author's Institution: ¹Departments of Histopathology University Hospital of South Manchester NHS Foundation Trust, Manchester, United Kingdom; ²Departments of Gastrointestinal Surgery University Hospital of South Manchester NHS Foundation Trust, Manchester, United Kingdom; ³Academic Radiation Oncology University of Manchester Christie Hospital, Manchester, United Kingdom

Objectives: PARP or Poly (ADP-Ribose) Polymerase is an endo-nuclear enzyme that participates in apoptosis and DNA damage repair. The aims of this study were to quantify cleaved PARP expression in gastro-oesophageal adenocarcinoma and investigate its prognostic significance and relationship with the hypoxia regulatory protein HIF-1.

Methods: Tissue microarrays were constructed from tumour samples from 169 patients who underwent potentially curative surgery for gastro-oesophageal adenocarcinoma. Four cores were prepared for each patient, two from the central area and two from the invasive edge. Expression of cleaved PARP and HIF-1 were assessed by immunohistochemistry and light microscopy. Cancer-specific survival data were collected.

Results: Cleaved PARP expression was seen in 40% (69/169) of tumours and was associated with good prognosis ($p=0.026$). This was most striking when PARP was expressed centrally ($p=0.008$) as opposed to the invasive edge ($p=0.82$). Multivariate analysis reveal central PARP expression as an independent predictor of survival ($p=0.02$). Concurrent PARP and HIF-1 expression in the centre of tumours was associated with good outcome ($p=0.047$).

Conclusions: Centrally occurring apoptosis and HIF-1 is associated with good surgical outcome in gastro-oesophageal cancer. This finding might be associated with non-hypoxic activation of HIF-1 increasing apoptosis to prevent accumulation of mutated cells and promotion of an aggressive tumour phenotype.

Monday 10th March Session 5
17:10-17:20 Ochil

Abstract No. 37

Serum Proteomic Analysis of Resectable Non-small Cell Lung Cancer: Impact of the Smoking, Histology, Stage of Disease & Surgery

Authors: S Rathinam¹; D Ward²; A Alzetani¹; S Nyangoma²; J Starczynski¹; A Martin²; P Johnson²; N James²; P Rajesh¹

Author's Institution: ¹Birmingham Heartlands Hospital, Birmingham, United Kingdom; ²Cancer Research UK Institute for Cancer Studies, Birmingham, United Kingdom

Objectives: Surface Enhanced Laser Desorption Ionisation Time of flight Mass Spectrometry (SELDI-TOF-MS) is a mass spectrometry method used to generate proteomic profiles of body fluids such as serum. We have used this technique to produce serum proteomic profiles of non small cell lung cancer (NSCLC). To determine the impact of curative surgery, smoking, histopathology of the tumour and the staging on the proteomic profiles in Non Small Cell Lung Cancer.

Methods: Carcinoma of the Lung Biomarker (CLuB) Study is a prospective observational study with LREC, R&D Approval and NCRN support. The target group were patients undergoing surgery for lung cancer and the controls were from matched non-cancer subjects. Serum samples were collected and were analysed simultaneously using SELDI-TOF-MS.

Peak intensities were extracted from the proteomic profiles and a multiple linear regression model was used to evaluate how smoking, cancer type and stage affect the proteomic profiles. The p-values from t-tests of the significance based on the corresponding parameter estimates were used to identify their associated effects on peak intensities. These changes were further evaluated using two-sample t-test.

Results: Between January 2005-September 2006, 70 patients (66% male, median age 65.5 ±10.0 SD) and 75 control subjects (70% male, median age 62.9±12.5 SD) were recruited. 131 peaks were detected in the SELDI analysis, of which 40 showed significant differences between cancer patients and controls ($p < 0.01$). Following curative surgical resection most discriminatory peaks returned to normal. There was a correlation between the stage of NSCLC and the intensity of certain peaks in the serum proteomic profiles. The differences between adeno and squamous carcinoma were modest. Some peaks were found to be influenced by cancer alone, some by smoking alone and some by both cancer and smoking

Conclusions: Successful treatment resulted in some, but not all, of the discriminatory peaks returning to non-cancer levels. There was correlation between the stage disease and the intensity of certain peaks in the serum proteomic profiles of patients with NSCLC however the differences between adeno and squamous carcinoma were modest. Smoking also had a clearly detectable influence on the profiles.

Monday 10th March Session 5
17:20 – 17:30 Ochil

Abstract No. 38

Measurement of Extravascular Lung Water (EVLW) following Lung Resection

Authors: V Dronavalli¹; B Naidu¹, P Rajesh¹

Author's Institution: ¹Heartlands Hospital Birmingham, Birmingham, United Kingdom

Objectives: The mortality following Pneumonectomy and Lobectomy is 6.9% and 2.3% respectively, of which up to 72% are due to post operative acute lung injury. This injury is heralded by endothelial leak of fluid into the lung. Hence any technique that can detect the amount of extra vascular lung water (EVLW) would be useful in making the diagnosis and in assisting fluid resuscitation.

A widely validated method to measure EVLW is PiCCO, a single thermo-dilution technique based on the assumption that the ratio (1.25) between Global End Diastolic blood volume (GEDV) and intrathoracic blood volume (ITBV) is constant. This ratio will change following lung resection surgery but we hypothesise that it remains constant for an individual patient following initial change.

Methods: EVLW was measured using both Double dye technique (COLD-Z Pulsion) and single thermo dilution technique (PiCCO) in four patients, (thoracotomy and no lung resection, left upper lobectomy, left lower lobectomy and pneumonectomy). Regular measurements were made through surgery and a further 12 hours.

Results: The ration of GEDV/ITBV in all four patients following surgery was different but for each individual patient remained constant for up to 18 hours after surgery. (Table 1) In the pneumonectomy patient, PiCCO consistently under estimates EVLW.

Conclusions: The ratio between ITBV and GEDV for each individual patient is within acceptable variation from a constant. Therefore the trend of EVLW readings using the PiCCO system is likely to be accurate following lung resection surgery. Further studies need to be performed to determine whether these values are of any clinical benefit.

Surgery	Mean ITBV/GEDV	95% CI
Control	1.29	1.22 -1.36
Left upper Lobectomy	1.36	1.30 -1.42
Left Lower Lobectomy	1.24	1.22 -1.26
Pneumonectomy	1.15	1.12-1.18

Monday 10th March Session 5
17:30-17:40 Ochil

Abstract No. 39

Prognostic Implication of Improved CT Detection of Pulmonary Metastases in Patients undergoing Pulmonary Metastasectomy

Authors: E Belcher; S Sathianandan; S Letafat; E Lim; P Goldstraw; S Jordan

Author's Institution: The Royal Brompton Hospital, London, United Kingdom

Objectives: Pulmonary metastasectomy is an established treatment modality for selected patients. Computerised tomography (CT) is the mainstay for preoperative assessment and intraoperative palpation the gold standard for complete resection. The aims of our study were to determine the impact of unexpected nodules on survival.

Methods: We performed a retrospective review of patients undergoing pulmonary metastasectomy performed by a single surgeon at our institution between 1995 and 2007. Cox proportional hazards regression was used to estimate the impact of unexpected nodules on survival.

Results: 331 pulmonary metastasectomies were carried out on 239 patients. Complete preoperative radiological information was available for 327 of 331 operations. The overall 1 and 5 year survival was 84% and 56% respectively. CT was in agreement with operative findings in 56%, underestimated nodules in 39% and overestimated in 5%. 103 patients had unpredicted nodules found at one or more of their operations. 84 had unpredicted nodules on one occasion, 15 on two occasions and 4 on three occasions. Survival of patients with unexpected nodules was poorer with a hazard ratio of 1.34 (0.85 to 2.13, $p=0.21$), although this did not reach conventional levels of significance.

Conclusions: Unexpected nodules in patients undergoing pulmonary metastasectomy are common; however the presence of unexpected nodules did not influence survival. The lack of prognostic influence of unexpected nodules underlines the need for an open approach in order that palpation will identify these unpredicted nodules.

Monday 10th March Session 5
17:50 – 18:00 Ochil

Abstract No. 40

Systemic Chemotherapy Improves Long Term Survival after Extrapleural Pneumonectomy for Malignant Mesothelioma: A 20 Year Series

Authors: D West²; D Prakash¹

Author's Institution: ¹Hairmyres Hospital, East Kilbride, United Kingdom; ²Edinburgh Royal Infirmary, Edinburgh, United Kingdom

Objectives: Extrapleural pneumonectomy (EPP) has been employed in selected cases of malignant pleural mesothelioma (MPM) in our institution since 1987. We have reviewed our entire series to identify variables associated with long term survival.

Methods: 75 patients underwent EPP via thoracotomy between 1987-2007. EPP included resection of pleura and lung together with ipsilateral diaphragm and pericardium. 14/75 (19%) patients underwent EPP alone, while in 61/75 (81%) dual agent platinum-containing chemotherapy was planned postoperatively. Univariate analysis was performed with the Kaplan Meier method using Log rank testing. Variables with a log rank p value

Results: Mean age at operation (SD) was 59.3 (7.2), males comprised 54/75 (72%). 45/75 (60%) of resections were right sided. Median blood loss (95% CI) was 2000ml (1701, 2399).

On univariate analysis, chemotherapy (intention to treat analysis), age by quartile, FVC by quartile, gender, side of resection and asbestos exposure reached $p < 0.1$. Mediastinal nodal involvement ($p = 0.15$) and epithelial subtype ($p = 0.12$) did not. 3 variables emerged in the final Cox model (table 1). Overall model fit was highly significant, $p < 0.001$. Median survival was 10.4 months, rising to 14.3 months in the EPP and chemotherapy subgroup. Survival in this group was 26% at 2 years, 9% at 5 years.

Conclusions: This is one of the longest follow up studies of EPP for MPM. Post-operative chemotherapy was strongly associated with improved survival in this series. We no longer offer EPP without systemic chemotherapy.

	Relative Risk (95 % CI)	p value
Age (per additional year)	1.055 (1.012, 1.100)	0.012
Right sided resection	2.310 (1.322, 4.036)	0.003
EPP with chemotherapy (vs. EPP alone)	0.347 (0.169, 0.652)	0.001

Preoperative Versus Postoperative Chemotherapy for Patients Undergoing Resection for Lung Cancer. Systematic Review & Indirect Comparison Meta-analysis of Randomised Trials

Authors: G Harris¹; A Patel¹; I Adachi¹; L Edmonds²; F Song³; E Lim¹

Author's Institution: ¹Royal Brompton Hospital, London, United Kingdom; ²Papworth Hospital, Cambridge, United Kingdom; ³University of East Anglia, Norwich, United Kingdom

Objectives: A large number of trials evaluated the efficacy of postoperative chemotherapy after resection for lung cancer. A smaller number evaluated preoperative chemotherapy for potentially resectable lung cancer, but no direct comparison has yet been published comparing the two approaches.

Methods: We conducted a systematic review of randomised trials, extracted time-to-event data using Parmar methods (when not reported), used random effects meta-analysis to evaluate overall and disease free survival and performed indirect comparison using surgery (without chemotherapy) as the common comparison.

Results: 112 publications were identified and 56 potentially relevant trials retrieved for more detailed evaluation. In total, 17 were excluded for repeat data and data from 8 studies could not be extracted for meta-analysis, leaving 31 trials that were analysed: 21 administering postoperative and 10 administering preoperative chemotherapy.

For overall survival, the hazard ratio in postoperative chemotherapy trials was 0.80 (0.73 to 0.87; $p < 0.001$) and for preoperative chemotherapy trials was 0.81 (0.68 to 0.97; $p = 0.024$). Using indirect comparison meta-analysis, the relative hazards of postoperative compared to preoperative treatment was 0.99 (0.81 to 1.21; $p = 0.900$).

For disease free survival, the hazard ratio in postoperative chemotherapy trials was 0.76 (0.67 to 0.87; $p < 0.001$) and for preoperative chemotherapy trials was 0.79 (0.63 to 1.00; $p = 0.050$). Using indirect comparison meta-analysis, the relative hazards of postoperative compared to preoperative treatment was 0.96 (0.74 to 1.26; $p = 0.770$).

Conclusions: Postoperative and preoperative chemotherapy for patients undergoing surgery for lung cancer yielded similar results on overall and disease free survival with a confidence interval that effectively excludes any clinically important difference.

Monday 10th March Session 5
18:10 – 18:20 Ochil

Abstract No. 42

Clinical Upstaging of Non-small Cell Lung Cancer that Extends Across the Fissure: Implications for the Current TNM Classification System

Authors: V Joshi; J McShane; A Soorae; R Page; M Carr; N Mediratta; M Shackcloth; M Poullis

Author's Institution: The Cardiothoracic Centre, Liverpool, United Kingdom

Objectives: No data or trials have examined the effect of extension of a non-small cell lung cancer (NSCLC) across a fissure into an adjacent lobe. The current TNM staging system does not take extension across the fissure into account. We examined the experience at our centre.

Methods: Data were collected prospectively on all patients undergoing lung resection for NSCLC between 2001 and 2007 (1020 patients underwent a lobectomy). 180 patients were identified as having lesions extending between two lobes and underwent bi-lobectomy or lobectomy and wedge resection. (Histopathological Stage 1(a)=11.7%, 1(b)=51.1%, 2(a)=1.7%, 2(b)=21.1%, 3(a)=10.0%, 3(b)=2.8% and 4=1.7%). These were matched for stage with 420 patients who underwent lobectomy for a tumour confined to a single lobe. Sub-group analyses were conducted in a similar manner. Survival data were obtained using the National Strategic Tracing Service and a Kaplan-Meier analysis performed.

Results: For Stage 1 NSCLC, our data appears to show a difference in survival developing after 1 year with a significant reduction in 5-year survival of between 10 and 15% (Figure 1). Log Rank Test = 0.037. For Stage 2(a) and above, there was no difference in survival in our sample.

Conclusions: Our data suggests there is a significant difference in survival for patients with resected Stage 1 lung cancer crossing the fissure versus those confined to a single lobe. If our sample is representative of the wider population, should the TNM staging system be revised to accommodate these lesions?



Monday 10th March Session 5
18:20 – 18:30 Ochil

Abstract No. 43

Pre-operative Chemotherapy in Patients with Resectable Non-Small Cell Lung Cancer. MRC Lu22 / Nvalt / Eortc 08012 Multi-centre Randomised Trial

Authors: E Lim¹; P Goldstraw¹; D Gilligan²; M Nicholson³; M Nankivell⁴; C Pugh⁴; R Stephens & Investigators⁴

Author's Institution: ¹Royal Brompton Hospital, London, United Kingdom; ²Addenbrookes Hospital, Cambridge, United Kingdom; ³Aberdeen Royal Hospitals Trust, Aberdeen, United Kingdom; ⁴MRC Clinical Trials Unit, London, United Kingdom

Objectives: This is an international multi-centre trial to investigate if neo-adjuvant platinum-based chemotherapy administered before surgery would improve outcomes in patients with resectable stage I to III NSCLC.

Methods: Patients were randomised to surgery alone (S), or 3 cycles of platinum-based chemotherapy prior to surgery (CT-S) with clinicians choosing the chemotherapy from 6 standard regimens. Quality of life was assessed using the SF-36 questionnaire.

Results: 519 patients were randomised (S 261, CT-S 258) from 70 centres in the UK, Netherlands, Germany and Belgium. The median age of the patients was 63 years, 72% were male, 55% were performance status (PS) 0, and 61% had stage I disease. In total, 76% of patients received all 3 cycles of chemotherapy with a good response rate (4% CR, 45% PR).

Pre-operative chemotherapy down-staged 13% of patients, but did not affect the proportion of pneumonectomy (S 33%, CT-S 28%) or lobectomy performed (S 61%, CT-S 66%), completeness of resection (S 79%, CT-S 81%), post-operative complications or quality of life. The 30-day mortality for pneumonectomy was 4.1% (S 3.8%, CT-S 4.6%) and lobectomy (or lesser resection) was 1.6% (S 2.0%, CT-S 1.3%). A total of 244 patients died (S 122, CT-S 122) with no evidence of a difference in overall survival between the two groups (HR 1.02, 95% CI 0.80, 1.31).

Conclusions: The results of this largest neo-adjuvant trial to date suggest that pre-operative platinum-based chemotherapy did not influence surgical outcome or lead to a benefit in overall survival in patients with resectable stage I to III NSCLC.

Tuesday 11th March Session 6
08:00-08:10 Ochil

Abstract No. 44

Early Results of Valve-sparing Aortic Root Replacement using the New Valsalva Conduit in Marfan Syndrome Patients

Authors: I Elahi

Author's Institution: Eoin O'Malley National Centre For Cardiothoracic Surgery, Dublin, Ireland

Objectives: Valve-Sparing aortic root replacement for treatment of aortic disease in Marfan patients potentially avoids the problems of prosthetic valves. We evaluated our early experience of valve preserving aortic root reconstruction in Marfan patients using the new de Paulis Valsalva graft that maintains annular stability and recreates sinuses to minimize leaflet stress.

Methods: All Marfan Patients at undergoing Valve-Sparing Aortic Root Replacement using the Valsalva graft were studied. Clinical data were obtained from hospital and clinic documentation, patient contacts and follow-up echocardiography was used to analyse aortic root and annular diameters in addition to valve function.

Results: Between Sept 2005 and Nov 2007, 10 Marfan patients underwent valve sparing aortic root replacement using a modification of the David I re-implantation (or David V) technique with the Valsalva graft. Mean patient age was 28 ± 9.9 yrs; 6 patients were male. Indication for surgery was aortic root dilatation in all patients. Preoperative mean root diameter was 5.5 ± 0.5 cm. There was no operative or late death; 1 patient required reoperation for bleeding, and no graft failure. Follow up range was 1 to 25 months, mean 8 months. No patient was anticoagulated. There were no episodes of thromboembolism or endocarditis. Echocardiography confirmed stability of the aortic annulus and root dimensions on follow up. No patient had more than trivial aortic insufficiency.

Conclusions: Valve-Sparing aortic root replacement using the Valsalva graft using the re-implantation technique has excellent early results in Marfan patients. Preservation of valve competence is encouraging.

Continued follow-up will be required in these and further patients to demonstrate the long-term fate of the preserved aortic valve in Marfan patients.



Outcome following Bioprosthetic Root Replacement with Gelweave Valsalva & BioValsalva Grafts

Authors: K Gubbi; M Field; V Arera; M Kuduvali; A Oo; A Rashid

Author's Institution: The Cardiothoracic Centre, Liverpool, United Kingdom

Objectives: The threshold for bioprosthetic root replacement in patients with borderline indications has tended downwards as the operative mortality reaches equivalence with isolated aortic valve replacement. We report the favourable outcomes of a consecutive series of patients undergoing root replacement which supports this practice. This series reports out specific experience with the Gelweave Valsalva and BioValsalva grafts.

Methods: We retrospectively examined the outcome of 49 consecutive patients undergoing aortic root replacement with either a Gelweave Valsalva graft (Perimount Magna valve) or a BioValsalva prosthesis (Valsalva graft with Elan stentless valve) between 1999-2007. 41 patients underwent first-time elective bioprosthetic root replacement, thirty four with the Gelweave Valsalva graft and seven with the BioValsalva graft. Of these elective cases, twelve involved arch surgery and other additional procedures included: CABG, 12; extra-anatomical bypass, 1 and mitral valve surgery, 2. Of the remaining 8 patients, three were urgent cases, three were emergencies, one was redo-surgery and one was salvage. All roots utilised a modified Bentall technique with coronary ostia re-sutured as Carrel buttons.

Results: Overall hospital mortality for elective root replacement with these bioprostheses was 2.43%. A single patient died of ischaemic bowel following an episode of atrial fibrillation. Additional outcome data in the elective group is described in the Table. Of the remaining seven non-elective cases there were four deaths.

Conclusions: Elective bioprosthetic root replacement with the Valsalva construct can be performed with an acceptable morbidity and mortality. We have an increasingly lower threshold for root replacement in patients with a borderline indication.

	n	Age (years)	EuroSCORE (logistic)	EuroSCORE (additive)	Stroke (%)	Hospital stay (days)	Mortality (%)
Gelweave Valsalva	34	70(52-82)	13.2	8.50	2.94	14 (4-56)	2.94
BioValsalva	7	70(67-76)	22.4	10.2	0.00	9 (8-44)	0.00
Cumulative	41	70(52-82)	15.3	8.85	2.44	14 (4-56)	2.43

Data on elective roots

Tuesday 11th March Session 6
08:20 – 08:30 Ochil

Abstract No. 46

Experience with Extra Anatomical Bypass for Treatment of Arch & Descending Thoracic Aneurysms

Authors: K Mandal; N Roberts; J van Besouw; M Thompson; M Jahangiri

Author's Institution: St George's Hospital, London, United Kingdom

Objectives: Open surgery for treatment of arch and descending thoracic aneurysms requiring circulatory arrest is associated with high mortality and risk of neurological damage. With advent of vascular stenting and combining with extra anatomical bypass of head and neck vessels, treatment has become safer. Because of the novelty of this procedure, optimum surgical technique and timing of stenting following surgery are not defined.

We report our experience of the first 10 patients undergoing this procedure and aim to address some of the technical issues in this setting.

Methods:

Results: 10 patients with median age of 68 years (68-77) underwent bypass of the head and neck vessels from (neo) ascending aorta and subsequent endovascular stenting of the aneurysm, between June 2006 and July 2007.

8 had arch and descending aneurysm and 2 isolated arch aneurysm. 3 had had type B dissection, 3 previous surgery, 3 associated aortic valve disease and 4 had ascending aneurysm.

There were no procedural deaths. No patients had TIA or CVA or taken back for bleeding. One developed paraplegia. The stents were inserted at a median time of 1.4 months (4 d-2.5 mo) after surgery. One patient had blocked extra-anatomical bypasses when admitted for elective stenting 3 months after original procedure.

Conclusions: Extra anatomical bypass with endovascular stenting is a safe option for treatment of arch and descending aneurysm. For optimum results, the origins of head and neck vessels should be occluded at the time of surgery and early stent insertion is required to avoid competitive flow and occlusion of bypass grafts.



Aortic Valve Replacement in Patients with Bicuspid Aortic Valve Disease is Not Followed by Progressive Aortic Root Dilatation

Authors: A Ali; A Patel; D Freed; Y Abu-Omar; A Sheikh; Z Ali; A Rostron; T Athanasiou; J Pepper¹

Author's Institution: Royal Brompton Hospital, London, United Kingdom

Objectives: A bicuspid aortic valve (BAV) may be associated with an aortopathy; this may lead to progressive aortic dilatation over time. It is uncertain whether the ascending aorta should be replaced prophylactically during AVR in these patients. We analyzed change in ascending aortic diameter over time following AVR, to determine whether a clinically relevant aortic pathology exists in patients with BAV disease.

Methods: Demographic, operative and clinical data were obtained retrospectively through casenote review. AVR was performed with an aortic homograft or porcine stentless valve using the subcoronary implantation technique. Patients were grouped according to whether their native aortic valve was identified as tricuspid (TC) or bicuspid (BC) at operation. Transthoracic echocardiography was used to measure pre-operative and post-operative ascending aortic diameter.

Results: 217 patients underwent AVR between 1st January 1991 and 1st January 2001. Ninety patients had a bicuspid aortic valve, in the remaining 127 the valve was tricuspid. The bicuspid group was younger (BC 62 ± 15 yr, TC 71 ± 12 yr; $p < 0.001$). Follow-up echocardiography was performed 6 ± 4 years post-operatively. Pre-operative root diameter was similar (BC 3.2 ± 0.5 , TC 3.2 ± 0.5 cm; $p=0.56$) There was no difference in the increase in ascending aortic diameter over follow-up (BC 0.1 ± 0.5 cm, TC 0.0 ± 0.5 cm; $p=0.34$)

Conclusions: The clinical importance of “bicuspid aortopathy” in an older age group appears to be minimal. Additional aortic procedures designed to protect against progressive aortic aneurysmal disease in this setting do not seem justified.

Tuesday 11th March Session 6
08:40 – 08:50 Ochil

Abstract No. 48

Carotid Artery Diameter, Plaque Morphology & Haematocrit in addition to Percentage Stenosis, Predict Reduced Cerebral Perfusion Pressure during CPB

Authors: M Poullis¹; Z Ghogawala²

Author's Institution: ¹CTC, Liverpool, United Kingdom; ²Yale, New Haven, United States

Objectives: To develop a finite element analysis of blood flow in the carotid artery to demonstrate that percentage stenosis of a carotid artery is conceptually unsound as a sole marker of risk for reduced cerebral perfusion pressure during cardiopulmonary bypass. Carotid artery diameter, carotid artery plaque morphology and haematocrit were evaluated as potential additional factors in the model.

Methods: A mathematical model using finite element analysis was created to model the carotid artery vessel and its stenotic plaque. Poiseuille's formula applied to a trapezoidal carotid plaque morphology model was utilised. A finite element thickness of 1mm was utilised which resulted in between 500 and 50,000 element analysis depending on the length of the plaque. Laminar non-pulsatile flow was modelled to reflect the situation on cardiopulmonary bypass.

Results: Analysis of over 100 scenarios revealed that the degree of carotid artery stenosis, the length of the carotid artery plaque, the diameter of the carotid artery and the blood haematocrit all independently significantly, $p < 0.05$, affect the required pump perfusion pressure to maintain adequate cerebral perfusion during cardiopulmonary bypass.

Conclusions: The results from a finite element mathematical model reveal that carotid artery diameter, carotid artery plaque length and haematocrit in addition to percentage stenosis should be included in any thought process involving carotid artery stenosis and cardiac surgery. Estimating cerebral risk during CPB should no longer rely on only the percentage stenosis.

Identification of patients that might benefit from higher pump perfusion pressures or concomitant carotid endarterectomy via this model may reduce cerebral morbidity and mortality.



The Morphological Left Ventricle that requires Training by PA Banding prior to Double Switch for Congenitally Corrected Transposition of the Great Arteries is at Risk of Late Dysfunction

Authors: D Quinn; S McGuirk; C Metha; J de Giovanni; R Dhillon; Paul Miller; J Wright; O Stumper; D Barron; W Brawn[†]

Author's Institution: Birmingham Childrens Hospital, Birmingham, United Kingdom

Objectives: The aim was to compare the outcome of the double switch (DS) procedure for congenitally corrected transposition of the great arteries for patients completing morphological left ventricle (mLV) training by PA banding with patients whose mLV did not require training.

Methods: A retrospective study of all patients undergoing DS procedure 1991-2004 was performed. Patients were divided into 2 groups; those not requiring mLV training (n=33) and those completing mLV training by PA banding (n=11).

Results: The time spent with the mLV conditioned at systemic pressures was longer for the group not requiring mLV training (median 730 days IQR 399-1234 vs 436 days 411-646; p=0.19). The overall mortality (not requiring mLV training 12.1%; requiring mLV training 9.1% p=1) and death/transplantation and/or development of moderate-severe mLV dysfunction (not requiring mLV training 21.2%; requiring mLV training 45.5% p=0.14) was similar between groups. Actuarial freedom from death/transplantation with good mLV function was superior for patients whose mLV did not require training (p=0.04). The follow up was not different between groups (not requiring training median 1435 days, IQR 285-2570; requiring mLV training 568 days, 399-113-1465 p=0.14). On multivariate analysis the completion of mLV training predicted death/transplantation and/or development of moderate-severe mLV dysfunction (p=0.02).

Conclusions: The early results of the DS procedure in patients whose mLV required training compare favourably with patients whose mLV requires no training. There is an increased risk of deterioration of mLV function overtime in patients whose mLV requires training overtime and these patients need to be followed up regularly in order to detect this.

Tuesday 11th March Session 7
08:55 – 09:05 Harris

Abstract No. 50

Should every Paediatric Cardiac Surgery Centre have an Active Extracorporeal Life Support Program?

Authors: J McGuinness; C Smith; J Redmond; A Wood; L Nolke

Author's Institution: Our Lady's Childrens Hospital Crumlin, Dublin, Ireland

Objectives: Paediatric cardiac surgery has been performed in Ireland since 1971, but Extracorporeal Life Support (ECLS) has not been available until 2000. The closest ECLS centres are located in the United Kingdom and Sweden. While flying a child with respiratory failure to another country for ECLS is possible, it is highly improbable for the child post cardiac surgery.

Methods: A retrospective analysis of the Cardiothoracic Surgery Program at Our Lady's Children's Hospital (OLCHC), the only paediatric cardiac surgery centre in Ireland, was performed. The program currently performs approximately 450 cardiac procedures per year.

Results: Results: ECLS was first used in a post cardiectomy patient at OLCHC in 2000. However the second run was not until 2005. In those 5 years, there were a total 1652 cardiothoracic surgical cases with 62 (3.8%) mortalities at 30 days. Since ECLS has been introduced, there have been 1110 cardiothoracic cases with 20 (1.8%) mortalities at 30 days, giving a relative risk for mortality of 2.1 in the early group ($p=0.0016$). There have been a total of 32 ECLS runs on 25 cardiac patients. The single largest population requiring ECLS were those post the Modified Norwood Procedure stage one, with 6 (66%) of 9 ECLS patients surviving to discharge. Overall survival to discharge was 14 (56%) of the 25.

Conclusions: Conclusion: The use of ECLS has decreased mortality rates of paediatric post cardiac surgery patients in Ireland. As post Norwood patients remain that largest population at risk for ECLS, possible elective post Norwood ECLS is being considered.



Use of Tissue Microdialysis to Investigate Hyperlactataemia Following Paediatric Cardiac Surgery.

Authors: R Hosein; K Morris; J Stickley; S Laker; P Davies; T Jones; D Barron; W Brawn

Author's Institution: Birmingham Childrens Hospital, Birmingham, United Kingdom

Objectives: To investigate tissue lactate, pyruvate and lactate: pyruvate (LP) ratio post-cardiac surgery and the relationship of cardiac index and oxygen delivery to late onset hyperlactataemia in ICU.

Methods: Prospective study of 10 children, mean (SD) age 4.9 (0.4) years, post-Fontan operation admitted with a normal blood lactate. Tissue lactate, pyruvate and LP ratio were monitored post-operatively every 30 minutes for 12 hours via a subcutaneous microdialysis catheter placed in the abdominal wall subcutaneous tissue. Blood lactate and cardiac index were measured by femoral artery thermodilution (PiCCO) at 0, 4, 8, and 12 hours.

Results: Blood and subcutaneous tissue lactate were strongly correlated ($r=0.87$; $p=0.001$). Mean (SD) blood lactate rose from 2.23 (0.49) to 3.73 (1.16) mmol L^{-1} in the first 5 hours after ICU admission ($p = 0.008$), only one child not showing hyperlactataemia. Tissue monitoring revealed a rise in tissue lactate, from 3.8 (0.83) to 5.3 (1.6) ($p=0.011$), with a parallel rise in pyruvate. LP ratio remained constantly below 20, indicating no tissue oxygen debt. Cardiac index increased from 2.83 (0.63) to 3.77 (1.34) $\text{L min}^{-1} \text{m}^2$ over the same 4 hour period ($p=0.05$), with a corresponding increase in oxygen delivery from 4556 (1094) to 6076 (2322) ml min^{-1} ($p=0.04$).

Conclusions: Tissue microdialysis provides near-continuous measurement of tissue lactate and pyruvate, post cardiac surgery. A rise in blood lactate concentration following the Fontan operation is mirrored by subcutaneous tissue lactate and pyruvate concentrations, and is not associated with a low or falling cardiac index or with tissue oxygen debt.

Tuesday 11th March Session 7
09:15 – 09:25 Harris

Abstract No. 52

Modelling Aortic Coarctation & Elimination of Concomitant Cardiovascular Defects to Assess Severity: A Mathematical Model

Authors: M Poullis

Author's Institution: Cardiothoracic Centre, Liverpool, United Kingdom

Objectives: To develop a finite element analysis of blood flow across a coarctation of the aorta to enable the pressure drop to be calculated regardless of concomitant cardiovascular abnormalities or a collateral circulation.

Methods: A mathematical model using finite element analysis was created to model the pressure drop across a coarctation. Poiseuille's formula applied to a quadratic coarctation morphology model was utilised. A finite element thickness of 10 micrometers was utilised which resulted in between 1,500 and 60,000 elements, depending on coarctation length. Variables studied included percentage stenosis, length of coarctation, aortic diameter pre and post coarctation, cardiac output, and blood viscosity.

Results: Percentage stenosis, $p < 0.05$, length of coarctation, $p < 0.05$, aortic diameter, $p < 0.05$, cardiac output, $p < 0.05$, and blood viscosity, $p < 0.05$, all have significant effects on the pressure gradient across a coarctation. Post coarctation aortic dilatation has little effect on the pressure drop, $p > 0.05$.

Conclusions: Mathematical modelling can result in an accurate calculation of the pressure drop across a coarctation, so that the variable effects of presence of a patent ductus arteriosus, atrial septal defect, ventricular septal defect, aortic stenosis, hypoplastic left heart syndrome, peripheral vascular resistance, cardiac output, haematocrit and collateral flow can be eliminated, since these can result in significant measurement errors and potential under estimation of the coarctation significance.



Right Ventricular Dyssynchrony as a Potential Mechanism of Right Heart Dysfunction Following Congenital Heart Surgery

Authors: E Peng; S Lilley; B Knight; D Young; F Lyall; K MacArthur; J Pollock; M Danton

Author's Institution: Royal Hospital for Sick Children, Glasgow, United Kingdom

Objectives: Dyssynchronous ventricular contraction is recognised as a mechanism for impaired cardiac function in patients with heart failure. This study explores the extent and distribution of dyssynchrony in the paediatric population early after congenital cardiac surgery.

Methods: 33 patients [23 Fallot (TOF), 10 VSD] were prospectively studied (mean age 15.8 ± 14.7 months). Tissue Doppler images were recorded at induction and 24 hours post-op. Segmental dyssynchrony, defined by delayed peak myocardial contraction, was determined at the base, mid, apical segments of the septum, RV and LV free walls.

Results: Pre-operatively, synchronous myocardial contraction was evident in the RV and LV free walls in all patients. Five TOF had a single affected apical segment in the septum. Post-operatively, dyssynchronous pattern was noted in the RV in 23(100%) TOF vs 8(80%) VSD ($p=NS$) and septum in 16(70%) TOF vs 7(70%) VSD ($p=NS$). The LV remained synchronous in all patients. However, the segmental involvement was more extensive in TOF: ≥ 2 segments in RV [14(61%)TOF vs 1(13%)VSD; $p=0.02$] and septum [7(44%)TOF vs none VSD; $p=0.04$]. The distribution pattern of the affected segments also differed. In TOF, the basal to apical segments were involved but in VSD, this was principally confined to the apical segment. Within TOF group, transannular patch (TAP) use was associated with greater dyssynchronous involvement (TAP vs non-TAP: 3.5 vs 2 segments, $p=0.007$).

Conclusions: Ventricular dyssynchrony affects predominantly the RV and septal wall in the paediatric population. RV dyssynchrony may be an important mechanism of right heart dysfunction especially in Tetralogy of Fallot following congenital cardiac surgery.

Tuesday 11th March Session 7
09:35 – 09:45 Harris

Abstract No. 54

Critical Oxygen Delivery during Cardiopulmonary Bypass & Early Renal Function after Paediatric Cardiac Surgery

Authors: A Vassalos; D Young; K MacArthur; J Pollock; F Lyall; M Danton

Author's Institution: Royal Hospital for Sick Children, Glasgow, United Kingdom

Objectives: Cystatin C is a biomarker sensitive to early and mild changes in renal function. We utilized cystatin C to investigate acute changes in renal performance following cardiac surgery in children. The influence of perfusion during cardiopulmonary bypass (CPB) and myocardial injury on renal function was evaluated.

Methods: Twenty children were prospectively studied (AVSD n=7, VSD n=9, ASD n=4). Post-operative renal function was assessed by urine output, creatinine (Cr) and glomerular filtration rate (GFR). GFR was quantified by creatinine clearance and cystatin C during the first and second post-operative 12hr periods, CrCl_{12/24}, cysC_{12/24}, respectively. Recorded CPB parameters included lowest pump flow (Q_{min}), lowest hematocrit (Hct_{min}) and the corresponding lowest oxygen delivery (DO₂ min). Myocardial injury was quantified by troponin-I.

Results: Cr and cysC increased post-operatively to peak on days 2 and 3 respectively (Cr_{Pre-op} 31±6.9 vs. Cr_{D2} 36.9±12.2; p=0.03) (cysC₁₂ 0.83±0.27 vs. cysC_{D3} 1.45±0.53; p=0.02). GFR reduced during initial 24hr post-operative period as indicated by cysC increase (cysC₁₂ 0.83±0.27 vs. cysC₂₄ 1.09±0.39; p=0.003), although CrCl remained unchanged (CrCl₁₂ 63.6±37.0 vs. CrCl₂₄ 65.1±27.5). Urine output decreased (3.4±2.6 vs. 1.2±0.7, p=0.02). Reduced GFR was associated with increasing CPB duration (cysC₂₄ r=0.71, p=0.03, CrCl₂₄ r=0.83, p<0.0001), lower Q_{min} (cysC₂₄ r=0.61, p=0.0046) and lower DO₂ min (cysC₂₄ r=0.57, p=0.003). Reduced GFR was associated with greater Troponin-I release (cysC₂₄ r=0.73, p=0.0004, CrCl₂₄ r=0.83, p<0.0001).

Conclusions: This study identified an early reversible decline in renal function in children following cardiac surgery. Reduced GFR was associated with low flow and oxygen delivery during CPB, and the magnitude of peri-operative myocardial injury.

A Case Series Of Unilateral Agenesis Of The Pulmonary Artery

Authors: K Redmond; L Mansfield; N Griffin; A Nicholson; P Goldstraw; M Dusmet

Author's Institution: Royal Brompton Hospital, London, United Kingdom

Objectives: Unilateral agenesis of the pulmonary artery (UAPA) is a rare vascular anomaly.

Methods: Four patients with UAPA were retrospectively identified, management with outcome evaluated.

Results: Right-sided UAPA occurred in 2 patients, left-sided UAPA in the other 2; aortic arch on the contra-lateral side to the absent pulmonary artery; major aorto-pulmonary systemic collaterals (MAPCAs) supplying the affected lung. Dyspnoea was present in all 4 patients, frank haemoptysis in 2, recurrent pulmonary infections in 1 and an incidental left upper lobe lung lesion in 1. Ventilation radioisotope scanning in 2 patients with bronchiectasis demonstrated absent perfusion, with 23-37% ventilation to the affected lung. Pneumonectomy was performed without complication, to control symptoms in 2 patients and exclude malignancy in a solitary pulmonary nodule in 1. The 4th patient with severe pulmonary hypertension was managed medically. Preoperative coil embolisation of the predominant feeding MAPCAs was carried out in 1 patient to reduce the risk of peri-operative haemorrhage; a cell-saver allowing auto-transfusion. One patient re-presented late with moderate post-pneumonectomy syndrome, but pneumonectomy did not significantly affect functional reserve in the others. All patients are alive at follow-up of 18 months to 5 years.

Conclusions: With UAPA, patients are not exposed to some of the usual potential complications of pneumonectomy, in particular right heart failure. Angiographic localization with embolisation of the dominant MAPCAs is advocated prior to pneumonectomy to prevent blood loss. Morbidity and mortality is acceptably low. In fact, pneumonectomy should improve pulmonary reserve and exercise tolerance because it reduces physiologic dead space ventilation.

Tuesday 11th March Session 7
08:45 – 08:55 Harris

Abstract No. 56

Outcome of Radical Surgery for Adenosquamous Carcinoma of the Lung

Authors: M Asif; A Martin-Ucar; L Beggs; E Black; J Duffy; F Beggs

Author's Institution: Department of Thoracic Surgery Nottingham University Hospitals NHS Trust City Hospital Campus, Nottingham, United Kingdom

Objectives: It has been reported that the prognosis after surgery for adenosquamous carcinoma is much worse than for other cell types. We aimed to review our Unit's experience of the outcome of radical surgery for adenosquamous carcinoma.

Methods: We retrospectively analysed the data of patients undergoing radical surgery for adenocarcinoma (AD), squamous cell carcinoma (SQ) and adenosquamous carcinoma (ADSQ) between October 1991 and August 2007 at our unit. 1219 consecutive patients [841 male and 378 female, median age 66.2 (range 33.6 to 86.4) years] were identified. 383 (31.4%) patients underwent radical surgery for AD, 772 (63.3%) for SQ and 64 (5.3%) for ADSQ. Survival was plotted according to the Kaplan-Meier method and univariate (log-rank) and multivariate (Cox regression) tests of the variables performed.

Results: Overall median survival (95% Confidence Interval) was 48.9 months (41.7-56.1). For AD the median survival was 36.7 months (27.8-45.7), for SQ 56.9 (46.3-67.5) and for ADSQ 51.9 (5.3-98.4). Univariate analysis found that gender, age >75 years, tumour grade and stage, and extent of resection were significant factors affecting postoperative survival. Multivariate analysis using Cox's regression model showed that only gender, age >75 years and TNM stage were significant predictors of survival (all $p < 0.05$). Cell type was not a significant predictor of survival ($p = 0.07$)

Conclusions: Contrary to previous series, postoperative survival after radical surgery for ADSQ is similar to other forms of NSCLC. As previously reported, gender, age and tumour stage are the main factors affecting long term survival.

Skills Assessment of Cardiothoracic Surgery: A Study Of 27 Trainees

Authors: R Vaughan

Author's Institution: Heartlands Hospital, Birmimngham, United Kingdom

Objectives: To determine the global and task specific skill levels of trainees undertaking thoractomy and lobectomy with an objective scoring method so as to determine competencies.

Methods: 2 opeartions were studied Thoracotomy and Lobectomy
Each operation was divided into steps Task Specific i.e level of incision, counting ribs and Global Skills i.e tissue handling. Each part was scored as 1 completed or 0, incomplete. If the trainee was being taught 25% was removed from the total. A fully competent trainee would score 100%. Each task or skill can be measured individually or together as a whole. Cummulative records were assesseed

Results: 27 trainees were examined FY2, SHO year 1-3 SpR year 1-6 undertaking thoracotomies . 7 SpRs were examined undertaking lobectomy. In all trainees the trainee were competent in carrying out the task of thoractomy if they were an SHO or FY2 after a mean of 12 cases but may not have had the global skills to obtain full scoring 100%. For a lobectomy one trainee undertaking a total of 41 lobectomies was able to undertake the task but was not compentent given the global scores he had i.e did not progress, using 6 observations only do not allow accurate assessments as trainees are inconsistent in performance.

Conclusions: Scoring competencies enables the trainer to sign off the trainee as competent or not, allows feedback of scores to correct task or global inaccuracies. A selection of six observations is inadequate to assess trainees as required by new DOPS in cardiothoracic surgery.

Tuesday 11th March Session 7
09:05 – 09:15 Pentland

Abstract No. 58

It's Friday, It's Five O'clock & the Chest Physicians are on the Phone with Another Bubbling Chest Drain

Authors: W Kent; H El-Sayed; J McShane; N Chaudhuri; M Poullis; N Mediratta; M Carr; R Page; M Shackcloth

Author's Institution: The Cardiothoracic Centre, Liverpool, United Kingdom

Objectives: Pneumothoraces which fail to resolve with simple measures require specialist management. BTS guidelines on the management of pneumothoraces were published in 2003. We review compliance with the guidelines and our experience over a 5 years period.

Methods: Patients were identified from the Thoracic Surgery database and the hospital patient administration system. Case notes were reviewed

Results: 120 patients were transferred to our care for management. 19% of these were treated conservatively. 101 patients underwent pleurectomy (28 by VATS). 40% of patients had more than one chest drain inserted prior to transfer. 58% only had a pigtail drain inserted. 79% had suction applied to the drain in the peripheral hospital. Mean time between admission and referral was 10.8 days (range 0-48), admission and operation 15.3 days (range 1-50). Mean post-operative stay was 8.1 days (range 3-50). In hospital mortality was 0%. 24% of patients had evidence of intrapleural infection at time of operation. This was more likely if the time to pleurectomy was greater than 14 days ($p < 0.05$). There was no difference in referral patterns after the publications of the BTS guidelines.

Conclusions: BTS guidelines for the management of pneumothoraces are not being followed. Pneumothorax management requires specialist care. Better communication is needed between chest physicians and thoracic surgeon in cases where the lung fails to expand fully, or the air leak persists for more than 5 days.



Surgery Significantly Improves Survival in Stage Three Non-small Cell Lung Cancer & Reduces Local Recurrence following Induction Chemotherapy.

Authors: N Mc Gonigle¹; J McAleese²; R Johnston²; K McManus¹

Author's Institution: ¹The Royal Victoria Hospital, Belfast, United Kingdom; ²The Cancer Centre, Belfast, United Kingdom

Objectives: We hypothesized that surgical resection following induction chemotherapy (ICT) improves survival and locoregional control in stage III non-small cell lung cancer (NSCLC).

Methods: Retrospective analyses of 30 patients undergoing surgical resection and 43 undergoing radical radiotherapy following induction chemotherapy for NSCLC between 2001 and 2005.

Results: There were no deaths within 30 days of operation. Median survival in the surgical group was 72.6 months and in the radiotherapy group 17.9 months ($p=0.008$; hazard ratio 2.17, CI 1.22-3.81). The overall 2-year survival in the surgical group and radiotherapy group in stage IIIA was 57% and 39%, and in stage IIIB 44% and 30% respectively ($p=0.31$). Pneumonectomy was associated with a lower 2-year survival than lobectomy (See table).

Twenty patients with stage IIIA disease later presented with recurrence. In the surgery group, 4(13.3%) had local recurrence and 7 (23.3%) distant metastases. In the radiotherapy group, 7 (16.2%) had local recurrence and 7(16.2%) distant metastases.

Conclusions: Induction chemotherapy is important in the systemic management of patients with advanced stage NSCLC. We have demonstrated that long-term survival is improved following surgical resection, particularly lobectomy, when compared to radical radiotherapy.

STAGE	GROUP	2YR SURVIVAL
IIIA	Radiotherapy	39%
	Pneumonectomy	43%
	Lobectomy	71%
IIIB	Radiotherapy	30%
	Pneumonectomy	40%
	Lobectomy	50%

Survival Stage III NSCLC

Tuesday 11th March Session 7
09:25 – 09:35 Pentland

Abstract No. 60

Development of Risk Models in Surgery for Primary Lung Cancer: The Way Forward for Patient Selection & Consent

Authors: R Page; S Shah; J McShane; M Jackson; N Mediratta; M Shackcloth; M Carr

Author's Institution: The Cardiothoracic Centre, Liverpool, United Kingdom

Objectives: To develop a multivariate prediction model for in-hospital and 1-year mortality following lung resection for primary non-small cell lung cancer.

Methods: Between September 2001 and December 2005, 1067 consecutive patients underwent lung resection for primary cancer within a single centre; patient data was collected prospectively. Multivariate logistic regression analyses, using the forward stepwise technique, were used to identify independent risk factors for in-hospital and 1-year mortality. All identified independent variables are stated with the relevant coefficient values and p-values.

Results: The in-hospital and 1-year mortality was 2.8% and 17.1% (30 and 182 patients) respectively. Independent variables identified with in-hospital mortality are: (1) Right pneumonectomy: 1.9941, $p < 0.001$; (2) Age (continuous): 0.1011, $p < 0.001$; (3) % predicted preoperative FEV₁: -0.0252, $p = 0.013$. Intercept: -9.0039. Independent variables identified with 1-year mortality are: (1) Pathological stage 3 (or greater) lung cancer 2.0946, $p < 0.001$; (2) Pathological stage 2 lung cancer: 1.1175, $p < 0.001$; (3) Age (continuous): 0.0453, $p < 0.001$; (4) Decreasing body mass index: -0.0811, $p < 0.001$; (5) % predicted preoperative FEV₁: -0.0116, $p = 0.011$. Intercept: -2.4762. The ROC was 0.75 for both in-hospital and 1-year mortality models. Bootstrapping demonstrated that estimates were stable.

Conclusions: We have developed two logistic risk models that may have an important role in helping select and consent patients for lung cancer surgery.

Prognostic Factors for Long-term Survival after Pulmonary Metastasectomy In Sarcoma Patients: A 12-year Experience

Authors: E Belcher; S Letafat; S Sathianandan; P Goldstraw; S Jordan¹

Author's Institution: The Royal Brompton Hospital, London, United Kingdom

Objectives: Prolonged survival after pulmonary metastasectomy for sarcoma is well documented. Pleural effusion is usually considered a contraindication to surgery. We sought to determine the impact of a preoperatively identified pleural effusion on long-term survival.

Methods: We performed a retrospective review of patients undergoing pulmonary metastasectomy for metastatic sarcoma performed by a single surgeon at our institution between 1995 and 2007. We examined the impact of age, gender, sarcoma type, disease-free interval (DFI), number and distribution of metastases, prior metastasectomy and the presence of a pleural effusion on survival. Actuarial survival was estimated using Kaplan-Meier methods and comparisons by Cox regression.

Results: 157 metastasectomy procedures were performed on 105 consecutive patients between 1995 and 2007. 49 patients were male and 56 female. Mean age was 40 years (range 8-82 years). 30 patients underwent >1 metastasectomy procedure. Operative mortality was 0%. Overall survival was 51.9% at 5 years (95% CI: 40.6%-62%) and 46.2% at 10 years (95% CI: 33.9%-57.9%). Median survival was 6.4 year, DFI greater than 12 months (HR=0.447 [95%CI: 0.247-0.809]) ($p=0.01$) and repeated metastasectomy (HR=0.18 [95% CI: 0.07-0.44]) ($p<0.001$) were favourable predictors of survival.

The presence of a pleural effusion did not influence survival (HR1.55 [95%CI: 0.65-3.69]) ($p=0.32$). There were no significant survival differences between patients with solitary versus multiple metastases ($p=0.40$) or bilateral pulmonary metastases ($p=0.22$).

Conclusions: Resection of sarcomatous pulmonary metastases confers good long-term survival, with low operative mortality. The presence of a pleural effusion is not a negative prognostic factor and therefore should not preclude surgery.

Tuesday 11th March Session 7
09:45 – 09:55 Pentland

Abstract No. 62

Monitoring Individual Thoracic Surgeons Mortality Figures

Authors: M Poullis

Author's Institution: Cardiothoracic Centre, Liverpool, United Kingdom

Objectives: To develop a CUSUM equivalent in thoracic surgery. The lack of an equivalent to cardiac surgery's Parsonnet, or EuroSCORE, makes the construction of risk adjusted CUSUM impossible.

Methods: A CUSUM equivalent was constructed using mortality rates for the 14 different standard common operations for carcinoma of the lung: five possible lobectomies, 2 bilobectomies, 4 lobectomies with wedge, left and right pneumonectomy, and wedge resections. If a particular resection has a mortality of Mx%, then a surgeon who performs 100 of these procedures should have 100-Mx survive, and Mx die for them to be of average ability. Each particular thoracic resection with its own unique Mx%, calculated from the national dataset of the particular country that the surgeon practices in, then each survivor scores + Mx/100, and each death scores -(100-Mx)/100. Adding all these positives and negatives for each lung cancer patient undergoing resection should at the end of a suitable time period equal zero, in an average surgeon.

Results: The CUSUM curves of a good and a bad surgeon are instantly recognisable.

Conclusions: A CUSUM equivalent helps to compare a thoracic surgeon with their colleagues. Unlike the present system examining only lobectomy data, wedge resections and pneumonectomy are included, eliminated gaming. This model offers a start, on very much the same pathway that the cardiac surgeons have walked. Differing warning and inspection levels of surgeons who fall outside the 95, 97.5 or 99 % confidence interval, depending on institution or country of practice, rather than below average is needed.

PTFE Neochordae as the Primary Repair Strategy to Facilitate a High Rate of Repair in Patients with Mitral Regurgitation

Authors: F de Robertis; A Kelleher; K Fogg; S Price; N Moat

Author's Institution: Royal Brompton Hospital, London, United Kingdom

Objectives: Recently updated international guidelines advocate earlier surgery for patients with severe mitral regurgitation as long as the patient can be offered a high rate of repair. In 2004 we decided to move away from more classical Carpentier techniques (particularly in anterior and bileaflet prolapse) to adopt a standardised technique based upon using PTFE neochordae as the primary repair strategy. The objective of this paper is to determine whether this strategy can facilitate a high rate of valve repair in patients with mitral regurgitation.

Methods: A consecutive series of patients undergoing surgery for severe mitral regurgitation between 1.1.04-31.08.07. Data was prospectively collected on the PATS database. A simple standardised method of repair was used utilising PTFE chordae as the primary strategy in conjunction with a complete annuloplasty ring (Physio TM).

Results: 243 consecutive patients underwent first time surgery to correct mitral regurgitation. This included elective and non-elective cases of all aetiologies (degenerative, infective, rheumatic, ischaemic etc). The 30 day mortality was 3/243 (1.3%). A repair was performed in 241/243 (99%). In the last 12 months of the study, 81/91 patients had at least 1 PTFE neochord implanted and 91/92 had a complete annuloplasty ring implanted. Follow-up echocardiographic assessments are being analysed retrospectively and will be presented.

Conclusions: PTFE neo-chordae can be used to facilitate complex mitral repair. It is a simple and reproducible technique that permits a high rate of repair with acceptable early results.

Tuesday 11th March Session 8
09:10 – 09:20 Ochil

Abstract No. 64

Patient-prosthesis Mismatch in Mitral Replacement: Incidence & Outcomes

Authors: T Barker¹; N Howell¹; A Ranasinghe¹; B Keogh²; R Bonser¹; T Graham¹; J Mascaro¹; S Rooney¹; I Wilson¹; D Pagano¹

Author's Institution: ¹Queen Elizabeth Hospital, Birmingham, United Kingdom; ²The Heart Hospital, London, United Kingdom

Objectives: Mitral patient prosthesis mismatch (mPPM) has been hypothesized to lead to an increased in-hospital mortality and a decrease in late survival. We analysed the effect of moderate and severe mPPM on in-hospital and late survival following mitral valve replacement at our institution.

Methods: Prospectively collected data on 558 patients undergoing mitral valve replacement (MVR) isolated, or in association with tricuspid valve repair and/or CABG between 1/1/97 and 31/12/06, were analysed. Projected in vitro valve effective orifice area (EOA) was calculated and indexed to body surface area (cm^2m^2). Moderate mPPM was defined as $\text{EOAi} < 1.2$ and Severe mPPM $< 0.9 \text{ cm}^2\text{m}^2$. Late survival was obtained from the Central Cardiac Adult Database and was available on 100% of patients.

Results: There were 41 in-hospital deaths (8%). There were 238 (46.7%) patients in the reference group with no evidence of mismatch. 264 (52%) of patients had moderate mismatch and only 8 (1.6%) patients had severe mismatch. The in-hospital mortality was 10%, 6.1% and 12.5% respectively ($p=0.228$). The mean EuroSCORE was similar for each group 7.1; 6.9 and 8.25 ($p=0.52$), as was the incidence of concomitant revascularisation, 43 (18.1%) in the reference group and 57 (22%) ($p=0.69$). There were 133 late deaths. The estimated 5 year survival was 67% for the reference group and 68% for those with moderate mismatch ($p=0.78$).

Conclusions: Severe mitral patient prosthesis mismatch was uncommon following MVR at our institution. Moderate mPPM was more common and did not have an adverse impact on in-hospital or late survival.



Tuesday 11th March Session 8
09:20 – 09:30 Ochil

Abstract No. 65

A Simple Method for Successful use of Artificial Chords in Mitral Valve Repair

Authors: S Livesey¹; N Viola¹; A Lipnevicius²

Author's Institution: Southampton General Hospital, Southampton, United Kingdom;
²Vilnius University Cardiac Surgery Centre, Vilnius, Lithuania

Objectives: This is a film which demonstrates a simple, reproducible method for determining the correct length of artificial chords used for mitral valve repair.

Methods: Between June 2006 and October 2007, 89 mitral valve repairs were performed by the principle author. Artificial chords were used to facilitate the repair in 46 of these cases.

Results: In those patients in whom artificial chords were used for the valve repair 41 patients had trivial mitral regurgitation and 5 had mild regurgitation following the repair. 1 patient died within 30 days of the procedure. In two (additional) patients the valve repair was not accepted and the valve replaced.

Conclusions: This film shows a simple, reproducible method for determining the correct length of artificial chords used for mitral valve repair. It is readily taught and good results can be achieved by senior trainees using these methods.

Tuesday 11th March Session 8
09:30 – 09:40 Ochil

Abstract No. 66

Optimizing the Timing of Surgery in Asymptomatic Patient with Severe Mitral Regurgitation using Strain Rate Imaging.

Authors: A Marciniak; G Sutherland; M Marciniak; A Kourliouros; B Bijmens; M Jahangiri

Author's Institution: St George's Hospital, London, United Kingdom

Objectives: Postoperative left ventricular (LV) function is an important prognostic factor in patients with mitral regurgitation (MR). Currently, there is no specific diagnostic method that determine optimum time for surgery before development of myocardial damage.

Strain rate (SR) imaging is a recent technique which is sensitive in detecting regional systolic abnormalities and may allow diagnosis of subclinical changes of LV function. We aimed to investigate the value of preoperative regional peak systolic SR as a predictor of postoperative LV systolic function.

Methods: We studied 31 asymptomatic patients (age 55 ± 11) with chronic MR who underwent mitral valve repair. A standard echo examination and tissue Doppler, was performed immediately before and 6 months after surgery. To assess LV longitudinal deformation, SR data were acquired from the mid septum and lateral wall (LW).

Results: All patients presented with preserved preoperative systolic function before surgery ($EF > 50\%$). They were divided into 2 groups based on post-operative EF: Group 1 with $EF > 50\%$ and Group 2 with $EF < 50\%$. Group 1 had a significantly ($p < 0.005$) higher preoperative peak systolic SR (LW: $1.86 \pm 0.49 s^{-1}$; Septum: $-1.52 \pm 0.28 s^{-1}$) compared to Group 2 (LW: $0.92 \pm 0.23 s^{-1}$; septum: $-0.97 \pm 0.23 s^{-1}$). Significant correlation was detected between preoperative SR and postoperative EF.

For detecting subclinical changes in deformation of LW, $SR-1.20 s^{-1}$ had 87% sensitivity and 90% specificity; in septum $SR-1.21 s^{-1}$ had 84% sensitivity and 88% specificity.

Conclusions: SR imaging detects subclinical changes in LV function before they can be detected by global standard parameters and might thus be used to optimize the timing of surgery.



A Novel Method for a Simplified Mitral Valve Repair

Authors: K Kotidis; Y Vali; N Parbat; J Swanevelde; T Spyt

Author's Institution: University Hospitals of Leicester Glenfield Hospital, Leicester, United Kingdom

Objectives: The superiority of mitral valve repair in terms of outcomes has been long and well established. However repair techniques often prove challenging. We present our initial experience with a novel mitral valve repair system that appears to simplify the need for repair of certain types of valve pathology.

Methods: Between April and October 2007, twelve patients undergoing surgery for mitral valve disease, received the Mitrofast repair system (Shellhigh Inc, Union, NJ, USA). It comprises of a D-shaped annuloplasty ring with a curved surface made of a polymer, incorporated in the region of the annulus corresponding to the posterior leaflet. The whole device is covered by bovine pericardium. It mimics the posterior leaflet in the closed position, forming a trap-door mechanism against which the anterior leaflet may coapt.

Results: There were no perioperative deaths. 8 patients were male. The mean age was 68.2 years (range 57- 85) and mean logistic Euroscore was 8.04 (2.27-25.66). All patients had isolated posterior leaflet prolapse of degenerative aetiology. All but 2 patients were in NYHA class 2 or 3 and all but one patient had MR grade 4. Concomitant procedures included RFA in 3 patients and TV repair in 1. The average CPB time was 79.3 (43-107) and cross-clamp time 50 (37-80) minutes. Only two patients had trivial MR in post implantation transoesophageal echocardiography. The mean hospital stay was 11.7 days (6-23).

Conclusions: The Mitrofast repair system represents a promising tool for simplified and reproducible mitral valve repair, particularly the cohorts of patients with complex posterior leaflet pathology.

Tuesday 11th March Session 8
09:50 – 10:00 Ochil

Abstract No. 68

Mitral Valve Reconstruction With Autologous Glutaraldehyde-fixed Pericardium

Authors: J Chikwe; A Anyanwu; P Rahmanian; J Castillo; F Filsoufi; D Adams

Author's Institution: Mount Sinai Medical Centre, New York, United States

Objectives: Advantages of mitral valve reconstruction over replacement have been reported to include better preservation of left ventricular function, greater freedom from valve related complications including thromboembolism, hemorrhage, and endocarditis, and improved long-term survival. In valvular pathology characterized by deficiency of leaflet tissue, reconstruction may be challenging. Autologous glutaraldehyde-fixed pericardium is a useful substrate for mitral valve reconstruction in these cases. This video demonstrates the use of autologous pericardium to reconstruct the mitral valve presenting echocardiographic and surgical footage of four cases, illustrating a range of pathology including congenital cleft mitral valve, rheumatic mitral valve disease and endocarditis.



Tuesday 11th March Forum
09:00 – 09:20 Sidlaw

Abstract No. 69

Autologous Platelet Gel: Does it have a Place in Post-operative Cardiothoracic Surgical Wounds?

Authors: J Tyrrell; S Bateman

Author's Institution: Cardiothoracic Division James Cook University Hospital, Middlesbrough, United Kingdom

Objectives: Using sequestration technology, patient's own blood can be utilized to obtain an intact, viable platelet concentrate, rich in growth factors. Platelet derived growth factors, as well as other bioactive substances, are released from platelets upon activation. These mediators are responsible for a variety of complex functions, such as initiation of wound healing mechanisms, including mesenchymal cell proliferation, re-epithelialization, angiogenesis and inflammatory responses. The aim of this new clinical intervention is to establish Autologous Platelet Gel as a therapeutic strategy within acute and difficult to heal surgical wounds.

Methods: Ten patients were targeted with difficult to heal surgical wounds, despite utilisation of current available therapies. 60-180ml of patient's whole blood was obtained and processed to produce platelet rich (PRP) and platelet poor (PPP) plasma. The PPP is activated to produce a thrombin and the PRP is activated with the thrombin to produce a gel which is applied to the wound bed for five to seven days. A comprehensive audit was conducted.

Results: Seven patients have completed treatment and audit to date, five with sternal and three with leg wounds. All seven patients have had successful wound closure as an outpatient, with no rates of further infection, need for antibiotic or other therapy, no re admission back to hospital. Wound assessment has appeared to demonstrate accelerated healing times compared to previous therapeutic attempts.

Conclusions: It appears that Autologous Platelet Gel has an important role from both a patient, clinician and economist perspective within wound healing, and should be regarded as a viable alternative therapy.

Tuesday 11th March Forum
09:20 – 09:40 Sidlaw

Abstract No. 70

Impact Of Nurse-led Chest Drain Clinic in the Efficacy of a Regional Thoracic Unit.

Authors: P Law; T Cantlin; S Rathinam; P Keogh; M Jan; L Jones; P Rajesh

Author's Institution: Birmingham Heartlands Hospital, Birmingham, United Kingdom

Objectives: Patients with intercostal drains and persistent air leaks have a prolonged hospital stay. They have been discharged into the community with their drains attached to flutter bags, but regular follow up and care was fragmented with minimal support for them in the community causing concerns.

The concept of the Nurse Led Chest Drain Clinic (NLCDC) was developed to provide regular follow up for the patients at a dedicated time and to support and educate the district nurses.

Methods: A nurse is allocated to run the NLCDC on Wednesday mornings every week. The nurse assesses the presence of an air leak and drainage volume. Chest x-rays are reviewed by medical staff, prior to decision making regarding the drain removal.

Results: During a 12 month period from September 06-September 07, there were 126 clinic visits for 61 patients.

29 patients required only one clinic attendance, whereas 2 patients required weekly visits for six weeks. The remaining 30 patients attended the clinic for between 2-5 weeks.

This has significantly reduced inpatient length of stay

Conclusions: The use of the NLCDC in thoracic surgery has resulted in a more efficient and cost effective department with improved support for the patients and district nurses.

Procedure Group Number of visits mean (range)

Lobectomy	1.67 (1-5)
Bullectomy	2.67 (1-5)
Decortication	1.9 (1-4)
Diaphragm repair	2 (1-3)
LVRS	2 (1-3)
Sleeve Resection	2
Thoracoplasty	6
Pleural Procedures	1.8 (1-5)
Wedge Resections	1.8 (1-3)
Others	1

Number of visits according to procedure group.

Tuesday 11th March Forum
09:40 – 10:00 Sidlaw

Abstract No. 71

The Management of Atrial Fibrillation after Coronary Artery Bypass Graft Surgery

Authors: K Prime

Author's Institution: Barts and the London NHS Trust, London, United Kingdom

Objectives: Atrial fibrillation is a common arrhythmia that often develops post operatively in coronary artery bypass graft surgery (CABG) patients. Patients can become haemodynamically compromised very quickly as a result of the rapid heart rate and loss of cardiac output while others may complain of the onset of “palpitations” with no physical signs of discomfort. In the routine assessment of post-operative CABG patients, atrial fibrillation can be easily detected and treated, especially when cardiac monitoring is in use. It can also be diagnosed by palpating an irregular pulse. In this case study I would be focusing on the assessment, diagnosis and treatment of atrial fibrillation of an 80 year old woman (Jane) highlighting the research supporting different management options.

Methods: Discuss Jane's transition from Intensive Care Unit to the ward up to discharge home.

Results:

Conclusions: The postoperative management of a patient with atrial fibrillation requires the clear recognition of symptoms and an understanding of the diagnosis. This will enable nursing and medical staff to reassure patients, thus reducing their anxiety. However, there are a number of nursing considerations that must be made in order for nurses to care safely and effectively for patients with atrial fibrillation whilst working with the medical team.

Tuesday 11th March Session 9
10:45 – 10:55 Ochil

Abstract No. 72

Abstract Withdrawn



Use of Skin Blister Model to Assess Extravasated Monocyte Activation following CABG Surgery with Cardiopulmonary Bypass & OPCAB Techniques.

Authors: B Evans¹; C Landis²; K Taylor¹

Author's Institution: ¹Imperial College, London, United Kingdom; ²Univeristy of West Indies, Bridgetown, Barbados

Objectives: To assess the inflammatory effect on monocytes of cardiopulmonary bypass (CPB) using a new model for leucocyte transmigration by comparing CPB surgery with OPCAB surgery.

Methods: 16 elective primary CABG patients, were randomised into two groups; Group 1: Surgery with CPB (n=8) and Group 2: OPCAB surgery (n=8). Patients were given two cantharidin-induced skin blisters immediately before and 24h post-surgery. A blood sample was also taken. Blister and blood leucocytes were analysed using three colour flow cytometry to assess the activation status (L-selectin shedding) and resolving-inflammation status (CD163+) on CD14+ monocyte/macrophages.

Results: Total leucocyte counts for pre-op and peri-op blisters revealed significantly less cells in the peri-op blister in group 2, ($p < 0.017$). Post-op blood monocytes showed significantly greater activation in group 1 (23.3% L-selectin positive \pm 5.17) compared to group 2 (48.3% \pm 6.35, $p < 0.0127$), but no difference was seen in the PMN activation status between groups. Blood monocytes also showed a significant rise in CD163 expression post-operatively in group 1 (3.09% \pm 0.31 to 20.63% \pm 2.65), no such rise was seen in group 2.

Conclusions: The total number of leucocytes entering skin blisters was significantly less following OPCAB surgery, suggesting a lower inflammatory insult. Greater L-selectin shedding in monocytes post surgery in group 1 suggests that the inflammatory insult post CPB persisted in monocytes up to 24h post-operatively. Diminished induction of CD163+ monocytes, (resolving inflammatory marker), following OPCAB surgery again suggests that the inflammatory insult is less than post CPB with consequently less pronounced resolution phase on monocytes in the off-pump group.

Tuesday 11th March Session 9
11:05 – 11:15 Ochil

Abstract No. 74

The Effect of Transfusion of Leuco-depleted Red Cells on the Inflammatory Response in Patients undergoing Coronary Artery Bypass Graft Surgery

Authors: C Rogers; N Panayiotou; R Ascione; M Caputo; G Angelini; G Murphy

Author's Institution: Bristol Heart Institute, Bristol, United Kingdom

Objectives: Allogenic red blood cell (RBC) transfusion is associated with an increase in ischaemic and infectious complications following cardiac surgery. The mechanisms underlying these effects are poorly understood. The aim of this study was to determine the effect of leucodepleted RBC transfusion on the systemic inflammatory and immune system responses of patients undergoing first time isolated coronary artery bypass grafting (CABG).

Methods: Data was pooled from five randomised controlled trials of varying interventions in patients undergoing CABG carried out at our institution from July 1997 to May 2006. A total of 337 patients were analysed, 74 of whom received leucodepleted RBC transfusion. Markers of the inflammatory and immune responses were measured pre-operatively and at 4, 12, 24, and 48 hours post-operatively. Regression analyses used mixed models for repeated measures, adjusting for pre-operative values and baseline confounding factors. Effect sizes are expressed as ratios of geometric means with 95% confidence intervals (CI).

Results: Release of pro-inflammatory interleukins was on average higher in the group of patients receiving RBC transfusion, with a significant difference for IL-6 (1.18, 95%CI 1.01-1.38, $p=0.04$) and IL-8 (1.19 95%CI 1.04-1.36, $p=0.01$), C5a release was significantly lower in the transfused group (0.73, 95%CI 0.57-0.93, $p=0.01$). C3a ($p=0.42$) and anti-inflammatory IL-10 ($p=0.14$) levels were similar between the groups

Conclusions: Leucodepleted RBC transfusion is associated with amplification of the systemic inflammatory response as well as suppression of effectors of the humoral immune response in CABG patients. Better blood conservation practice and the design of safer blood components may reduce transfusion associated morbidity.

Development of Novel Synthetic Serine-protease Inhibitors to Reduce Postoperative Blood Loss after Cardiac Surgery: First Experimental Results

Authors: G Szabó; G Veres; T Radovits; M Karck

Author's Institution: University of Heidelberg, Heidelberg, Germany

Objectives: The non-specific serine-protease inhibitor aprotinin is used to reduce perioperative blood loss after cardiopulmonary bypass. Because of allergic and infectious risk and clinical side effects, substitutes of aprotinin would be highly preferable. We investigated the efficacy of the novel synthetic serine-protease inhibitors CJ2010 and CJ2020 on blood loss in a canine model.

Methods: 37 dogs were divided into five groups: control (n=5), aprotinin (n=8; Hammersmith scheme), CJ2010 I (n=8, 1.6 mg/kg Hammersmith scheme) CJ2010 II (n=8, 1.6 mg/kg continuous infusion) and CJ2020 (n=8, 4.98 mg/kg, Hammersmith scheme). All animals underwent 90-minute cardiopulmonary bypass. Endpoints were blood loss during the first two hours after application of protamine, activated clotting time (ACT), partial thromboplastin time (PTT), normalized prothrombin time (Quick).

Results: CJ2010 and CJ2020 significantly ($p < 0.05$) reduced blood loss compared to aprotinin (Table 1). While ACT and PTT normalized after protamine in the control, aprotinin and CJ2010 I groups they remained elevated in the CJ2010 II and CJ2020 groups. Quick values did not differ between the groups.

Conclusions: The novel serine-protease inhibitors CJ2010 and CJ2020 significantly reduce blood loss after cardiac surgery comparable to aprotinin. Furthermore, an additional anti-thrombotic protective effect is implicated by prolonged PTT and ACT values.

control	aprotinin	CJ2010 I	CJ2010 II	CJ 2020
149±24	61±7	43±4	44±4	52±8

Blood loss (in ml)

Tuesday 11th March Session 9
11:25 – 11:35 Ochil

Abstract No. 76

The Role of Acute High Shear Stress on Inflammatory Responses in Venous Versus Arterial Endothelial Cells

Authors: M Zakkar²; P Evans¹

Author's Institution: ¹Hammersmith cardiothoracic unit and the unit of cardiovascular medicine, London, United Kingdom; ²Hammersmith cardiothoracic unit and BHF Cardiovascular Sciences Unit, London, United Kingdom

Objectives:

- 1-To examine the effects of acute arterial shear stress (12dynes/cm²) on pro-inflammatory activation of porcine aortic endothelial cells (PAEC) and porcine jugular vein endothelial cells (PJVEC).
- 2-To look at signalling pathway involved in the initial inflammatory process which leads to intimal hyperplasia formation in vein grafts.
- 3-To look at the effect of anti-inflammatory agent such as dexamethasone on the inflammatory process.

Methods:

- 1-Porcine aortic and jugular vein endothelial cells isolated and cultured.
- 2-Cells were exposed to high shear stress using the cytodyne system for different time points.
- 3-Comparative real-time PCR used to look at proinflammatory and cytoprotective gene expression.
- 4-Western blots used to look at MAKP (P-P38, P-JNK) and NF-kB activation.
- 5-Study to effects of dexamethasone on the proinflammatory profile of JVEC.

Results:

- 1-Comparative real-time PCR revealed that shear stress induced high levels of MCP-1 (14-fold at 4h, $p < 0.001$), IL-8 (39-fold at 4h; $p < 0.02$) and E-selectin (4-fold at 4h; $p = 0.05$) transcripts in PJVEC. By contrast, arterial EC were relatively resistant to shear stress.
- 2-Shear stress produces high activation of MAP kinases and NF-kB JVEC compared to PAEC at 30 and 90 min.
- 3-Dexamethasone significantly reduces the pro-inflammatory gene expression in JVEC (IL8 30% reduction $p < 0.05$, Mcp 40% reduction $p < 0.05$) and reduces MAPKs activation.

Conclusions:

- 1-Profound pro-inflammatory effects of acute high shear stress on venous EC may partly explain the susceptibility of vein grafts to inflammation and accelerated atherosclerosis.
- 2-Dexamethasone can play an important role in the reduction of intimal hyperplasia.

Leptin is an Endothelial Independent Vasodilator in Humans with Coronary Artery Disease: Evidence for Tissue Specificity of Leptin Resistance.

Authors: A Momin¹; A Shah¹; J Desai²; A El-Gamel²; M Kearney¹

Author's Institution: ¹The Cardiovascular Division GKT School of Medicine King's College, London, United Kingdom; ²The Cardiothoracic Department King's College Hospital, London, United Kingdom

Objectives: Leptin has emerged as an important peptide in metabolic regulation, with obese patients often being resistant to leptin's effects. Recently studies have suggested that leptin may also have vasoactive effects. We explored this possibility in human patients undergoing coronary artery bypass surgery. We sought to define the mechanisms and correlates of leptin's vascular actions in humans with coronary artery disease.

Methods:

In 131 patients (age 65.7 ± 0.7 years mean \pm SEM), ex-vivo vascular reactivity to leptin was assessed in saphenous vein (SV) rings.

Results: Leptin relaxed saphenous vein, maximal relaxation $24.5 \pm 1.6\%$. In separate experiments relaxation to leptin was unaffected by L-NMMA ($17.4 \pm 3.4\%$ vs $17.8 \pm 3.3\%$ $p=0.9$) or endothelial denudation ($17.4 \pm 4.4\%$ vs. $22.5 \pm 3.0\%$, $p=0.4$).

We explored the possibility that leptin's vascular effects are mediated via smooth muscle hyperpolarisation. In the presence of KCl (30mmol/L) to inhibit hyperpolarisation, the vasodilator effect of leptin was completely blocked ($0.08 \pm 4.1\%$, $p < 0.001$ versus control). Similar results were demonstrated in internal mammary artery rings.

The only independent correlate of leptin-mediated vasodilatation was plasma TNF-alpha ($r=0.25$, $p < 0.05$). Neither body mass index nor waist circumference correlated with leptin-mediated vasorelaxation. This lack of a correlation with markers of total body fat/fat distribution suggests that leptin resistance may not extend to the vasculature.

Conclusions: Leptin is a vasoactive peptide in human saphenous vein and internal mammary artery. Its action is not nitric oxide or endothelial dependent. Markers of body fat did not correlate with leptin-mediated vasodilatation raising the intriguing possibility of selective resistance to leptin's actions.

Tuesday 11th March Forum
11:25 – 11:45 Ochil

Abstract No. 78

Protocol Led Discharge

Authors: J Mills; F Groogan

Author's Institution: Royal Victoria Hospital, Belfast, United Kingdom

Objectives: The development of new practice is a concept that is important in the current climate of a modern healthcare system which builds on the ethos of clinical governance, organisation change and patient centred care as promoted by the government in the updated NHS improvement plan: Putting People First (DOH, 2004c). Our goal in developing protocol led discharge was to reduce current delays in discharge from the High Dependency Unit (HDU) to provide optimal utilisation of critical care beds. The implementation of a protocol led discharge (PLD) procedure was designed to be utilised by the nursing staff as a mechanism that would empower nurses to provide patient centred care to expedite discharges while assisting with bed management (Lees 2004).

Methods: Benchmarking discharge practice
Produced guidelines and discharge criteria
Involved key stakeholders
Audit process

Results: FROM 15/6/06-30/10/06
183 Patients went through HDU
141 Patients audited = 77% of throughput
80% of these (n=113) fitted the PLD criteria
20% (n=28) were medical led (MLD)

10 readmissions-2 PLD

Feedback from staff- lack of confidence implementing protocol

Conclusions: Changes needed in protocol documentation
Written support visible from consultants
More training sessions on implementing protocol
Only senior nurses to implement protocol
Currently reauditing



Tuesday 11th March Forum
11:45-12:05 Sidlaw

Abstract No. 79

Travelling the Assistant Practitioner Pathway. The Assistant Practitioner within the Cardiothoracic Surgical Unit

Authors: C Roberts

Author's Institution: Sheffield Teaching Hospital Trust, Sheffield, United Kingdom

Objectives: The challenges of National and European Directives require strategic workforce planning by the multidisciplinary team. Review of practice within our clinical settings has resulted in the development of several roles. The most versatile is the advancement of the Healthcare Assistant into an Assistant Practitioner. This role creates an individual that can competently undertake aspects of care traditionally considered the domain of the Registered Practitioner.

Methods: Since 2006 we have undertaken the development of 8 Assistant Practitioners and plan further posts. The Trust and clinical areas provide training. Our pathway offers development and career enhancement.

Results: The competencies required in the various clinical areas are shown in the table.

Conclusions: The Assistant Practitioner role provides stability and flexibility within the team and supports the development of qualified staff in advancing practice.

Competence	Ward Areas	High Dependency CICU/PCU	Clinic	Theatres
NVQ Level 3	x	x	x	x
Access /consolidation course	x	x	x	
Invasive clinical skills	x	x	x	x
Wound managementx	x	x		
Management of Care delivery	x			x
Management of the immediate post op patient		x		
Pre operative assessment		x		
Patient Education	x		x	
Scrub Role				x

Assistant Practitioner Pathway

Tuesday 11th March Session 9
10:45 – 10:55 Pentland

Abstract No. 80

A Surgeon's Case Volume of Oesophagectomy for Cancer Does Not Influence Operative Mortality in a Tertiary Referral Centre

Authors: R Jeganathan; A Graham; K McManus; J McGuigan

Author's Institution: Royal Victoria Hospital, Belfast, United Kingdom

Objectives: To assess if individual case volume of oesophageal resections influences the operative mortality rate in a tertiary referral centre.

Methods: Between June 1994 to June 2006, 252 total thoracic oesophageal resections (75% male, mean age 63 years) were performed by 5 surgeons in tertiary referral centre. Operative approach was standardised in all cases and consisted of left thoracalaparotomy, resection of all intrathoracic and abdominal oesophagus and left cervical incision for anastomosis. Operative mortality, defined as in-hospital death irrespective of length of stay, was compared among consultants and also trainees.

Results: A total of 207 operations were performed by five consultants with 9 deaths (4.3%) compared to 2 deaths after 45 operations by 17 trainees (4.4%) (Fisher's Exact Test, $p=0.62$). Individual case volume for consultants ranged from 5 to 12 cases/year with 0 to 5.4 % mortality rate (Chi-Squared Test, $p=0.24$). Overall hospital volume ranged from 30-57 cases/year.

Conclusions: This study confirms that surgeons who have been appropriately trained in oesophageal resection may obtain good results despite lower individual case volumes when a standardised approach is taken in an institution with a high case volume.



Routine Oesophagoscopy To Detect Anastomotic Leakage Following Oesophagectomy

Authors: R Page; D McWhirter; M Shackcloth

Author's Institution: The Cardiothoracic Centre, Liverpool, United Kingdom

Objectives: To evaluate the efficacy and safety of oesophagoscopy in assessing the anastomosis and stomach following oesophagectomy.

Methods: Over a ten-month period 27 consecutive post-oesophagectomy patients, all having reconstruction using the stomach, underwent oesophagoscopy. This was either as a planned procedure one week after surgery, or earlier depending on the patients' condition. The anastomosis and gastric mucosa were examined for evidence of incipient ischaemia and/or leak.

Results: All patients tolerated the oesophagoscopy without complications. Twenty-one patients had a normal examination and were immediately commenced on a semi-solid diet. Two patients developed a significant ischaemic anastomotic leak at three and six days after surgery, one of whom had no symptoms attributable to the leak. Both underwent immediate surgical treatment, one of whom died. In the remaining 4 patients, oesophagoscopy showed ischaemic gastric mucosa without leak; 3 of these patients were kept nil by mouth, underwent further regular endoscopic assessment and made a full recovery. The remaining patient had already developed early cardio-respiratory complications at the time of oesophagoscopy; because of the concern over the stomach deteriorating further and causing a leak, the patient underwent revision of the anastomosis as a precaution. She survived without further complications.

Conclusions: Routine oesophagoscopy within a week of oesophagectomy is a safe and efficient method of assessing the anastomosis and viability of the stomach. It allows a more targeted approach to individual patient care than other forms of management, and may prevent much of the morbidity of anastomotic leakage by allowing for earlier intervention.

Tuesday 11th March Session 9
11:05 – 11:15 Pentland

Abstract No. 82

Is ARDS/ Acute Lung Injury Common after Oesophagectomy? An Audit of Respiratory Complications

Authors: S Rao; A Martin-Ucar; L Beggs; E Black; D Beggs; J Duffy

Author's Institution: Nottingham City Hospital, Nottingham, United Kingdom

Objectives: It has been stated that Adult Respiratory Distress Syndrome/ Acute Lung Injury (ARDS/ALI) occurs in up to 20% of oesophagectomies. We aimed to audit our recent experience in a Thoracic Surgical Unit.

Methods: A review of the most recent 18 months (2006 to October 2007) identified 94 consecutive patients [68 male and 26 female, median age of 70 (range 50 to 89) years] undergoing elective oesophagectomy for carcinoma (n=90) or high grade dysplasia (n=4). 30% of the patients were older than 75 years.

We reviewed the case notes and all radiological investigations performed during the postoperative period. Outcomes of the study were the incidence of ARDS/ALI and other respiratory complications such as effusion, consolidation and atelectasis evident in post-operative investigations and mortality.

Results: There were 4 (4.3%) postoperative deaths. ARDS/ALI was only present in one of the patients who died after surgery and another patient who survived.

Most patients (82%) developed abnormal features in postoperative CXR, mostly minor effusions (68%) or atelectasis (82%) non-relevant clinically. 6% required insertion of an intercostal drain due to complications.

Conclusions: Our contemporary series reveals that, even in an ageing surgical population, our current protocol of care correlates with low hospital mortality and minimal incidence of ARDS/ALI. Most abnormal features in postoperative radiographs are minor atelectasis and effusions.

Clinical Impact of Tumour Involvement of the Anastomotic Doughnut in Oesophagogastric Cancer Surgery

Authors: A Sillah¹; E Griffiths¹; S Pritchard²; C West³; R Page⁴; I Welch

Author's Institution: ¹Department of Gastrointestinal surgery University Hospital of South Manchester, Manchester, United Kingdom; ²Department of Histopathology University Hospital of South Manchester, Manchester, United Kingdom; ³Academic Radiation Oncology University of Manchester Christie Hospital, Manchester, United Kingdom; ⁴The Cardiothoracic Centre Liverpool NHS Trust, Liverpool, United Kingdom

Objectives: Published colorectal cancer surgery data suggest no role for the analysis of the anastomotic doughnuts following anterior resection. The usefulness of routine histological analysis of the upper gastrointestinal doughnut is not clear. Our study assessed the impact of cancer involvement of the doughnut on clinical practice. Factors associated with doughnut involvement and the effect on patients' survival were also analysed.

Methods: The clinico-pathological details of 492 patients who underwent potentially curative oesophagogastric resection for cancer with a stapled anastomosis between 1994 and 2006 in two specialist centres were retrospectively analysed. Univariate, multivariate and survival analyses were carried out.

Results: Five percent (24/492) of doughnuts were histologically involved with cancer. Microscopic involvement of the proximal resection margin, local lymph node metastasis and lymphatic invasion within the main resected specimen were independently associated with doughnut involvement (all $p < 0.05$). However, these three factors taken together failed to predict doughnut involvement. Doughnut involvement was an independent adverse prognostic factor for cancer specific survival ($p = 0.0018$).

Conclusions: In contrast to findings in colorectal surgery, doughnut involvement with cancer appears to have useful prognostic information following oesophagogastric resection. Routine histological analysis of upper gastrointestinal doughnuts is justified. Doughnut involvement could potentially strengthen the indications for adjuvant therapy in the future.

Tuesday 11th March Session 9
11:25 – 11:35 Pentland

Abstract No. 84

Causes And Outcomes Of Unplanned Intensive Care Admissions After Thoracic Surgery

Authors: M Devbhandari; S Meraj; P Krysiak; MT Jones; R Shah

Author's Institution: University Hospital of South Manchester, Manchester, United Kingdom

Objectives: Data on patients requiring unplanned intensive care unit (ICU) admissions following thoracic surgery is sparse. We conducted a retrospective study to find the aetiology and outcome of unplanned ICU admissions following thoracic surgery in our unit.

Methods: Data was collected on all patients undergoing thoracic surgery over a period of four years between March 2001 and April 2005, who required unplanned admission to ICU from the operating theatre, high dependency or ward. Their clinical characteristics, indications for ICU admissions and the outcome were analyzed.

Results: During the study period a total of 50 patients required unplanned admissions to ICU. Their mean age was 54 with 34 male patients. The primary pathologies in these patients were lung cancer 14 (28%), oesophageal malignancy 12 (24%), mediastinal mass 8 (16%), pleural pathology 7 (14%), chest wall tumour 3 (6%), trauma 3 (6%) and diaphragmatic pathology 3 (6%). The indications for ICU admissions were respiratory failure 32 (64%), cardiovascular instability 11 (22%), sepsis 6 (12%), bleeding requiring re-exploration 4 (8%). Mechanical ventilation was necessary in 24(48%) patients where as non invasive ventilatory support was required in 8 (16%) patients. Tracheostomy was performed in 13 (26 %) patients. 20 (40%) patients developed sepsis with positive bacteriology from one or more sites. The in hospital mortality for group was 14% (7 patients) and the rest were discharged after a mean hospital stay of 11 days (range 1-48 days).

Conclusions: Unplanned ICU admission after thoracic surgery is worthwhile but carries a significant mortality and corresponding length of stay

Implementing Real-time Ultrasound in a Thoracic Surgery Practice

Authors: A Coonar²; S Walker¹; J. Hughes³; M de Perrot¹; A Pierre¹; T Waddell¹; G. Darling¹; S. Keshavjee

Author's Institution: ¹Toronto General Hospital, Toronto, Canada; ²Papworth Hospital, Cambridge, United Kingdom; ³Addenbrookes Hospital, Cambridge, United Kingdom

Objectives: To implement and evaluate the use of portable ultrasound by nurses and surgeons in a thoracic surgery practice.

Image guided treatment is undergoing rapid implementation. With other modalities we are implementing ultrasound into our thoracic and lung transplant surgery practice. We are using it in 3 settings: endoscopic bronchial ultrasound (EBUS), endoscopic esophageal ultrasound (EUS), and conventional thoracic ultrasound (TUS).

For some clinicians there may be a perception that this would be time-consuming or the skills difficult to acquire. In this context we describe our experiences of implementing TUS.

Methods: A handheld ultrasound-transducer (L25/10-5: 25-mm broadband (10-5 MHz) linear array) was selected (iLook® -SonoSite). Training by an ultrasonologist comprised a 1 hour seminar/practical, then over 1 week selected patients received ultrasound examinations. After the induction period, US was used to evaluate pleural effusions, chest wall lesions and to help decide on bladder volume and urethral catheterisation.

Results: After the induction period 62 consecutive studies were performed over a 4 month period (Table). With the assistance of US all interventions were successful in achieving drainage or adequate needle samples. Cannulations were performed in real-time with the patient correctly positioned as judged by the simultaneous US study. No repeat punctures were needed.

Conclusions: Patients appear to have been receptive to this practice innovation commenting that it may reduce delay, travel and the need to involve other services. Our own impression is that patient care has been expedited. Implementation is helped by close involvement of radiologists.

This practice development may benefit both clinicians and patients.

Site	n
Chest wall	4
Pleural space+/- cannulation	45
Bladder	13
Unsuccessful intervention	0

US studies in 4 months

Tuesday 11th March Session 10
11:50 – 12:00 Ochil

Abstract No. 86

Successful Extra Corporeal Membrane Oxygenation support After Pulmonary Thromboendarterectomy

Authors: M Berman¹; S Tsui¹; A Vuylsteke²; A Snell²; R Latimer²; R Hall²; J Arrowsmith²; J Kneeshaw²; A Klein²; D Jenkins¹

Author's Institution: ¹Department of Cardiothoracic Surgery Papworth Hospital, Cambridge, United Kingdom; ²Department of Anaesthesia and Intensive Care, Papworth Hospital, Cambridge, United Kingdom

Objectives: Pulmonary thromboendarterectomy (PTE) is the treatment of choice for patients with chronic thromboembolic pulmonary hypertension. Some patients develop severe cardio-respiratory compromise immediately on reperfusion of the lungs, either from early reperfusion pulmonary oedema or right ventricular failure secondary to distal vascular obstructions non amenable to surgery.

Methods: This is a retrospective review of all patients undergoing PTE in a single national referral centre between August 2005 and August 2007. ECMO requirement and outcome are reviewed.

Results: During this period, 127 consecutive patients underwent PTE surgery. Seven patients (5.5%) had extreme cardio-respiratory compromise in the immediate post-operative period and required veno-arterial ECMO support. Their mean age was 51.3 years with 4 males. The remaining 120 patients did not require ECMO support. The ECMO group had significantly poorer haemodynamics pre operation (mean PA 60.9 vs. 51.2 mmHg-p=0.03, PVR 906.8 vs. 723.8 dynes/sec/cm⁵-p= 0.02, CVP 15.8 vs. 11.5 mmHg-p=0.05). In five patients ECMO was commenced in the first hour after weaning from bypass due to evolving cardio-respiratory arrest. Initiating factors were high PA pressure (4), severe pO₂/pCO₂ derangement (2) and low systemic BP (1).

Mean duration of support was 119 hours (49-359 hours). Five patients were successfully weaned and 4 left hospital alive giving a salvage rate of 57%. For those who did not require ECMO support, hospital mortality was 4.2%.

Conclusions: Early ECMO placement has a role as rescue therapy post PTE in patients who would probably otherwise die. The success for adult ECMO support in this group is high.

Respiratory Failure & Not Tracheostomy is a Risk Factor for Deep Sternal Wound Infection

Authors: J Chikwe; J Castillo; P Rahmanian; F Filsoufi; D Adams

Author's Institution: Mount Sinai Medical Centre, New York, United States

Objectives: This study aims to establish whether tracheostomy remains an independent predictor of deep sternal wound infection (DSWI) when respiratory failure is controlled for.

Methods: We analyzed a series of 2823 consecutive patients who underwent median sternotomy for cardiac surgery procedures at a single centre between January 2002 and September 2006. RF was defined as cumulative post-operative intubation time >72 hours. Patients were divided into three groups: patients who did not develop RF (control group), patients who developed RF but who did not undergo tracheostomy (NTRX-group) and those who underwent tracheostomy postoperatively (TRX-group).

Results: The mean age was 63 ± 14 years, 25% (n=693) of patients were older than 70 years, and 62% (n=1744) of patients were male. Postoperative RF was observed in 252 (9%) patients. DWSI was observed in 38 (1.3%) patients. This complication occurred in 25 out of 2571 patients without respiratory failure (1%) and in 13 out of 252 (5.1%) patients with respiratory failure ($p < 0.001$). In patients with RF, the incidence of DSWI was similar between the TRX-group (n=5, 4.6%) and the NTRX-group (n=8, 5.6%) patients ($p = 0.5$). Stepwise multivariate logistic regression analysis revealed RF to be the strongest predictor of DSWI (OR=5.2). When tracheostomy was added to the model, it did not have an independent influence on the development of this complication.

Conclusions: Respiratory failure, and not tracheostomy per se, is an independent risk factor for DSWI.

Tuesday 11th March Session 10
12:10 – 12:20 Ochil

Abstract No. 88

Predictive Accuracy of EuroSCORE: Is End-diastolic Dysfunction a Missing Variable?

Authors: T Theologou; M Field; P Sastry; A Grayson; M Pullan; B Fabri

Author's Institution: The Cardiothoracic Centre, Liverpool, United Kingdom

Objectives: Left-ventricular function has been shown to be an important prognostic factor in estimating operative risk of coronary artery bypass grafting (CABG) and as such left-ventricular ejection fraction (EF) is included in the EuroSCORE. However, left-ventricular function is more comprehensively assessed by measures of both systolic and diastolic dysfunction. We hypothesized that end-diastolic dysfunction is an additional independent indicator for predicting outcome following CABG.

Methods: We retrospectively assessed all patients undergoing isolated off-pump CABG between October 2000 and September 2004 by two surgeons. 1178 consecutive patients identified. Left-ventricular end-diastolic pressure (EDP) measured during coronary angiography was used as a measure of left-ventricular diastolic dysfunction. Logistic regression was used to assess the association between EDP (treated as a continuous and dichotomous variable) and mortality, while adjusting for EuroSCORE.

Results: 925 patients with complete EDP data were analysed. EDP was identified as an independent predictor of mortality after adjusting for EuroSCORE (OR 1.1 for each unit increase of EDP [95% CI 1.03-1.17] $p=0.002$). ROC curve improved from 0.7 with EuroSCORE alone to 0.78 when EuroSCORE combined with EDP. Logistic equation: odds of death = $\exp(-6.3283 + [\text{EuroSCORE} \times 0.1813] + [\text{EDP} \times 0.0954])$. In a sub-group analysis, operative mortality in patients with moderate to good ejection fraction is independent of EDP, however, for patients with impaired ejection fraction operative mortality is higher when EDP reaches 20mmHg. Substituting ejection fraction for CASS score produced similar results.

Conclusions: EDP is an important variable in predicting patient specific risk and should be incorporated in future risk models

	LVEF<30% Low EDP(<20)	LVEF<30% High EDP(>20)	LVEF>30% Low EDP(<20)	LVEF>30% High EDP(>20)
Mortality				
n	1/54	3/27	12/790	2/54
%	1.8	11.1	1.5	3.7

LVEF, EDP and mortality

Detection of Occult Left Ventricular Thrombus using Contrast-enhanced CMR in Patients with Impaired Ventricular Function undergoing Coronary Artery Bypass Surgery

Authors: T Pegg¹; T Karamitsos¹; J Arnold¹; J Francis¹; S Neubauer¹; J Selvanayagam²; D Taggart¹

Author's Institution: ¹University of Oxford, Oxford, United Kingdom; ²Flinders Medical Centre, Adelaide, Australia

Objectives: The prevalence of left ventricular thrombus (LVT) in patients undergoing CABG is unknown and may impact on surgical risk and post operative management. Contrast enhanced-cardiac magnetic resonance imaging (CE-CMR) is an important tool for pre-operative assessment of cardiac function and viability, and also has the capability to accurately detect LVT.

To examine the prevalence of LVT as detected by CE-CMR in a consecutive series of patients with chronic LV dysfunction referred for CABG.

Methods: 44 patients with EF

Results: Mean age was 66±8 years. 8 (18%) patients had LVT identified by CE-CMR. Patients with LVT were significantly younger (61±10 years) than patients in whom thrombus was not identified (67±7 years) p=0.03, Table 1. Patients with LVT had similar EF but increased LV volumes. Logistic regression analysis demonstrated age was the only predictor for LVT, with younger age indicating a higher risk. Two patients with LVT identified by CE-CMR had sustained a stroke within 6 months of their scan.

Conclusions: LVT is common in patients, and was more likely to be present in younger patients with heart failure. CE-CMR may have a role in the routine pre-operative assessment of this group of patients, both for viability assessment and thrombus detection.

	LVT+	LVT-
Age (years)	61 ± 10	67 ± 7
Male	100 (8/8)	92 (33/36)
Smoking	25 (2/8)	8 (6/36)
Diabetes	38 (3/8)	33 (12/36)
LVEF (%)	37 ± 14	39 ± 11
LVEDVI (ml.m ²)	136 ± 40	114 ± 31
LVESVI (ml.m ²)	89 ± 41	72 ± 31
Warfarin	25 (2/8)	6 (2/36)
ACE inhibitor	88 (7/8)	94 (34/36)
EuroSCORE	7.9 ± 4.6	10.3 ± 9

Table 1 Patient demographics

Tuesday 11th March Session 11
13:50 – 14:00 Ochil

Abstract No. 90

Sternal Resection For Malignant Disease

Authors: D Eaton; S Jordan; P Goldstraw; G Ladas

Author's Institution: The Royal Brompton Hospital, London, United Kingdom

Objectives: We analysed patients who had undergone sternal resection for malignant disease.

Methods: All patients who had undergone sternal resection for malignant tumours from 1998 to 2007.

Results: 31 patients underwent sternal resection, 8 patients had a full and 23 a partial sternectomy. 13 patients had additional resection of ribs (ranging from 1 unilateral rib to 5 ribs bilaterally; mean 3 ribs bilaterally). In 5 patients the resection included bilateral, and in 2 unilateral clavicular resection.

9 patients had primary and 22 metastatic tumours. The primary tumours consisted of 5 chondrosarcomas, 1 schwannoma, 1 sarcoma (secondary to radiotherapy), 1 giant cell tumour and 1 Ewing's sarcoma.

The metastatic group were 15 malignant breast cancers, 2 liposarcomas, 2 thyroid, 1 SCC (from tongue), 1 synovial sarcoma and 1 spindle cell sarcoma.

Over half the patients required a composite chest wall prosthesis (marlex mesh with methylmethacrylate) for the bony defect following resection. In 19 cases surgery was performed as a combined procedure with the plastic surgeons, where muscle or myocutaneous flaps were required for soft tissue coverage.

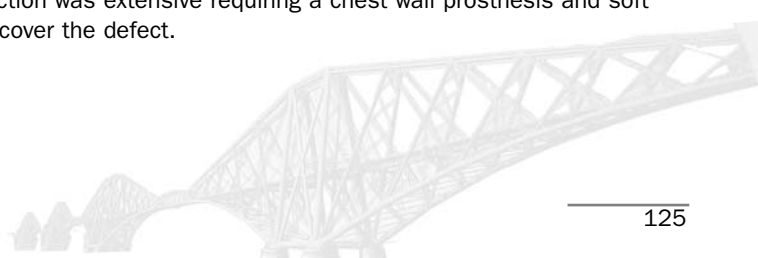
Length of stay varied from 6-22 days (average 11). The peri-operative mortality was zero, and there was one case of early graft infection requiring a further tissue flap.

Conclusions:

Sternal resection was carried out for malignant tumours of varied aetiologies.

Resection of part of all of the sternum can be carried out safely in a multi-disciplinary context.

In many cases the resection was extensive requiring a chest wall prosthesis and soft tissue reconstruction to cover the defect.



Tuesday 11th March Session 11
14:00 – 14:10 Ochil

Abstract No. 91

Modified Technique of Selective Lung Ventilation Through a Tracheostomy to Conservatively Treat Iatrogenic Tracheal Rupture

Authors: E Belcher; M Conti; P Goldstraw; S Jordan

Author's Institution: The Royal Brompton Hospital, London, United Kingdom

Objectives: We describe a modified technique of selective bilateral bronchial intubation through a tracheostomy to achieve conservative management of iatrogenic tracheal rupture.

Methods: A 77-year-old woman underwent percutaneous tracheostomy 5 days post intubation and ventilation following an out-of-hospital respiratory arrest, secondary to an acute exacerbation of chronic obstructive pulmonary disease (COPD). The patient was a life-long smoker. The procedure was complicated by a tracheal tear and the patient referred to our institution for surgical management.

Results: Rigid bronchoscopy revealed a full-thickness linear tear of the posterior wall, extending proximally 5 cm from the level of the carina. Oesophagoscopy did not reveal any associated oesophageal injury. An operative approach was considered to carry a high surgical risk due to her age and COPD. A conservative strategy was undertaken. The airway was decannulated and both main bronchi were selectively intubated with Frova catheters via the tracheostomy site under rigid bronchoscopic vision. Size 6 armoured endobronchial tubes were placed over each Frova catheter to selectively intubate both main bronchi. Positive pressure ventilation was continued with exclusion of the tracheal tear. Regular bronchoscopy was undertaken. Bronchoscopy on day 14 showed complete healing of the trachea. Endobronchial tubes were exchanged for a single lumen endotracheal tube to facilitate ventilatory weaning. The patient was successfully decannulated and discharged from hospital.

Conclusions: We believe that use of rigid bronchoscopy and Frova catheters enables exchange of endotracheal tubes in a controlled fashion and that superior visualisation afforded by this technique minimises the risk of further iatrogenic injury and therefore successful conservative management.

Tuesday 11th March Session 11
14:10 – 14:20 Ochil

Abstract No. 92

A 20 Year Audit of Tracheobronchial Airway Stenting at a Single Institution

Authors: K Redmond; E Lim; L Gurung; M Dusmet; G Ladas; P Goldstraw

Author's Institution: Royal Brompton Hospital, London, United Kingdom

Objectives: Evaluate outcome in patients requiring tracheobronchial airway stenting for obstruction.

Methods: A 20-year single institution retrospective study, matched categorical comparisons performed using McNemar test, survival compared using log-rank test.

Results: Of 1112 therapeutic bronchoscopic interventions over a 20-year period from 1986-2006, 799 were stent-related procedures in 243 patients. The mean (SD) age was 52 (20) years and 116 (48%) were men. Inter-hospital transfer required for 29.4%. Aetiology: malignant tumour 55.3%, infection 5.35%, polychondritis 3.7%, tracheomalacia 7%, post-intubation/ anastomotic 16.45%, vascular 2.47 and other 9.73%. The number of patients in pre-procedure MRC dyspnoea score 1-5 were 8(3%), 7(3%), 57(24%), 147(60%), 24(10%) respectively. After a median (IQR) of 6 (1 to 26) months, 127 (52%) of patients had died. At last follow up before death, all patients improved in MRC dyspnoea score compared to pre-procedure with 215 (88), 26(11), 2(1) patients in categories 1-3 respectively ($p < 0.001$). Two distinct survival patterns were observed. Patients with malignant underlying aetiology had 1, 5 and 10 year survival of 62%, 22%, 12%, whereas patients with non-malignant underlying aetiology had survival of 78%, 59% 41% ($p < 0.001$).

Conclusions: Survival in patients who receive tracheobronchial airway stenting is strongly dependant on underlying aetiology, but excellent palliation can be achieved in all groups.

Cervical Approach to Investigation of Pleural Disease

Authors: N Shah; D Tang; E Black

Author's Institution: Nottingham City Hospital, Nottingham, United Kingdom

Objectives: Pleuroscopy or thoracoscopy is commonly performed via an intercostal space(s) for investigating pleural diseases. Cervical mediastinoscopy may then need to be performed at a later date to stage thoracic malignancy and diagnosing of mediastinal lymphadenopathy. A cervical approach to the pleural space allows both to be performed at the same time. There is very little information available about the value of this technique for investigating pleural disease.

Methods: 7 patients had this procedure between Sept 2006 and Sept 2007. The operation was for diagnosis of pleural thickening associated with lymphadenopathy in 4 and staging known or suspected mesothelioma in 3. Operation entailed standard cervical mediastinoscopy, lymph node sampling and then entering the pleural space with a thoracoscope & biopsy forceps. Adhesions were divided as necessary to facilitate representative biopsies. After biopsies an intercostal drain was brought out through the neck. Talc poudrage was performed in one patient.

Results: All patients were male, median age was 63 (52-76). 1 left and 6 right sided pleural spaces were investigated. 2 patients had benign pathology, 1 lymphoma and the rest had malignant mesothelioma. 1 mesothelioma was sarcomatoid cell type the rest epithelioid with no lymph node metastasis who subsequently underwent radical surgery. The patient who underwent talc poudrage developed acute lung injury, renal failure before slowly recovering with a hospital stay of 22 days. The rest had a median stay of 3 days (1-5). There were no deaths, no bleeding or mediastinal infections or seedlings.

Conclusions: Cervical pleuroscopy may be a safe method to diagnose and stage pleural disease via one small incision. It avoids intercostal nerve injury and appears well tolerated. Longer follow up is needed to determine the risk of mediastinal contamination.

Tuesday 11th March Session 11

14:30 – 14:40

Ochil

Abstract No. 94

Experience with Right Side Carinal Pneumonectomy in a Single Centre

Authors: H Parissis; E McGovern; V Young

Author's Institution: St James's Hospital, Dublin, Ireland

Objectives: To report our experience for the treatment of lung tumors of the right main bronchus (RMB) invading the carina.

Methods: From February 2000 up till now we have identified 6 cases (1.09%) of right side carinal pneumonectomy. The surgical techniques and the outcome will be discussed.

Results: Plan of action:

Close cooperation with anesthetics, long flexible ET tube, Right posterolateral thoracotomy, no irrevocable steps until resection guaranteed, mobilization of trachea LMB, division of the trachea & LMB, Intubate across field. Avoid devascularization during dissection. Tailoring for airway size discrepancies.

Pt/age Procedure Hist/gy Sex N Status

- 1) 58 RSP SCC M N0 A
- 2) 62 RSP SCC M N2 A
- 3) 55 RSP SCC M N1 D(ALI)
- 4) 55 RCSP SCC M N1 A
- 5) 62 CP TS F N0 A
- 6) 66 RSP SCC M N2 A

RSP: Right Sleeve pneumonectomy, RCSP: completion sleeve pneumonectomy for T1N0 tumor removed with R middle & lower lobectomy 5 years ago.

CP: carinal plasty for Tracheal Sarcoma (TS)

Mortality: 16.6%. Recurrence: Pt N 2: Local recurrence 1 year later, Pt N 6: Distant metastasis 3 months later.

Conclusions: Success of carinal surgery depends on careful patient selection and attention to detail. Patients with pathological N2 disease have the worst prognosis.



Bilateral Thoracoscopic Sympaticotomy

Authors: R Jeganathan; K McManus; P Sidhu; M Jones; A Graham; J McGuigan

Author's Institution: Royal Victoria Hospital, Belfast, United Kingdom

Objectives: To evaluate the efficacy of bilateral thoracoscopic sympaticotomy in alleviating symptoms and improving quality of life in patients with hyperhidrosis or facial blushing and to investigate the occurrence, severity and possible underlying factors to compensatory sweating after surgery.

Methods: Patients details were prospectively entered into a departmental database. All procedures were performed through two 5mm ports using monopolar cautery. Depending on the symptoms, sympathetic chain at T2, T3, T4 +/- T5 would be ablated and divided. Follow-up date was obtained via telephone enquiry.

Results: One hundred and sixty three patients in a single institution underwent bilateral thoracoscopic sympaticotomy with a mean follow-up period of 51 (5-140) months. Indications were for palmar hyperhidrosis (41%), axillary hyperhidrosis (17%), combined palmar and axillary hyperhidrosis (27%) and facial blushing +/- facial hyperhidrosis (15%). Median operating time was 35 minutes. Success rates were palmar 98.5%, axillary 96.4%, palmar and axillary 97.7% and facial blushing +/- facial hyperhidrosis 84%. Compensatory sweating occurred in 77% of patients and its severity was related to the severity of the primary complaint. Recurrence rates were palmar 4.6%, axillary 7.4%, palmar and axillary 9.3% and facial blushing +/- facial hyperhidrosis 4.7% at a mean of 22 (3-72) months. An improvement in quality of life was seen in 85% and a diminution of quality of life was noted in 5% due to compensatory sweating.

Conclusions: Bilateral thoracoscopic sympaticotomy rather than resection can be performed effectively with low recurrence rates at long term.

Tuesday 11th March Session 11
14:50 – 15:00 Ochil

Abstract No. 96

Combined Chest Wall & Spinal Resection And Reconstruction

Authors: B Naidu; F Collins

Author's Institution: Heartlands Hospital, Birmingham, United Kingdom

Objectives: Posterior chest wall resection and reconstruction with combined vertebral excision and stabilisation as a single staged procedure for cancer requires good co-ordination and co-operation between specialist surgeons. We present two such cases with oncological clearance and excellent cosmetic/functional results. Our favoured chest wall prosthesis is a moulded plate made from orthopaedic cement (Methyl Methacrylate), sandwiched between two layers of prolene mesh. The medial fixation of this is complicated by the resection of the vertebrae and soft tissue.



Minimally Invasive Radical Lymphadenectomy for Early Stage Lung Carcinoma

Authors: B Witte; M Huertgen

Author's Institution: Katholisches Klinikum, Koblenz, Germany

Objectives: To assess the feasibility and radicality of a combined thoracoscopic and mediastinoscopic approach to mediastinal lymphadenectomy compared to thoracoscopy only for minimally invasive management of early stage lung carcinoma.

Methods: Prospective observational study of all patients who underwent anatomical thoracoscopic lung resection for lung carcinoma in our department in 2007. Mediastinal lymphadenectomy was performed either thoracoscopically (VATS group) or by a combination of videoassisted mediastinoscopic lymphadenectomy (VAMLA) and thoracoscopy (VAMLA+VATS group). Inclusion criteria for the study were: stage Ia on CT scan, no central tumour at bronchoscopy, and no contraindications against lobectomy or segmentectomy. Additional criteria for VAMLA were: preoperatively confirmed histology, and no contraindications against multimodality treatment.

Results: Eighteen VAMLA+VATS and 14 VATS patients were studied. For histology, pTNM stage, type of resection, semiquantitative assessment of the fissure and vascular dissection plane, conversions, blood loss, operation time, adverse events and drainage time, no differences between the two groups were observed. In the VATS group there was slight preponderance of women, and right-sided tumours. In the VAMLA+VATS group, both the number of dissected mediastinal lymph node stations (6.4 vs 3.6 stations) and the weight of the mediastinal specimen (10.7 vs 5.6 gr.) were significantly higher than in the VATS group ($p < 0.005$).

Conclusions: A combined approach by VATS and VAMLA improves radicality of minimally invasive mediastinal lymphadenectomy without increase in operation time, morbidity, and drainage time.

Tuesday 11th March Session 12
15:55 – 16:05 Pentland

Abstract No. 98

Hands Off or Quick & Dirty? VATS Lobectomy versus Open Segmentectomy for Stage 1 NSCLC in COPD

Authors: I Lyons; M Chamberlain; A Martin-ucar; A Nakas; D Waller

Author's Institution: Thoracic Surgery Department Glenfield Hospital, Leicester, United Kingdom

Objectives: Lung cancer resection in patients with COPD has the potential for increased risk. The risk of post operative respiratory complications can be avoided by reducing the thoracic wall trauma by VATS or by preserving functional lung by anatomical segmentectomy. We aim to compare these two operative strategies both in terms of peri-operative course and long term survival.

Methods: Over a ten year period a total of 115 consecutive patients were identified from operative records as having undergone either VATS lobectomy (n=61) or open segmentectomy (n=54) for stage 1 NSCLC and impaired FEV1 (less than 70% predicted). Information regarding patient demographics, respiratory function, pathology, in hospital morbidity and mortality were retrieved from patient and medical databases. All the VATS lobectomies were performed by a single experienced operator. All patients had epidural analgesia.

Results: Overall mortality was 7%. There were no significant differences in age, pre-operative spirometry, hospital stay, operative time, ITU usage, in hospital mortality or median survival (TABLE 1).

Conclusions: We have found no therapeutic benefit from the use of VATS lobectomy in high risk patients with stage 1 NSCLC. It remains to be debated whether the additional training required for this technique is justified in this context. There should be no shame in performing a “quick and dirty” open anatomical parenchymal-sparing operation with adequate analgesia.

	VATS lobectomy	Open Segmentectomy
FEV1 % predicted	52% (19-69)	53% (34-69)
Operation time (mins)	207 (63-270)	186 (114-275)
ITU use %	6.5	5.5
Hospital stay (days)	6 (2-67)	8 (3-36)
In hospital mortality %	4.9	9.2
Median survival (years)	5 ± 1	8 ± 1

Data as median (range)

A Randomized Controlled Trial Comparing Pericardial Buttress Versus Stapling With Bioglue In Preventing Airleaks In Lung Volume Reduction Surgery

Authors: S Rathinam; B Naidu; P Nanjaiah; M Loubani; M Kalkat; P Rajesh

Author's Institution: Birmingham Heartlands Hospital, Birmingham, United Kingdom

Objectives: Lung volume reduction surgery (LVRS) is complicated by prolonged airleak. Various adjuncts are advocated to reduce air leak after LVRS. A feasibility study was conducted to compare effectiveness of BioGlue (CryoLife Europa) and buttressed pericardial strips (Peristrips, Pulse) in reducing air leak in LVRS.

Methods: A prospective, self controlled randomised, clinical trial was conducted in patients undergoing LVRS. For each patient bioglue was used as an adjunct to the staple line on one side and pericardial buttress (our standard practice) was used on the other side. The sides were randomised for adjuncts with each patient acting as his own control. Duration of air leak, intercostal drainage and time to chest drain removal were the study end points.

Results: 10 patients undergoing bilateral LVRS through a median sternotomy were recruited between December 2005 to October 2007. There were 6 men (60%) and mean age of patients was 59.8 years (range 48-64.5 years, SD 4.91). There was one mortality due to non study related causes. One patient in the Peristrips group needed additional pneumostasis at the end of the procedure. The outcome data presented as mean \pm SD in Table 1. No major complications were encountered with either BioGlue or Peristrips.

Conclusions: This study demonstrates comparable efficacy of BioGlue and Peristrips in prevention and reduction of of alveolar air leak after LVRS. .

	Bioglue	Peristrips	p
Airleak (days)	3.0 \pm 4.6	6.50 \pm 6.88	0.267
Drainage Volume (ml)	733 \pm 404.3	1001 \pm 861.2	0.650
ICD duration (days)	9.7 \pm 10.56	11.5 \pm 11.07	0.732

Comparable outcomes between the two groups

Tuesday 11th March Session 12
16:15 – 16:25 Pentland

Abstract No. 100

The Role of Surgery in the Treatment of Limited Disease Small Cell Lung Cancer

Authors: E Belcher; Y Yap; N Andrew; P Goldstraw; E Lim

Author's Institution: The Royal Brompton Hospital, London, United Kingdom

Objectives: Concurrent chemo-radiotherapy is considered the standard treatment for small cell lung cancer (SCLC), however, the results remain poor. We sought to determine the survival after complete resection of SCLC and the prognostic impact of pathological stage.

Methods: A retrospective review was undertaken of patients who underwent surgery between 1980 and 2006. Patients were staged according to the 6th edition of the TNM classification of lung cancer, actuarial survival estimated with Kaplan-Meier methods and comparisons were undertaken using Cox regression.

Results: 59 patients underwent complete resection with nodal dissection for SCLC between 1980-2006. Completeness of resection was based on operation notes and histopathological examination of resected tissue. Mean age was 62 years and 69% were male. Clinical staging was available in 53 patients: stage IA (n=9), IB (n=21), IIA (n=0), IIB, (n=13), IIIA (n=9), IIIB (n=1). Histological examination showed small cell lung carcinoma in 73% of patients and small cell in combination with another tumour type in the remaining. The median time to follow-up (1st to 3rd quartile) was 2.8 (0.79-8.65) years with an overall survival at 1 and 5 years of 76% and 52% respectively. There was no difference in survival across clinical or pathological T ($p=0.366$, $p=0.331$) or N ($p=0.489$, $p=0.597$) categories, with increasing age being the only significant predictor of mortality ($p=0.05$).

Conclusions: Our results show excellent survival for stage I to stage III patients who underwent resection supporting the need to re-evaluate the role of surgery in patients with very limited disease.



Does Failed Video-assisted Lobectomy for Lung Cancer Prejudice Immediate & Long-term Outcomes?

Authors: R Jones; G Casali; WWalker

Author's Institution: The Royal Infirmary of Edinburgh, Edinburgh, United Kingdom

Objectives: VATS lobectomy for lung cancer remains an infrequently performed operation. This is despite numerous publications showing the benefits of successful VATS compared to an open thoracotomy approach. However, concern remains regarding patient safety notably the need for emergent intra-operative conversion to open thoracotomy leading to potential adverse consequences. We therefore sought to compare the outcomes of converted VATS patients with open thoracotomy controls. No study has specifically addressed this issue and certainly the long-term outcomes of converted VATS patients are unknown.

Methods: 30 out of 286 VATS Lobectomies for cancer required intra-operative conversion to open thoracotomy between May 1992 and April 2006. Of these, 4 were of advanced cancer stage and excluded from the study. The remaining cases were matched 2:1 with open thoracotomy controls by age, sex, cancer stage, year and type of operation. Post-operative complications and pathology were determined from the hospital discharge summary and pathology report. Long-term survival information was obtained from the GP or central registry.

Results: There were no statistically significant differences regarding post-operative complications between the two groups $p=0.64$. There were no in-hospital deaths in the converted VATS group. Kaplan-Meier survival analysis for cancer related or unassociated death demonstrated no statistically significant difference $p=0.24$.

Conclusions: Conversion during attempted VATS resection does not prejudice short or long-term surgical outcomes. We therefore suggest that VATS Lobectomy should be the treatment strategy of choice for stage I and II non-small cell lung cancer in view of the well established short-term benefits and equivalent survival associated with successful VATS resection.

Tuesday 11th March Session 12
16:35 – 16:45 Pentland

Abstract No. 102

Active Treatment Rate for Lung Cancer Patients at The University Hospital Of South of Manchester: Are we Doing Enough?

Authors: M Devbhandari; K Piotr; R Shah; MT Jones

Author's Institution: University Hospital of South Manchester, Manchester, United Kingdom

Objectives: In order to improve the quality of treatment the National Lung Cancer Audit (LUCADA) has been introduced. A prospective tracking study was designed to monitor the quality of lung cancer services at our institute.

Methods: From September 2003 to December 2005 all primary lung cancer referrals to North West Lung Centre were tracked prospectively. Patient's pathways were monitored and treatments received were documented. Active treatment was defined as any therapeutic intervention with the aim of improving the quality or length of patients' survival irrespective of whether it is curative or palliative.

Results:

From August 2003 to December 2005 a total of 342 were confirmed to be new cases of lung cancer. 193 (56%) patients presented through GP and 149 (44%) took other routes. The majority of patients were male (63%) and the median age was 71 years (IQR 62-77 years) at presentation. The cell types were small cell (SCLC), non-small cell (NSCLC) and mixed cancers in 52 (15.2%), 229 (67%) and 1 (0.3%) patients respectively while 60 (16.5%) patients had no histological confirmation.

Overall, the active treatment rate was 71% with 58 (17%), 122 (35.5%), 59 (17.5%) and 3 (1%) undergoing surgery, chemotherapy, radiotherapy and other methods respectively. The active treatment rates for histologically proven SCLC, NSCLC and all lung cancers excluding SCLC were 82.7%, 78.2% and 69% respectively compared to the LUCADA national average of 71%, 62% and 52% respectively for the same period.

Conclusions: These reassuring results show that South Manchester has excellent active treatment rates for lung cancer.



Tuesday 11th March Session 12
16:45 – 16:55 Pentland

Abstract No. 103

Intraoperative Talc Pleurodesis may be Inappropriate for Young Patients.

Authors: N Shah; A Martin-Ucar; L Beggs; F Beggs; J Duffy; E Black

Author's Institution: Nottingham University Hospitals NHS Trust, Nottingham, United Kingdom

Objectives: Talc is an effective agent for pleurodesis. Concern regarding its safety has limited its appeal for younger patients. We reviewed 14 years of experience to identify complications in patients receiving intraoperative talc pleurodesis (ITP).

Methods: 212 patients received ITP between 1993 and 2007 [155 male and 57 female, median age 61 (range 16-83) years]. Indications included 75 pneumothorax patients and 137 effusion patients. Histology of the effusion group included 41 benign pathologies, 61 mesotheliomas and 35 other malignancies.

Results: Median hospital stay was 6 (range 1-35) days. Two patients (0.9%) had an in-hospital death whilst a further 5 (2.4%) died within 30 days. 44 patients (21%) had a postoperative complication including respiratory complications in 29 patients (14%). 31 patients (15%) had difficulties with poor pain control following surgery. Patients in the pneumothorax group were younger than in the effusion group ($p < 0.001$) and had a longer hospital stay ($p = 0.003$). They also had more problems with pain ($p < 0.001$) but no more respiratory or overall complications than the effusion group.

Conclusions: Intraoperative talc pleurodesis is associated with a complication rate of 21% and a respiratory complication rate of 14%. Young patients undergoing pleurodesis for pneumothorax suffered with more problems regarding post operative analgesia.

Tuesday 11th March Session 12
15:45 – 15:55 Ochil

Abstract No. 104

The Validation & Role of Extra Vascular Lung Water Measurement in the Potential Lung Transplant Donor

Authors: R Venkateswaran¹; V Patchell²; I Wilson¹; J Mascaro¹; R Thompson ¹, J Coote²; R Bonser¹

Author's Institution: ¹University Hospital Birmingham NHS Foundation Trust, Birmingham, United Kingdom; ²University of Birmingham, Birmingham, United Kingdom

Objectives: It remains difficult to satisfactorily identify transplantable donor lungs. Lung water may increase following brainstem death due to a number of hydrostatic and permeability influences and thus its measurement might aid assessment and guide management. We therefore validated thermodilution lung water quantification, using gravimetry and assessed the impact of extra vascular lung water index (EVLWI) measurement during donor management.

Methods: EVLWI measurement was performed in 60 potential lung donors (initial $pO_2 > 30$ KPa) followed by optimisation for 6.9 ± 1.2 hours and then repeated prior to retrieval. Donor lungs not accepted for transplant ($n=20$) were retrieved for measurement of lung water by gravimetry using Holcroft and Trunkey modification of the Pearce method. Donors were randomly allocated to receive methylprednisolone (MP)(\pm triodothyronine)($n=29$) or placebo \pm T3($n=31$). Changes in EVLWI, response to MP and ultimate suitability for transplant were assessed.

Results: There was a strong correlation of EVLWI and EVLW-gravimetry ($r=0.7$; $p=0.001$) confirming the validity of this measurement post-BSD. Initial EVLWI was elevated in 16/60 donors (>10 ml/kg). Despite optimization, EVLWI deteriorated from 9.7 ± 4.5 to 10.8 ± 5.2 ; $p=0.009$, between assessment and retrieval. Initial EVLWI was higher in lungs ultimately unsuitable for transplant (11.2 ± 5.6 versus 8.4 ± 2.9 ; $p=0.02$) and an initial EVLWI >10 ml/kg was predictive of unsuitability ($p=0.019$) on univariate analysis despite comparable initial PaO_2/FiO_2 ratio. MP attenuated the increase in EVLWI during optimization ($p=0.019$).

Conclusions: Thermodilution EVLWI is a valid index of lung water post-brainstem death and may further discriminate organ suitability in lung donors. Lung water represents a factor that could be specifically targeted to improve donor lung function and yield.

Tuesday 11th March Session 12

15:55 – 16:05

Ochil

Abstract No. 105

Assessment of 20 Consecutive Lung Allografts from Donation after Cardiac Death

Authors: C Wigfield¹; J Lindsey¹; R Love²

Author's Institution: ¹University of Wisconsin Hospitals, Madison, WI, United States;

²Loyola University Medical Center, Maywood, ILL, United States

Objectives: Only 18% of available lung allografts are suitable for transplantation. Donation after cardiac death (DCD) is a promising additional source for allografts. There are few reports regarding DCD-donor lungs. We established characteristics of successfully transplanted controlled DCD-lung allografts.

Methods: Retrospective evaluation of procurement data and case notes of 20 consecutive DCD-lung donors. Demographic, clinical and death related details were reviewed. Oxygenation at FiO₂ 0.4 and 1.0 were recorded. Evaluation methods, specific DCD-procurement protocols, warm (WIT) and cold ischaemic times (CIT) were assessed. Recipients' lung allocation scores (LAS), incidence of primary graft dysfunction (PGD), rejection episodes and survival was determined.

Results: Median DCD-donor age 28 years; multitrauma (9) was predominant CoD others due to CVA (5), anoxia (2), asphyxia (3); one DCD-donor suffered prior cardiorespiratory arrest. PO₂ (means) at baseline-FiO₂ (0.4): 135.5 mmHg; after O₂-challenge FiO₂ (1.0) 474.4 mmHg. Final O₂ prior to withdrawal was 406.4 mmHg. At least one bronchoscopy was performed in all donors to assess graft adequacy and re-intubation was required for all DCD allografts procured. Procurement procedure varied minimally according to local protocols. Ischaemic times were: WIT 36.2 min (19-93min), CIT 349min (228-480 min). Mean LAS was 58.3 (35.1-90.5). No clinically evident PGD was observed in recipients. In-hospital 30day and 1 year survival of DCD lung recipients in this series is 94% and 83%, respectively.

Conclusions: The pre-withdrawal oxygenation observed at baseline and after O₂-challenge in DCD donors was correlated with excellent outcomes. Combined WIT/CIT upto 4 hrs have not resulted in clinically relevant PGD. A standardized approach, adherence to local DCD-protocol and prospective evaluation of outcomes is advocated.

Tuesday 11th March Session 12
16:05 – 16:15 Ochil

Abstract No. 106

The Effect of Methylprednisolone on the Pro-inflammatory Post-brain Stem Death Environment

Authors: R Venkateswaran¹; V Dronavalli¹; P Lambert²; I Wilson¹; J Mascaro¹; R Thompson¹; R Bonser¹

Author's Institution: ¹University Hospital Birmingham NHS Foundation Trust, Birmingham, United Kingdom; ²Aston University, Birmingham, United Kingdom

Objectives: Brainstem death may elicit a pro-inflammatory cytokine response which might be manipulated by steroid administration. We investigated the prevalence of this response and the effect of steroid (methylprednisolone (MP)) administration.

Methods: Using commercial immunoassays, serum levels of C-reactive protein (CRP), Interleukin-1, 6 (IL-1, IL-6) and tumor necrosis factor (TNF-alpha) were measured at initial assessment in 79 potential heart donors who were invasively monitored and managed with an algorithmic protocol. In donors receiving norepinephrine (NE) vasopressin was actively substituted. Donors received tri-iodothyronine (0.8µg/kg bolus; 0.113µg/kg/hr infusion), MP(1000 mg bolus), both drugs or placebo in a prospective randomised study. Measurements were repeated following an interval of 6.9±1.3 hours.

Results: The median age was 44 years. IL-1 and TNF-alpha levels were undetectable or within normal limits in 79/79. IL-6 (pg/ml) was elevated in 79/79(92.6±26.9) and CRP (mg/l) in 69/79(101.9±64.6). Pre-retrieval measurements were unchanged (IL-6 97±25.2; p=0.06 and CRP 114.5±62.7; p=0.06). Early MP administration (39/79) did not affect levels (Table). Forty/79 hearts achieved haemodynamic criteria of transplant suitability but marker levels did not predict suitability. Forty/79 were receiving NE. NE donors had higher initial TNF-alpha (8.5±2.4 versus 7.4±2.2; p=0.045). IL-6 and IL-1 fell in non-NE donors (p=0.044) but not NE donors. At initial assessment, 27 hearts were dysfunctional and these donors had higher TNF-alpha (8.7±2.9 versus 7.5±1.9 p=0.044).

Conclusions: There is an inflammatory environment in the cardiac donor that may be worse in donors requiring or receiving norepinephrine. Cytokines are not reduced by administration of methylprednisolone. Cytokine measurement may have a role in donor heart assessment.

Cytokine	Non-MP	MP	p-value
IL-1	0.96±5.1	-1.1±5.4	0.11
IL-6	-7.3±20.2	-2.2±19.8	0.30
TNF-alpha	0.5±2.8	0.3±2.5	0.78
CRP	1.3±21.5	-5.8±47.8	0.42

Delta - change in markers

The Non-heart Beating Donor for Heart Transplantation: A New & Evolving Source of Organs

Authors: A Ali¹; P White²; K Dhital³; M Ryan²; S Tsui³; S Large³

Author's Institution: ¹Standford University, USA, ²Addenbrookes Hospital, Cambridge, United Kingdom, ³Papworth Hospital, Cambridge, United Kingdom

Objectives: The non-heart beating donor (NHBD) is an increasing source of organs for transplantation. Cardiac donation from NHBD has been considered unsuitable due to warm ischaemia and potential anoxic neurological insult. We describe successful in-vivo cardiac resuscitation in a NHBD with extracorporeal perfusion. Furthermore, we review this donor source to estimate what proportion would be suitable for cardiac donation.

Methods: A human NHBD suffered cardiac arrest after elective withdrawal of supportive therapy. Extracorporeal perfusion was established through cannulation of the great vessels twenty-three minutes after death. Pressure-volume data was acquired using the conductance catheter technique to determine load-independent right and left ventricular contractility. A clinical database of 67 NHBD was reviewed to determine what proportion would be suitable cardiac donors based on their past medical history and pre-terminal cardiovascular status.

Results: Following resuscitation, extracorporeal support was withdrawn and the heart supported the circulation independently confirming effective cardiac function. Pressure-volume data demonstrated satisfactory left ventricular function with contractile reserve. The right ventricle exhibited diastolic dysfunction without contractile reserve. Database review confirmed that 80% of NHBD were potential candidates for heart donation.

Conclusions: The world's first heart transplant in 1967 was performed using a heart from a NHBD. We have demonstrated successful resuscitation of the heart in a controlled NHBD with adequate functional cardiac recovery to support the circulation. We believe that the non heart-beating donor source can significantly increase the number of organs available for cardiac transplantation

Tuesday 11th March Session 12
16:25 – 16:35 Ochil

Abstract No. 108

Assessment & Transplantation of Cardiac Allografts using Continuous Blood Perfusion via the Organ Care System (transmedics): A Single Centre Experience

Authors: A Barker; K Dhital; D Jenkins; M Berman; C Sudarshan; J Dunning; S Large; S Tsui

Author's Institution: Papworth Hospital, Cambridge, United Kingdom

Objectives: Donor hearts are conventionally preserved in a cold and arrested state, which imposes time limits on assessment and transportation. The Transmedics Organ Care System (OCS) uses continuous warm blood perfusion for donor hearts, and provides the opportunity for prolonged assessment and optimisation.

Methods: Donor hearts are assessed for transplantation in-vivo by standard criteria including pulmonary artery catheterisation. Accepted organs are explanted, cannulated and perfused continuously in the OCS. Aortic pressure, coronary blood flow, oxygenation and lactate are monitored. After retrieval on the OCS, suitable hearts are transplanted in the normal way.

Results: Since 2006, the OCS was used for 11 donor hearts including 2 practice runs. Eight hearts were successfully transplanted and all patients continue to be well at 12-month follow up (range 6-16 months). One heart produced increasing lactate on the OCS despite satisfying perfusion parameters and maximal vasodilator therapy. This heart was not transplanted. Subsequent histopathological examination demonstrated severe non-calcified coronary artery disease.

Conclusions: The Organ Care System offers an effective way of transporting organs for transplantation. Assessment on the OCS uncovered significant occult pathology in one heart and stopped implantation of a suboptimal organ. Adopting the OCS for organ maintenance and assessment may therefore lead to improved transplant outcomes in the future.



Tuesday 11th March Session 12

16:35 – 16:45

Ochil

Abstract No. 109

Donor Cardiac Troponin-i: A Biochemical Surrogate of Heart Function but Not a Predictor of Outcome

Authors: R Venkateswara; R Steeds; J Ganesh; V Dronavalli; I Wilson; J Mascaro; R Thompson; R Bonser¹

Author's Institution: University Hospital Birmingham NHS Foundation Trust, Birmingham, United Kingdom

Objectives: Cardiac troponin-I (cTnI) levels in the potential cardiac donor may be inversely associated with heart function in the donor and recipient. We studied whether cTnI levels predicted donor heart usability versus functional data.

Methods: In a prospective study, cTnI measurement, Swan-Ganz catheterisation and transthoracic echocardiography were performed at initial assessment in 80 potential cardiac donors (mean age 43±13.1yr), All donors were then managed according to a strict algorithm to optimize cardiac function and received hormonal therapy as part of a randomised trial. Donor heart suitability for transplantation was assessed after 6 hours of management. The association of cTnI with initial functional indices was assessed and outcome compared for donors categorised according to cTnI level (1µg/L)

Results: Initial cTnI strongly correlated with initial cardiac index (CI) ($p=0.003$), right ($p<0.001$) and left ventricular ejection fraction($p=0.001$) and LV (but not RV)-Tei index ($p=0.003$). Serum cTnI was elevated in 29/80 donors. Higher CVP (10 ± 5.1 vs 7.9 ± 2.9 mmHg; $p=0.026$) and PAWP (12 ± 5.4 vs 8.1 ± 3.1 mmHg; $p=0.002$), lower cardiac index (2.7 ± 1.1 vs 3.6 ± 0.9 l/min/m²; $p=0.001$) and fractional shortening ($p<0.01$) and worse wall motion score index ($p<0.01$) and RV-tei index ($p=0.012$) were observed in the cTnI $>1\mu\text{g/L}$ group. Despite these differences, the number of hearts ultimately suitable for transplantation post-optimisation, were not different ($p=0.137$) and post-transplant 30-day and 1 year survival were similar.

Conclusions: The donor cTnI level represents a biochemical correlate of functional donor heart assessment. Although, high cTnI is associated with worse donor heart function, this does not preclude successful optimization or recipient outcome following transplantation.

Tuesday 11th March Session 12
16:45 – 16:55 Ochil

Abstract No. 110

Mathematical Modelling to Identify Patients who should Not Undergo Left Ventricular Volume Reduction Surgery (LVVRS)

Authors: M Poullis¹, R Poole²

Author's Institution: ¹CTC, Liverpool, United Kingdom; ²University Engineering Department, Liverpool, United Kingdom

Objectives: To develop a mathematical model that would enable the prediction of the cardiac output post resection of free left ventricular wall, to establish who should not undergo LVVRS. The benefits of a model are that associated cardiac and non cardiac conditions do not affect the mathematical analysis, while still yielding a clinically relevant answer.

Methods: A mathematical model was developed. Systolic and diastolic slice summation analysis was utilised. Two scenarios were evaluated dilated cardiomyopathy, and left ventricular wall aneurysm.

Results: In diffuse cardiomyopathy a left ventricular diastolic volume (LVDV) of 380 ml, ejection fraction (EF) of 15%, and a heart rate of 80, produces a cardiac output of 4.5 L/min; after LVVRS to reduce the LV volume to 315ml, the EF is unchanged, but the cardiac output drops by 0.7 L/min.

In LV aneurysms, a LVDV of 380 mL, EF of 20%, and a heart rate of 80, produces a cardiac output of 4.5 L/min; after LVVRS to reduce the LV volume to 320 ml, the EF increases to 60%, and the predicted cardiac output doubles.

Conclusions: The model demonstrates that LVVRS is potentially very hazardous in the setting of dilated cardiomyopathy, a fact confirmed in the international registry report. However in the setting of left ventricular wall aneurysm, the surgery can result in marked improvement in cardiac output. The effect on post operative cardiac output, due to the extent of LV resection can now be quantified pre operatively.



Tuesday 11th March Forum
16:15 – 16:35 Sidlaw

Abstract No. 111

The Impact of Oesophagectomy for Carcinoma on Health Related Quality of Life.

Authors: S Deacon; A Martin-Ucar; L Beggs; J Duffy; E Black; D Beggs

Author's Institution: Nottingham University Hospitals NHS Trust City Campus, Nottingham, United Kingdom

Objectives: This study aimed to explore the impact of oesophagectomy on patients' post-operative quality of life.

Methods: The EORTC's generic quality of life questionnaire C30 and the oesophageal disease-specific module OES 24 were completed at pre-admission clinic then posted at 6 and 12 months post oesophagectomy. 85 participants, median age 68 (range 41 to 89) years responded to the postal questionnaires. Scores were grouped into scales using EORTC algorithms and analysed using the Wilcoxon signed rank test.

Results: There was deterioration across the generic symptom scales in QLQ-C30 (all $p < 0.05$), but the overall rating of patients' global health status did not show significant change.

In contrast, QLQ-OES24 showed no differences from pre to post-operatively in all scales and single items, except dysphagia, which improved significantly after surgery ($p = 0.001$).

Conclusions: Discussion: Patients' rating of their health status did not worsen despite the deterioration shown by the generic questionnaire scales, demonstrating the importance of using disease-specific tools to assess treatment effectiveness.

Clinical Implications: 'Quality of Life' assessment tools provide data that can be used not only to evaluate the effectiveness of oesophageal resection for the treatment of cancer, but also to inform and educate the patients who undergo it.

Tuesday 11th March Forum
16:35 – 16:55 Sidlaw

Abstract No. 112

How To Establish A Catheter Based Aortic Valve Replacement Program: Early Experience With The Partner Trial.

Authors: O Wendler; M Baghai; P MacCarthy; M Thomas; M Monaghan; K Wilson; E Alcock; R Kailasam; A El-Gamel

Author's Institution: King's College Hospital, London, United Kingdom

Objectives: We report our strategy on how the percutaneous valve program was initiated at our institute.

Methods: The multidisciplinary team approach includes cardiac surgeons, cardiologists, imaging specialists, anaesthetists, and nurses.

We present the pre-operative patient selection process which is both critical and vital for a successful outcome. This includes a detailed assessment of the patients which enables us to choose the optimal surgical approach: trans-femoral versus trans-apical.

For post operative follow up we again have a multidisciplinary approach so as to make sure all events are effectively recorded and none of the patients are lost to follow-up.

Results: N/A

Conclusions: We would also like to take this opportunity to share some of the lessons we have learnt so far.



An Audit of Post-operative Pain Management of Patients undergoing Thoracotomy

Authors: N Kiely; M Kingston; M Buckley

Author's Institute: St. James's Hospital, Dublin, Ireland

Objectives: To determine what analgesia was prescribed and administered to patients post thoracotomy and to assess its effectiveness.

International guidelines on the management of post-operative pain suggest that a 'multimodal' approach using epidural therapy with a local anaesthetic agent and an opioid for at least 72 hours together with a non-opioid agent administered intravenously (IV) or orally (PO) is the 'gold standard' for the management of postoperative pain.

Methods: Between 1st of October 2006 and 30th of September 2007, 161 patients underwent thoracotomy in St. James's Hospital. 25% of these patients were randomly selected. A retrospective audit of their medical records was conducted.

Results: In the majority of patients reviewed for this audit, postoperative pain was managed in accordance with international guidelines. However a high percentage of patients audited required review and top-up analgesia within the first 24 hours post-operatively.

Conclusion: Despite adherence to international guidelines patients post operative pain levels require regular assessment and individualised management. A multi-disciplinary approach optimises patient care.

The Less Time in ICU the Better

Authors: M Buckley

Author's Institute: St James's Hospital, Dublin, Ireland

Objectives: The majority of patients who undergo cardiac surgery are admitted to ICU for less than 24 hours and there appears to be no literature available on the impact an ICU admission has on their psychological well-being. The aim of the study was to discover the lived experience of a short-term admission to ICU.

Intensive Care Units are highly stressful environments, and it is hardly surprising that a significant number of patients are psychologically traumatised from the experience. This can impair their quality of life. There is an abundance of literature outlining psychological problems caused by an admission to ICU for longer than 3 days; however no research looked at patients who were in ICU for less than 24 hours.

Methods: Using a phenomenological approach, the researcher conducted semi-structured interviews with patients (n=6) who had spent less than 24 hours in ICU. Data was analysed using Colazzi's seven-stage framework.

Results: It was discovered that there were both positive and negative outcomes from their short-term admission to ICU. Within each theme there were three sub-themes. The positive outcomes included a positive outlook for the future, feelings of safety and feelings of relief. The negative outcomes included difficulties in sleeping, intrusive thoughts and negative feelings.

Conclusion: This research provides an insight for healthcare professionals on the psychological effects of short-term admissions to ICU. It is important that we are aware that early discharge from ICU can have a positive outlook for the patients' psychological recovery. This information should impact on future planning, as we continue to strive in discharging patients from ICU as soon as possible. Early discharge will ensure our patients remain positive and optimistic about their future.



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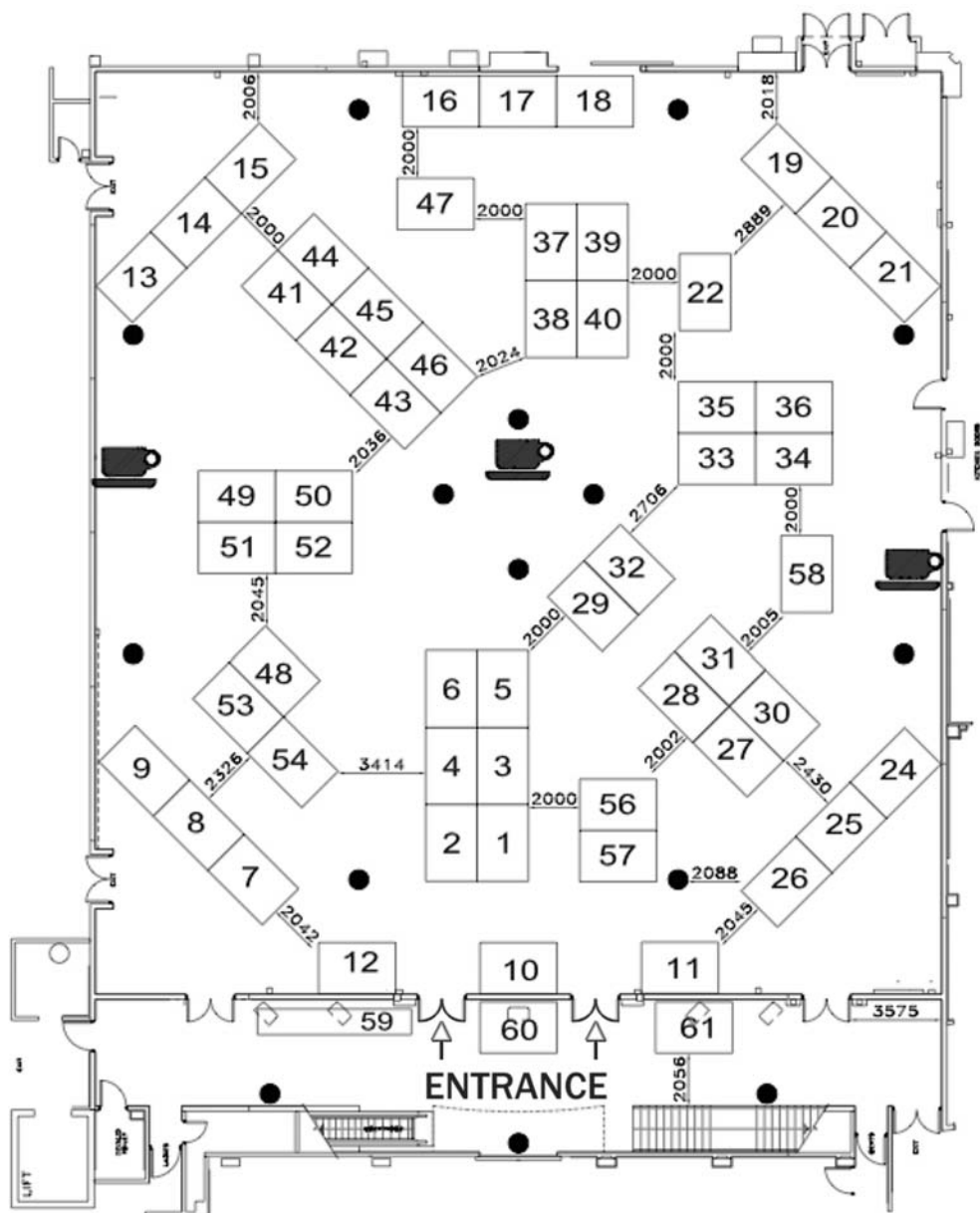
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Email: atriumuk@atriummed.com

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Stand 58

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Stand 47

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The Acorn Corecap device and the most recent published data is presented on the stand. New data shows that this is a very effective and safe answer for particular heart failure patients when there is no other option.

To continue the heart failure theme The TRISAVR device from Chase Medical is displayed. This shaping device provides the surgeon with predictable, reproducible results when confronted with a difficult ventricular restoration procedure for ventricular aneurysms.

With the growing use of biventricular pacing, the surgical implantation of LV pacing leads is on the increase. The Enpath Myopore bipolar screw-in lead and minimally invasive tool the Fastac are becoming very popular in the UK and are presented on the stand.

New for this year is the Novadaq Spy intra-operative imaging system. This system provides the Cardiac Surgeon with fabulous pictures in the theatre for real-time assessment of graft patency and allows recordable and printable images for documentation purposes.

CARDIO SOLUTIONS UK LTD

Stand 57

Customer Services:

Tel: 01423 875 787

Fax: 01423 501 112

Email: customer.services@cardiosolutions.co.uk

Web: www.cardiosolutions.co.uk

Cardio Solutions Ltd is a UK based company dedicated to the supply and sales management of Cardiothoracic equipment to the UK health market. Established in 2005, Cardio Solutions Ltd has continued to build on relationships within the medical industry to ensure the highest quality of service in the delivery of Cardiothoracic equipment, education and support to surgeons, NHS Trusts and hospitals.

Our product portfolio encompasses some of the finest innovations in medical technology including; St Jude Heart Valves, Conduits, Mitral Repair Rings and the Epicor High Intensity Focused Ultrasound (HIFU) ablation device; Medical Concepts Temporary Pacing Wires and Disposable Patient Cables; Tissuemed's Tissuepatch 3 – a barrier to pulmonary air leaks; Porter Medical Inc. Aortic Patches; FLEXIGRIP- Nitinol Sternal Closure Clips from Praesidia S.r.l and VirtuoSaph an Endovascular Vein Harvesting system from Terumo.

Contacts:

Mark Bailham: 07725 365 552 mark.bailham@cardiosolutions.co.uk

Wayne Wright: 07725 365 550 wayne.wright@cardiosolutions.co.uk

Mark Woolley: 07725 365 551 mark.woolley@cardiosolutions.co.uk

CHALICE MEDICAL LTD

Stands 20, 21

Chalice Medical Ltd

Coach Crescent

Shireoaks

Worksop

Nottinghamshire, S81 8AD

Tel: +44 (0)1909 470777

Fax: +44 (0)1909 470888

Email: enquiries@chalicemedical.com

Website: www.chalicemedical.com

Chalice Medical Ltd was established in 1998 to import high quality medical products from suppliers in Europe and the U.S.A specifically for the Cardiac Surgery and Perfusion market within the U.K & Ireland. Since then it has also installed manufacturing facilities to support its business.

From our head office in Nottinghamshire, Chalice manufacture customised extra-corporeal tubing packs, cannula & cardiotomy reservoirs within it's state of the art cleanrooms. The sales & marketing suites, climate conditioned warehousing and distribution centre are also located here.

Our Products Range Includes:

Levitronix Ventricular Assist Device

- CentriMag® & PediVASO short term Ventricular Assist Device

AutoTissue GmbH Heart Valves

- MatrixP: Decellularized Xenogenic Heart Valve

Perouse Cardiovascular Grafts

- Various sizes and models of formaldehyde free surgical grafts

Delacroix Chevalier Surgical Instruments

- Full range of retractors including Carpentier Mitral Valve, IMA, Dubost, Adult and paediatric ranges
- Instruments for minimally invasive surgery
- Needle holders, Micro-instruments, Resano forceps
- Titanium instruments

Medos and Gish Oxygenators and Extracorporeal Tubing Packs

- Miniature Bypass and conventional systems

- Adult, Paediatric and Neonatal ranges
- Conventional, Coated and Long Term ECMO ranges
- Cardioplegia delivery systems

Cannulae

- Full range of cannulae from leading companies around the globe

CLS SURGICAL

Stand 1

Chris Bond, Director
CLS Surgical Ltd
Coach House
The Green
Wallsend
Tyne and Wear NE28 7PG
Tel: 0191 263 4991
Fax: 0191 295 0046

COVIDIEN

Stand 41, 42

Covidien (UK) Commercial Ltd
154 Fareham Road
Gosport
Hampshire PO13 0AS
Tel: +44 (0)1329 224 330
Fax: +44 (0)1329 224 400

Covidien, formerly Tyco Healthcare, welcomes you to visit their exhibition stand to see the latest technology from two renowned divisions and one exciting new division; Autosuture, Syneture and Biosynthetics respectively.

Autosuture's innovative surgical staplers and stapleoscopy products are used worldwide and the Autosuture division remains focused on developing the best products, service and training for Surgeons and Healthcare Customers in the industry. Please ask us about our VATS MasterClass programmes.

The Syneture suture division not only provides a complete suture portfolio by combining USS's reputation for innovation with D&G's technology, but has technology no other company can provide. To test NuCoat™ needle technology, experiment with Next Generation Surgipro™ II and find out about the Cardiac training opportunities we provide, please visit the Syneture team.

The new Biosynthetic division recently launched the PleuraSeal™ lung sealant system, intended for use as a surgical sealant during pulmonary resection as an adjunct to standard closure techniques of visceral pleural air leaks. We look forward to showing you PleuraSeal™ and talking with you about your experiences and views.

CRYOLIFE EUROPA LTD**Stand 3**

CryoLife Europa Ltd
Bramley House
The Guildway
Old Portsmouth Road
Guildford
Surrey GU3 1LR
Tel: 01483 441 030
Fax: 01483 452 860
Email: europa@cryolife.com

CryoLife Europa, Ltd. will be demonstrating BioGlue® Surgical Adhesive. BioGlue can be used as a sealant, adhesive and for tissue reinforcement. Clinically proven in over 350,000 procedures worldwide, BioGlue is available in fully disposable syringes in 10ml, 5ml and 2ml volumes.

The small profile of the syringe improves site access and visualization and the all-inclusive packaging saves time and storage space. BioGlue Surgical Adhesive is CE marked for cardiac, vascular, pulmonary, dural sealing and general surgery.

CryoLife Europa Ltd will also be demonstrating the CryoLife-O'Brien® Porcine Bioprosthesis. The CryoLife-O'Brien Bioprosthesis is a stentless porcine aortic valve with proven durability and performance out to 10 years. The supra-annular implant position and single-suture line implant technique offers many benefits to both surgeons and patients.

CTSNet**Stand 9**

Website: <http://www.ctsnet.org/>
Contact: Carol L. Blasberg: blasbergc@wustl.edu
Ray Everngam ray@ctsnet.org

CTSNet is the leading international source of online resources for cardiothoracic surgeons and associated medical professionals. CTSNet hosts the primary websites of 52 professional cardiothoracic surgery organizations-including 34 international organizations. This shared hosting infrastructure allows state-of-the-art functionality and unique online resources to more than 33,000 community participants. Collaboration in the community is achieved through innovative career-development resources such as the Professional Portfolio (through which surgeons can manage Maintenance of Certification activities), sophisticated educational tools such as the Self-Examination, Self-Assessment in Thoracic Surgery and the Learning Management System (through which surgeons can study essential aspects and new techniques of CT surgery and earn CME credit), online versions of 6 leading CTS journals and a real-time, central repository for US and European operative log tracking.

DATASCOPE

Stand 56

Datascope Medical Co Ltd
Lakeview Court
Ermine Business Park
Huntingdon
Cambs PE29 6XR

Tel: 01480 423 600

Fax: 01480 423 638

During 2007 Datascope have been pleased to announce several new products:

The CS300 IAB pump gives faster time to therapy and faster response to changes in patient physiological status coupled with simple start up and automated operation.

Sensation 7Fr the smallest IAB catheter which incorporates fibre optic technology for in vivo calibration, a Durathane balloon membrane for improved abrasion resistance and the smallest size potentially reduces vascular complications.

ClearGlide the single incision vein and artery harvesting product that reduces trauma and complications and improves cosmesis

InterGard Woven grafts including speciality grafts for aortic arch and thoracic aorta repair and replacement in a range of sizes. Features include exclusive weave design giving advanced handling suturing characteristics, strength and durability.

And to compliment those products relative to CTS we are also pleased to launch the Spectrum OR Theatre Monitoring System fully specified for CardioThoracic Anaesthesia.

Through the development of innovative new products and ongoing acquisition Datascope is pleased to continue as a key provider of quality products to the field of Cardio Thoracic Surgery and a supporter of SCTS

DENDRITE CLINICAL SYSTEMS LTD

Stand 36

59A Bell Street
Henley-on-Thames
Oxfordshire RG4 9QT

Tel: 01491 411 288

Fax: 01491 411 377

Email: info@e-dendrite.com

Website: www.e-dendrite.com

Head Office Contact: Dr Peter K H Walton, Managing Director

Dendrite Clinical Systems are delighted to announce 3 new web registries that have been added to the Dendrite portfolio; the International Atrial Fibrillation Registry and the European Valve Repair Registry have been launched in association with EACTS and also a new Thoracic Stent Graft Registry.

Using web-based technology the Dendrite database now incorporates images and diagrams. Images may be single shot or moving sequences and are stored as part of the

patient's record. Diagrams are edited on-line and again saved. The patient's record can be reviewed or updated from any PC on the hospital network using Internet Explorer.

Please come and visit our exhibition stand to see a demo of these new registries and to also hear about our "Gateway" product which is a fully modular bi-directional interface engine that will handle data from hospital systems and cardiac devices to ensure you have the information you need to manage the patient and understand your clinical practice.

EDWARDS LIFESCIENCES

Stands 49, 50, 51, 52

2 Toomers Wharf

Canal Walk, Newbury, Berkshire RG14 1DY

Tel: 0870 606 2040

Fax: 0870 606 2050

Website: www.edwards.com/europe

Edwards Lifesciences is a global leader in products and technologies to treat advanced cardiovascular disease. Edwards continues to lead in the promotion of education for valve repair techniques and to innovate in valve replacement solutions. Visit our stand to learn more about the new Carpentier-Edwards Perimount **Magna**TM valve with ThermafixTM, now available for the **Mitral** position.

ETHICON LIMITED

Stand 35

P.O. Box 1988

Simpson Parkway

Kirkton Campus

Livingston EH54 0AB

Customer Services:

Tel: 0800 0327 326

Fax: 01344 864122

Web addresses: www.ethiconproducts.co.uk

ETHICON, a division of JOHNSON & JOHNSON MEDICAL LIMITED, is the worldwide leader in suture products and suture technology and is one of the most recognisable and well-respected brand names in the hospital environment. The division has a long history of innovation in providing products – including sutures, topical adhesives, surgical meshes and wound drains – that improve lives by advancing the standard of care in tissue repair.

FANNIN

Stand 46

Fannin (UK)

Pincents Kiln Industrial Park

Calcot

Reading

Berkshire RG31 7SB

Tel: FREEPHONE 0800 212 827

FANNIN is the new name in the UK for Brownes GU, and is the sole worldwide Distributor of the known and trusted **GU Surgical Instruments**.

The GU brand of Surgical Instruments has been the choice of many Cardiac and Thoracic Surgeons since 1920, and we continue to offer Quality products, at competitive prices.

Our range includes a large selection of Rib Spreaders, Atrial Retractors and Perfusion related Vents and Cannulae.

We are also proud to offer the **BOSS** range of Instruments, another favourite with all Surgeons!

We are soon to promote our new **SINGLE USE BIOPTOMES**, for use Post-Transplant Surgery. These will provide the Clinician with the same comfort and security of use as with our Re-usable Biotomes, but, as Single-use, will minimise risk of infection to the Patient.

Please visit us on Stand 46, and contact us on FREEPHONE 0800 212827

KARL STORZ

Stand 10

392 Edinburgh Avenue

Slough

Berkshire SL1 4UF

Tel: 01753 503 500

Fax: 01753 578 124

E-mail: customerservice@karlstorz.com

Contact: Steve Anderson

Karl Storz GmbH & Co. is the world's premier surgical endoscopy company with an established and acknowledged reputation for producing the finest quality surgical endoscopes and accessories. We shall be displaying a wide range of cardio-thoracic instruments for endoscopic procedures. These include the following in the cardio-thoracic product range:-

- Multifunctional retractor for Thoracic and Heart Surgery
- Endoscopic Saphenous Vein Harvesting system
- Video-Mediastinoscope

So please visit the Karl Storz stand, No.10, and we shall be pleased to discuss all your endoscopic requirements.

MEDELA

Stand 43

Medela Healthcare

Huntsman Drive

Northbank Industrial Park

Irlam

M44 5EG

Tel: 0870 950 5994

Thoracic Drainage System

Medela introduces a new system made to meet the challenges of modern thoracic surgery.

Thopaz - setting a new standard among vacuum pumps

With the new Swiss made Thopaz Medela enhances mobility, flexibility and objective data gathering for the treatment of patients after thoracic surgery.

Main features of the Thopaz-vacuum pump

Design (light weight/compact size) that fits the requirements of mobility

Electronic measurement and display of flow and negative pressure values real time and over time

Pump regularly self- checks its functioning status

Capability to download recorded patient flow and pressure values from the pump to the PC

Silent operation

Swiss made product

Benefits for patients/physicians/hospital staff

Early mobilization of the patient under continuous vacuum thereby avoiding unnecessary complications

Reduction of in-patient time/cost savings

Electronic Display of the healing process
Support in the decision making process in drainage

Avoidance of critical situations for the patient

Enhancement of confidence regarding patient status with physicians and hospital staff

Decreased probability of a pump malfunction or user error.

Enhancement of patient data tracking and archiving

Enhanced of patient comfort

Benefits of a high end product
Professional support of customers throughout the world

Visit us at our stand and experience our innovative devices first hand.

Enter our competition in order to win one of our attractive prizes!

MEDTRONIC LTD

Stands 48, 53, 54

Cardiac Surgery Division
Sherbourne House
Croxley Business Park
Watford WD18 8WW

Tel: +44 (0) 1923 212 213

Fax: +44 (0) 1923 241 004

Website: www.medtronic.co.uk and www.heartvalverepair.net

Contact: Mrs Bettina Fitt

Medtronic offer a comprehensive range of tissue valves, repair products, DLP cannulae, OPCAB products and Atrial Fibrillation pens, bi-polar clamps, generators and products specifically designed for Lone AF. We have over 60000 ablation cases safely performed worldwide. We offer the latest tissue technology in the 3rd generation stented Mosaic and the unstented Freestyle valves as well as unparalleled 20 year data on our second generation Hancock II stented tissue valves. Medtronic has recently launched two new repair products and a new range of products to support Minimally Invasive surgery.

Please visit our stand where the team will be happy to show you all of the above along with some other exciting new products.

NHS HEART PROGRAMME

Stand 8

Contacts: sheelagh.machin@heart.nhs.uk 07771 980 846
wendy.gray@heart.nhs.uk 07884 003 659

The NHS Heart Improvement Programme supports the development of 30 cardiac networks across England, facilitating improvements in the way heart services are delivered to patients and their carers in line with the aims of the National Service Framework for Coronary Heart Disease. Specific projects of the national programme include work on making the best use of inpatient beds, including a focus on surgical inter-hospital transfers; and the impact of surgery on the 18 weeks whole pathway.

In partnership with the office of the Parliamentary and Health Service Ombudsman and the Society of Cardiothoracic Surgeons, the Heart Improvement Programme has piloted the implementation of improvements in the consent process with four different surgical teams in England. The final Consent in Cardiac Surgery project report is available at www.heart.nhs.uk.

For further details, contact sheelagh.machin@heart.nhs.uk 07771 980 846 and wendy.gray@heart.nhs.uk 07884 003 659.

OPTIONS MEDICAL

Stand 34

Options Medical Limited
Little Acre
27 Kiln Road
Fareham
Hampshire PO16 7UQ
Tel: 0870 242 3717
Fax: 0870 242 3718
Website: www.optionsmedical.com

Powerful, intelligent, innovative technology just got better by incorporating existing knowledge and innovative design.

With 100 years of suction system development, Options Medical (ATMOS UK) will this year be launching the next generation of thoracic drainage systems in the UK. The ATMOS

E201/ S201 Thorax drainage systems are the most powerful available worldwide and incorporate previously unavailable technical innovations.

With the ATMOS tube measuring system, the vacuum parameters are measured directly with the patient, not just at the vacuum source. Resulting from the constant monitoring of the set parameters the siphon effect is excluded as changes in line status are automatically balanced.

The built-in alarm function of the ATMOS S/E 201 Thorax will ensure that any problem can be clearly noted by staff within a noisy clinic environment.

Including a 'real-time' flow measuring system', the ATMOS system can measure current flow parameters so staff and physicians are fully informed of the patients status.

The ATMOS S201 has the additional features of a visual flow history display, the ability to export data in MS Excel[®] format via an SD card to a PC for patient treatment history traceability, the ability to connect to a nurse calling system and a colour graphic display.

We welcome you to our stand where both systems will be available for demonstration.

PIERSON SURGICAL LIMITED

Stand 35

North Bradley House

North Bradley

Trowbridge

Wiltshire BA14 0TA

Tel: +44 (0) 7785 295 594

Fax: +44 (0) 7092 315 510

Email: annie@piersonsurgical.com

Website www.piersonsurgical.com

Contact: Annie Pierson

Pierson Surgical Ltd is a specialist surgical products distributor with a primary focus on Cardiac and Vascular products. Current products include:

Péters Sutures - a wide spectrum of high quality sutures for all aspects of surgery. This includes:

Cardionyl and Cardioflon ranges for Mitral Valve surgery

Corolene with its very low memory and high strength for Coronary surgery.

Premio which offers excellent long term stability and has the option of pre-attached pledgets for buttressing in both paediatric and adult surgery

Cardioflon with Teflon impregnation for Cardiac Valve repair, also available with pre-attached pledgets

Stainless Steel Sternal closing Wires

Perouse – Woven Vascular Prostheses for Cardiac Surgery including one, three and four branch prostheses.

Landanger Surgical Instruments – France's largest manufacturer producing an extensive range of surgical instruments with a specialisation in CardioThoracic and Vascular instruments.

Tubing Clamps for Perfusionists

Nuviv/Zeiss magnification and illumination products

Sale of ex-stock Keeler Magnification Loupes up to 50% discount

Rooke boot for protection of the lower extremities of patients by providing optimal insulation and reduced pressure.

I look forward to seeing you on the stand.

PULSE SURGICAL LTD

Stands 50, 51

32A Station Road

Chinnor

Oxon OX39 4PZ

Tel: +44 (0) 1844 352220

Fax: +44 (0) 1844 354322

Email: steve@pulsesurgical.co.uk

Website: www.pulsesurgical.com

Contact: Mr. Steve Chaplin

Pulse continues to be one of the most focused cardiac companies in the UK. As independent distributors, we can offer a unique mix of complimentary products. These include the superb Scanlan Instrument product line, associated with first-class Surgical Acuity loupes, the On-X heart valve range, Medi-Stim's flow meter with vessel location option, PeriStrips for staple-line buttressing and Periguard pericardial patches. We also handle the MedXpert range of Pectus bars and associated tools for Pectus Excavatum correction, and their unique Stratos system for Pectus Carinatum, flail chest and rib resection stabilisation. Flothru shunts, Starion's unique vessel harvesting devices, and many unique niche products to assist you in surgery also feature in our range of complimentary products.

SORIN GROUP UK

Stands 27, 28, 30, 31

Sorin Group Cardiovascular Division have been at the forefront of world heart valve design and manufacture since 1977. Unique Carbofilm™ technology, coupled with state of the art, innovative technological advancement, allows Sorin Group to offer an unrivalled portfolio of heart valve replacement and repair products.

Following their takeover of Carbomedics in 2003, Sorin Group can now offer the UK's largest choice of heart valve prosthesis, ensuring there is always a product offering which meets the surgeons needs.

To evaluate the very latest products from Sorin Group, please visit us at booth numbers 37, 28, 30 and 31, where the Sorin team will be available to discuss your requirements.

ST JUDE MEDICAL UK LTD**Stands 24, 25, 26**

Capulet House
Stratford Business & Technology Park
Banbury Road
Stratford upon Avon CV37 7GX
Tel: +44 (0) 1789 207618
Fax: +44 (0) 1789 263206
Email: sshaw@sjm.com
Website: www.sjm.com
Contact: Sally Shaw

With advances in new techniques the potential profile of patients presenting for surgery is changing. These changes are reflected in the developing product portfolio from St Jude Medical's Cardiac Surgery Division.

This year's meeting will offer the opportunity to view the Epicor Cardiac Ablation System. High Intensity Focused Ultrasound is used to provide cardiac surgical ablation safely and reproducibly, both epicardially and off - pump. Please visit our stand to see a demonstration of this system.

In addition, our established Regent™ and Epic™ families of mechanical and porcine valves will also be displayed.

We look forward to welcoming you to the St Jude Medical booth.

SYNTHESES**Stand 11**

Synthes specialises in the field of osteosynthesis offering systems for sternal closure and reconstruction. We develop, produce and market instruments, implants and biomaterials for the surgical fixation and reconstruction of the human skeleton and its associated soft tissue.

Titanium Sternal Fixation System

The Synthes Titanium Sternal Fixation System (TSFS) is intended for use in secondary reconstruction of the sternum following sternotomy or fracture where it is used to stabilise the sternum and promote fusion. It can also be used as primary closure in high risk patients.

The exciting TSFS features a locking plate concept and offers both straight and manubrium plates. It is particularly useful following extensive debridement of the sternum, or when sternal bone quality is poor. In addition the TSFS provides faster, more reliable bone healing, simpler flap technique, early extubation and shorter hospital stay.

Modular Sternal Cable System

The Modular Sternal Cable System (MSCS) is intended for primary sternal closure in high risk patients, either peristernally or transternally, after midline sternotomy and for repair/reconstruction of transverse sternal fractures.

The system's modular design provides an intra-operative flexibility depending on the patient's need and surgeon's preference. The MSCS consists of three basic implant components: cable, cannulated screws and reconstruction plates; which can be used in a number of different combinations.

TEASDALE SURGICAL LTD

Stand 4

Peter Teasdale

Teasdale Surgical Ltd

Tel: 0114 283 5811

Fax: 0114 283 5801

Mobile: 07775 602500

Email: peter@teasdalesurgical.com

Web: <http://www.teasdalesurgical.com>

UK distributors for Fehling Cardiovascular Instruments in Stainless Steel with Ceramic Coating or Titanium. Wide range of Minimal Invasive surgical instruments for Cardiac Surgery.

UK distributor for Genesee Biomedical with Sternal Retractors for Adult, Paediatric, Child and Neonate together with the Shaw IMA Retractor.

We look forward to meeting you at our stand in Edinburgh.

THORATEC

Stand 60

Thoratec Europe Ltd

Burnett House

Lakeview Court

Ermine Business Park

Huntingdon

Cambs PE29 6UA

Tel: +44 (0)1480 455 200

Fax: +44 (0)1480 454 126

Thoratec® Corporation, the pioneer and leader in ventricular assist devices (VADs), offers a full line of advanced circulatory assist devices for the restoration of hemodynamics and an improved quality of life for the widest range of patients experiencing heart failure. Only Thoratec offers both approved implantable and paracorporeal VADs for indications including Post-Cardiotomy, Bridge-to-Transplantation and Destination Therapy. The latest addition to the product portfolio is the HeartMate II (HMII) Left Ventricular Assist System, which incorporates advanced technology, precision engineering and over 30 years of clinical experience, into a pump designed to improve patient outcomes, quality of life and exceptional reliability with minimal complications.

TOMCAT CLINICAL SYSTEMS

Stand 2

Channel Wharf
Old Channel Road
Belfast
BT3 9DE

E-mail: sales@tomcat.co.uk

Web: www.tomcat.co.uk

Tel: +44 (0) 2890 467 337/8

Fax: +44 (0) 2890 467 342

Contact: John Neeson john.neeson@tomcat.co.uk

The TOMCAT Cardiothoracic Information System encompasses a comprehensive surgical reporting solution. TOMCAT provides surgeons with instant access to the complete cardiac record from anywhere in the hospital, linking to a full range of clinical equipment, imaging, and reporting systems.

The cardiothoracic surgery modules are fully compliant with the SCTS / CCAD minimum dataset. The user-friendly interface promotes speed and ease of data entry.

TOMCAT Data Analyzer is a powerful, intuitive data extraction, analysis and validation tool, providing real-time access to information stored within the TOMCAT database. Core functionality includes the ability to generate CUSUM and VLAD plots as well as chart other clinical data in various formats.

With the ever increasing focus on clinical governance, accurate data and hospital performance figures it is crucial to have an electronic information system that facilitates comprehensive clinical reporting and the easy analysis of all surgical data.

Visit Stand 2 to see the latest version of TOMCAT

TRUMPF MEDICAL SYSTEMS LTD

Stand 19

TRUMPF Medical Systems Ltd
The Granary
Pinkney Park
Malmesbury
Wiltshire
SN16 ONX

Tel: 01666 841001

Fax: 01666 841008

Email: info@trumpf-med.co.uk

Website: www.uk.trumpf-med.com

TRUMPF Medical Systems Ltd continues to supply state-of-the-art Pendant Solutions, Operating Tables and Operating Lights.

Following a successful introduction of our revolutionary iLED OR-Light range last year, we are now demonstrating our accompanying camera systems.

Within our Operating Table range we recently launched a new model - Mars 2. This Operating Table boasts a load capacity of 360kgs and can be offered in a variety of cost-effective options. Our Titan model is our universal, fully electronic operating table, with a load capacity of up to 450kgs.

TRUMPF continues to supply top quality Pendant Solutions throughout Hospitals, in particular in Theatres, Intensive Care and HDU.

IMEC is our patient equipment transfer and pendant docking system, providing an efficient method of moving patients and their life support devices around the hospital. This is yet another innovative development to our pendant range.

TruFuture is here; with TRUMPF having launched the TruVidia HD Camera, ContrastLine technology for intra-operative imaging, TruSystem 7500 our new generation of operating tables, and AmbientLine, our revolutionary lighting concept for ICU and Operating theatres.

Visit us at Stand Number 19

VASCUTEK

Stands 37, 38, 39, 40

VASCUTEK (a TERUMO Company)

Newmains Avenue

Inchinnan

Renfrewshire PA4 9RR

Scotland, UK

Tel: (+44) 141 812 5555

Fax: (+44) 141 812 7170

www.vascutek.com

Significant advances in valved conduit design are rare, however BioValsalva™, a radically new design of valved conduit is without doubt an exception.

BioValsalva™ is a unique porcine aortic biological valved conduit designed for the Bentall procedure. It is a pre-sewn device combining Triplex™, an innovative trilaminar graft material and the elan™ Vascutek Ltd porcine aortic stentless biological valve.

BioValsalva™ reduces procedure complexity, prevents valve-to-graft mismatch and has the potential to reduce bypass, cross-clamp and procedural times. It also enables the treatment of more vulnerable patient groups.

The proximal portion of the conduit is shaped to mimic the geometry and therefore blood flow patterns of the natural sinuses of Valsalva. This combined with the stentless valve ensures that near normal physiological blood flow is achieved.

Triplex™ comprises three layers, inner woven fabric, central elastomeric membrane and outer PTFE wrap. This combination provides superb handling, excellent suturability and rapid haemostasis.

VIVOLUTION

Stand 22

The Vivostat® System is a revolutionary development for the preparation and application of autologous fibrin sealant. The system is fully automated and prepares approximately 5 ml of fibrin sealant from 120 ml of the patient's own blood in just 23 minutes. No thrombin or bovine components are added to the blood at any time during the process.

The Vivostat® Spraypen® is the central and most unique component of the system. It is designed for the delivery of fibrin sealant to the surgical site in a controlled and targeted manner. The Spraypen® enables the surgeon to use the system intermittently during the entire procedure without experiencing the blockage that is common in conventional systems.

The uniqueness of the Vivostat® System is a novel patented biotechnological process that enables reliable and reproducible preparation of autologous fibrin sealant and related products without using cryoprecipitation and without the need for a separate thrombin component.

It is designed to provide the best possible solution for many different settings independent of whether it is used in the surgical area or centrally in e.g. the transfusion centre or the blood bank. The straightforward and intuitive operation means that there is no need for specially trained personnel.

For further information, please visit www.vivostat.com

WISEPRESS ONLINE BOOKSHOP LTD

Stand 59

Wisepress Online Bookshop Ltd
The Old Lamp Works
25 High Path
Merton Abbey
London SW19 2JL, UK
Tel: +44 (0)208 715 1812
Fax: +44 (0)208 715 1722
Email: Bookshop@wisepress.com
Web: www.wisepress.com
Contact: Nadia Ahmed

Wisepress Online Bookshop is pleased to present a display of publications chosen especially for the Society of Cardiothoracic Surgeons of GB & Ireland Meeting from the world's leading publishing houses. All the books on display can be ordered/bought directly at the stand or via our website. We can also order you free sample copies of the journals on display and take subscription orders. Whatever your book requirements, Wisepress will be happy to help - whether you are an author seeking a publisher or having difficulty obtaining a title, our professional staff will assist you.

GENERAL INFORMATION

The 2008 Annual Meeting of the Society will be held at the Edinburgh International Conference Centre from Sunday 9th March to Wednesday 12th March 2008.



CONTINUING PROFESSIONAL DEVELOPMENT

Delegates will be awarded 18 credits of CPD for attendance at the whole meeting. Please note that certificates of attendance will be available for collection at registration at the end of the conference. You will need to complete a feedback form in order to collect your certificate.

The Annual Meeting of the Society for Cardiothoracic Surgery in Great Britain & Ireland is accredited by the European Accreditation Council for Continuing Medical Education (EACCME) to provide the following CME activity for medical specialists: a maximum of 18 hours of European external CME credits. Each medical specialist should claim only those hours of credit that he/she has actually spent in the educational activity. EACCME is an institution of The European Union of Medical Specialists (UEMS) www.uems.be.

ANNUAL SOCIAL EVENT

The SCTS Annual Social Event will take place on Tuesday 11th March between 19:00hrs and 23:30hrs at the Caledonian Hotel, Edinburgh. An evening not to be missed, this year, the black-tie dinner will take the form of a Prohibition themed casino evening and includes champagne on arrival and a three-course meal including wine. Tickets are £60 per head and can be purchased from the registration desk until 18:00hrs on Monday 10th March. We strongly advise you to book early because we anticipate that this will be a popular event.

ANNUAL BUSINESS MEETING

Annual Business Meeting will be held on Sunday 9th March 2008 between 18:00hrs and 19:30hrs. There will also be a separate Executive and Unit Representatives Meeting at 09:00hrs - 12:30hrs on Wednesday 12th March 2008.

Please note that the Business Meetings are open to Society members only.

THE PULSE SURGICAL LECTURE

Dr Randolph Chitwood will deliver his lecture on Sunday 9th March 2007 at 17:00hrs.

HEART RESEARCH UK LECTURE

Dr Randolph Chitwood will deliver his lecture on Monday 10th March 2007 at 11:45hrs.

REFRESHMENTS AND LUNCH

Complementary tea and coffee will be provided during the official breaks in the exhibition hall. A buffet lunch is included in the registration fee, and will also be served in the exhibition hall.

REGISTRATION

Sunday 9th March 16:00 - 20:00hrs
Monday 10th March 08:30 - 18:00hrs
Tuesday 11th March 08:30 - 14:00hrs



POSTERS

All posters should be mounted in their indicated space before 08:30hrs on Monday 10th March and should be removed between 15:15hrs and 16:00hrs on Tuesday 11th March. Any posters not collected after 16:00hrs will be disposed of.

KEY TO BADGES

Badges should be worn at all times during the conference. Exhibitors will be easily identified by their yellow badges.

White – attending entire conference/forum
Green – attending Monday only
Blue – attending Tuesday only

SATELLITE MEETINGS

Sunday 9th March

19:30 - 19:45hrs Presentation Assessors & Session Chairmen Briefing
Auditorium
Chairman: Mr Simon Kendall

Tuesday 11th March

14:00 - 15:00hrs Exhibitors' Meeting
Harris Suite
Chairman: Mr Simon Kendall
(attending: Professor David Taggart, Mrs Rachel Woolf)

16:00-17:00hrs Scholarship Award Meeting
Harris Suite
Chairman: Professor Sir Bruce Keogh
(attending: Honorary Secretary, President-elect,
Cardiothoracic Dean, Education Secretary & Chairman of the

SAC)

18:00-18:30hrs Presentation Grading Meeting
Harris Suite
Chairman: Mr Simon Kendall
(attending: President, President-elect, Chairman of the
Intercollegiate Board Chairman of the SAC Cardiothoracic Dean)

SPEAKER'S ROOM

Located in part 3 of the Carrick Room.

All presenters are requested to review their audio-visual material in the Speaker's room at the following times:

Morning presentations
by 15:00hrs on the day before presentation

Afternoon presentations
by 09:30hrs on the day of presentation



TRADE EXHIBITION

The Annual Trade Exhibition will be held in conjunction with the Meeting and will be open from 08:30hrs Monday 10th March to 15:45hrs on Tuesday 11th March 2008.

WELCOME RECEPTION

There will be a Welcome Reception in the foyer area of the EICC on the evening of Sunday 9th March 2008 between 19:30 and 20:30hrs. The Welcome Reception is included in the registration fee.

SCTS 2007 Prize Winners

Ronald Edwards Medal	J Finch
John Parker Medal	D Healy
Society Thoracic Medal	R Venkateswaran
Best CT Forum Presentation	H Munday

The winners will be presented with their medals at the annual dinner.

SCTS 2008 Awards

Ronald Edwards Medal	best scientific oral presentation
John Parker Medal	best clinical presentation
Society Thoracic Medal	best thoracic presentation
Medal	best CT Forum presentation

The winners will be announced at the annual dinner

SCTS 2007 Scholarships

Society Cardiac scholarship	P Catarino
Society Thoracic scholarship	J King
The Marian & Christina Ionescu travelling scholarship	S Rooney

SCTS 2008 Scholarships

- Society Cardiac scholarship
- Society Thoracic scholarship
- The Marian & Christina Ionescu travelling scholarship

The winners of the 2008 scholarships will be announced at the annual dinner



COMMITTEES

Executive Committee 2007–2008

Note: Several members of the Executive stood down from their ex-officio posts during 2007-8 and the structure of the Executive was changed during this period. Therefore, the list below represents those who sat on the Executive in a formal capacity during that time.

* = posts no longer on the Executive

Prof Sir Bruce Keogh	President	2006–2008
Mr Leslie Hamilton	President Elect	2006–2008
Mr James Roxburgh	Honorary Secretary	2004–2009
Mr Babulal Sethia	Honorary Treasurer	2004–2009
Mr Simon Kendall	Meeting Secretary	2007-2012
Mr Sunil Ohri	Communications Secretary	2005-
Mr Chris Munsch	*Chairman of the SAC (stood down in Sept 2007)	2005–2008
Mr Leslie Hamilton	*Chairman of Inter-Collegiate Board (stood down in May 2007)	2004–2007
Mr Steven Hunter	*Cardiothoracic Dean	2004–2009
Mr Jonathan Hyde	*Cardiothoracic Tutor	2004–2007
Mr Malcolm Dalrymple-Hay	*Young Consultant's Representative	2005–2008
Mr Freddie Wood/ Ms Eilis McGovern	*Representing the Republic of Ireland	2003–
Ms Farah Bhatti	Trainee Representative	2006–2009
Mrs Tara Bartley	Nursing Representative	2006-2011
Mr Richard Page/ Mr Jim McGuigan	*Thoracic Audit	2003–
Prof David Taggart	Elected member/Deputy Meeting Secretary	2005–2008
Mr Samer Nashef	Elected member	2005–2008
Mr Tim Graham	Elected member	2006–2009
Mr Ben Bridgewater	Elected member	2006–2009
Mr Jim McGuigan	Elected member	2007-2010
Prof John Pepper	Elected member/Education Secretary	2007-2010

Working Group Chairs

Mr Mark Jones	Quality Accreditation Programme	2002–continuing
Mr Patrick Magee	Distinction Awards Committee	2002–continuing
Mr Simon Kendall	NICE Topics	2003–continuing
Mr Richard Page	Thoracic Surgical audit	2004–continuing
Mr Steven Livesey	NCEPOD Study (1st time CABG mortality)	2004–continuing
Mr Patrick Magee	Revalidation	2006–continuing
Mr Graham Cooper		
Mr Graham Venn	Review of Job Descriptions	2007–
Mr Leslie Hamilton	Medico-legal Advice Panel	2007–
Mr Samer Nashef	How to Deal with the High Risk Patient	2007
Mr Jim McGuigan	Thoracic Representation	2007–

Presidential Objectives

1	To finalise the public disclosure of surgical results	Completed
2	To develop a strategy to maximise employment opportunities for UK trainees	
3	To develop an organisational structure which integrates and recognises the professional requirements of different surgical sub-specialties	Completed
4	To develop an innovative approach to patient involvement in the Society	Graham Cooper
5	To develop a specialty driven template for re-accreditation of surgeons	Pat Magee
6	To develop a mechanism for the Society to develop clinical guidelines	Graham Venn Ben Bridgewater



Programme Committee 2008 Meeting

		Lead Reviewers	
Mr Simon Kendall	Meeting Secretary	Mr Steve Clark (lead)	Transplantation
		Mr Malcolm Dalrymple-Hay	Adult Cardiac
		Mr John Duffy	Thoracic
		Mr Brian Fabri	Adult Cardiac
		Mr Adrian Marchbank	Experimental & Miscellaneous
		Mr Andrew Parry	Congenital
		Ms Tara Bartley (lead)	CT Forum

Abstract Reviewers 2008 Meeting

Adult Cardiac	Mr Brian Fabri (lead)	Thoracic	Mr John Duffy (lead)
	Mr Malcolm Dalrymple-Hay (lead)		Mr Sion Barnard
	Mr Clifford Barlow		Mr Jim McGuigan
	Mr Geoff Berg		Mr Rajesh Shah
	Mr Ben Bridgewater		Mr David Waller
	Mr Andrew Chukwuemeka	Transplantation	Mr Steve Clark (lead)
	Mr Domenico Pagano		Mr John Dark
	Professor David Taggart		Mr Steven Tsui
	Mr Gus Tang		Mr Nizar Yonan
	Mr Ian Wilson	Forum	Ms Tara Bartley (lead)
Congenital	Mr Andrew Parry (lead)		Ms Georgina Aldous
	Mr David Barron		Mr Tony Jessop
	Mr Lars Nolke		Ms Linda McKee
	Mr Mark Redmond		Ms Helen Munday
	Mr Kevin Watterson		Mr David Purdue
Experimental	Mr Adrian Marchbank (lead)		
	Dr David Chambers		
	Mr Jonathan Hyde		
	Mr Clinton Lloyd		
	Mr Alex Shipolini		

Specialist Advisory Committee in Cardiothoracic Surgery 2007–2008

(A Sub-committee of the Joint Committee for Higher Surgical Training)

Mr Tim Graham	(Chairman) Royal College of Surgeons	2007-2010
Mr Sion Barnard	Early Years Representative	2007-2012
Ms Farah Bhatti	Trainee Representative	2006-2009
Mr Steven Hunter	Cardiothoracic Dean	2004-2009
Mr Robert Jeffrey	Chairman of the Intercollegiate Board	2007-2012
Mr James Roxburgh	Secretary Society for Cardiothoracic Surgery	2004-2009
Mr Jim McGuigan	Joint Royal College Representative	2003–2008
Mr Steve Livesey	Society for Cardiothoracic Surgery	2004-2009
Mr David Barron	Society for Cardiothoracic Surgery	2007-2012
Professor John Pepper	Education Secretary (SCTS)	2007-2012
Mr Pala Rajesh	Joint College Representative – RCSEd	2006-2011
Professor David Sowden	Lead Dean for Cardiothoracic Surgery	For term of office
Professor John Wallwork	Academic Representative	2007-2012
Mr Vincent Young	Joint Royal College Representative – RCSI	2004-2009

Intercollegiate Board in Cardiothoracic Surgery 2007–2008

Mr Robert Jeffrey	Chairman (2007–2010)	2007-2010
Professor John Peper	Representative of the Society for Cardiothoracic Surgery	2007-2012
Mr Tim Graham	Chairman SAC in Cardiothoracic Surgery	2007-2012
Mr Jonathan Anderson	Representative of the Royal College of Surgeons of England	2007-2012
Mr Tom Aherne	Representative of the Royal College of Surgeons in Ireland	2003-2008
Mr David Richens	Representative of the Royal College of Physicians and Surgeons of Glasgow	2007-2012
Mr Pala Rajesh	Representative of the Royal College of Surgeons of Edinburgh	2007-2012
Mr Steven Hunter	Honorary Secretary (2007-2010) and Representative of the Society for Cardiothoracic Surgery	2007-2010

Past Presidents

List of Presidents of the Society since 1934

1934	Mr H Morrison Davies	1977	Mr H R S Harley
1936	Mr J R H Roberts	1978	Mr R Abbey-Smith
1938	Mr A Tudor Edwards	1979	Mr R P Moore
1945	Mr J B Hunter	1980	Mr J R Belcher
1947	Mr W M Anderson	1981	Mr M Bates
1948	Mr R B Purse	1982	Mr J M Hill
1950	Mr A Graham Bryce	1983	Mr J F Dark
1952	Sir C Price Thomas	1984	Mr D N Ross
1954	Mr H Reid	1985	Mr M Paneth
1956	Mr B Dick	1986	Mr M V Baimbridge
1958	Sir R Brock	1987	Sir K Ross
1959	Mr G A Mason	1988	Professor W H Bain
1961	Sir T Holmes Sellors	1989	Mr W G Williams
1963	Mr R F J Henry	1991	Professor D I Hamilton
1964	Mr N R Barrett	1992	Professor G H Smith
1966	Mr V C Thompson	1994	Mr B Ross
1968	Mr P R Allison	1995	Mr J Bailey
1969	Mr A L d'Abreu	1996	Professor H Matthews
1970	Mr A Logan	1997	Professor D Wheatley
1971	Mr O S Tubbs	1999	Mr J Dussek
1972	Mr F R Edwards	2000	Mr J Monro
1973	Mr J L Collis	2002	Mr C Hilton
1974	Mr R H R Belsey	2004	Mr P Magee
1975	Mr R S Barclay	2006	Professor Sir B Keogh
1976	Mr W P Cleland		

SCTS Annual Meeting's 10-Year History

1999	East Midlands Conference Centre	Nottingham
2000	Business Design Centre	London
2001	East Midlands Conference Centre	Nottingham
2002	Bournemouth International Centre	Bournemouth
2003	Edinburgh International Conference Centre	Edinburgh
2004	Beau Sejour Centre	Guernsey
2005	Olympia Conference Centre	London
2006	CityWest Conference Centre	Dublin
2007	Manchester International Convention Centre	Manchester
2008	Edinburgh Internatinal Conference Centre	Edinburgh

The Society would like to thank the following companies for supporting educational symposia:

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Organised by:

Society for Cardiothoracic Surgery in Great Britain and Ireland

Simon Kendall - Meeting Secretary
Email: Simon.Kendall@stees.nhs.uk

David Taggart - Deputy Meeting Secretary
Email: david.taggart@orh.nhs.uk

Isabelle Ferner - Society Administrator & Conference Organiser
Email: sctadmin@scts.org

Rachel Woolf - Accounts and Exhibition Administrator
Email: rwoolf@scts.org

Tara Bartley - Nursing Representative
Email: tara.bartley@ntlworld.com

Sunil Ohri - Communications Secretary (Programme/Flyers/Bulletin)
Email: sunil@ohril.co.uk

All best endeavours will be made to present the programme as printed. However the Society for Cardiothoracic Surgery in Great Britain and Ireland reserves the right to alter or cancel without prior notice any of the arrangements, timetables, plans or other items relating directly or indirectly to the meeting for any cause beyond their reasonable control. The Society for Cardiothoracic Surgery in GB & Ireland is not liable for any loss or inconvenience caused as a result of such alteration. In the event of cancellation of the congress all pre-paid fees will be refunded in full. However the Society for Cardiothoracic Surgery in GB & Ireland is not liable for any other loss or inconvenience caused as a result of such cancellation and delegates are therefore advised to take out their own travel insurance and extend their policy for personal possessions as the meeting does not cover individuals against cancellations of bookings or theft or damage of belongings.

2009 Meeting - Bournemouth

The Society for Cardiothoracic Surgery in Great Britain and Ireland Annual Meeting 2009 will be held at the Bournemouth International Centre, Bournemouth, 22nd-25th March 2009



CARDIAC SURGERY

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SORIN Group UK Ltd, Sorin Group UK Ltd, 1370 Montpellier Court,
Gloucester Business Park, Gloucester GL3 4AH



SUMMARY MEETING PROGRAMME

Sunday 9th March

1230-1330	ACSA, Society for Clinical Perfusion Scientists & Trainees Lunch	1700-1830	Thoracic Oral Presentations
1330-1600	Cardiothoracic Surgical Trainees Meeting	1700-1830	St Jude Postgraduate Lecture
1330-1645	Association of Cardiothoracic Surgical Practitioners (ACSA) Meeting	1830-2100	Edwards Symposium
1330-1645	Society of Clinical Perfusion Scientists of GB & Ireland Committee Meeting		
1600-1645	Scientific Lecture by Prof Derek Yellon		
1645-1700	Tea/Coffee		
1700-1800	Pulse Lecture by Dr Randolph Chitwood		
1800-1930	Annual Business Meeting		
1800-1930	ACSA Workshop		
1930-2030	Welcome Reception		

Monday 10th March

0700-0830	Breakfast Symposium	1150-1230	Cardiac Oral Presentations
0800-0850	Oral Presentations	1230-1330	Lunch
0845-1000	Oral Presentations with Forum & ACSA	1330-1500	AF Symposium
1000-1045	Tea/Coffee	1330-1500	Thoracic Surgery Complex Cases
1045-1145	Cardiac Oral Presentations	1500-1545	Tea/Coffee
1045-1230	Database Managers Meeting	1545-1700	Thoracic Oral Presentations
1045-1145	Forum	1545-1700	Transplant Oral Presentations
1145-1230	Hunterian Lecture	1545-1700	Forum
1230-1330	Lunch	1700-1800	President's Address
1330-1500	UK CT Activity & Practice	1930-1145	Annual Dinner – Caledonian Hotel
1500-1545	Tea/Coffee		
1545-1655	Thoracic Surgery Symposium		
1545-1655	Forum		
1545-1655	Cardiac Oral Presentations		

Wednesday 12th March

0900-1230	SCTS Executive & Unit Representatives Meeting
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