The Vascular Society of Great Britain & Ireland

Yearbook 2009

Contents

The Office

Address:

The Vascular Society, The Royal College of Surgeons (Eng)
35-43 Lincoln's Inn Fields, London, WC2A 3PE
Company 5060866, registered in England, limited by guarantee and registered as charity no 1102769

Tel: 0207 973 0306 **Fax:** 0207 430 9235 **E-mail:** office@vascularsociety.org.uk
Website: www.vascularsociety.org.uk

Chief Executive
Ms Jeanette Robey
E-mail: jeanette@vascularsociety.org.uk

Business Manager
Ms Neelam Daswani
E-mail: neelam@vascularsociety.org.uk

Fundraising and Events Manager
Ms Rebecca Wilkinson
E-mail: info@circulationfoundation.org.uk

Yearbook Editor
Mr Jonothan Earnshaw

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tfm Publishing Limited, Castle Hill Barns, Harley, Shrewsbury, Shropshire, SY5 6LX, UK.
Tel: +44 (0)1952 510061; Fax: +44 (0)1952 510192; E-mail: nikki@tfmpublishing.com; Web site: www.tfmpublishing.com

The Council

Front row, left to right:
Dr N Riazzudin (SVT); Mr T Lees; Mr J J Earnshaw; Mr P R Taylor; Professor C Shearman; Mr S D Parvin; Ms J Robey

Second row, left to right:
Mr R Hinchliffe; Professor A R Naylor; Mr D C Mitchell; Professor J D Beard; Mr P Blair; Mr P Madhavan; Mr D Baker; Mrs S Ward (SVN)

Back row, left to right:
Professor S Homer-Vanniasinkam; Professor G Stansby; Dr D Ettles (BSIR); Mr R Holdsworth; Mr W Yusuf; Mr S MacSweeney

Not pictured: Mr P M Lamont; Mr G Gilling-Smith; Mr D Combie (BLS)

Message from the President

Mr P R Taylor

It has been an exciting and invigorating year. The wheels involved in making vascular surgery a separate specialty are turning, albeit slowly. We have the support of PMETB and the Royal Colleges of Surgeons, and have met with the NHS Employers. We hope to have had a meeting with Patricia Hamilton by the time of the AGM. Her department will take over the function of PMETB and is very important in deciding who gets specialty status. The moratorium on new specialties lifted on 1st September and we have ensured we are among the first in the queue to make our claim. We have had fruitful discussions with The Royal College of Radiologists; both Professor Andy Adam and Dr Tony Nicholson have been very supportive, and have suggested new changes to the curriculum to ensure that we train vascular specialists of the future correctly. I will update Members on further progress with this at the AGM.

I would like to recognise the efforts of Cliff Shearman in developing the curriculum for vascular training and to those who have helped him. This has been an enormous amount of work and it is a testament to Cliff's dogged determination that he has managed to develop a curriculum which should satisfy the needs of vascular specialists in the 21st century.

The thorny issue of volume/outcome relationships is well understood by vascular surgeons and is to be debated at the meeting. I would urge all of you to attend the meeting in order to express your views. Currently there are many units performing vascular surgery with excellent results who do not meet all the criteria for the Quality Improvement Framework. Jonothan Earnshaw is addressing this in more detail in his Yearbook report.

Links with the interventional radiologists have been strengthened during the year. Both Councils have agreed a reciprocal arrangement for an observer to represent their respective Societies. Shane MacSweeney or Jonathan Beard will attend BSIR Council meetings on behalf of The Vascular Society. The BSIR representative at The Vascular Society Council meetings will be Duncan Ettles. We have a joint symposium with the BSIR which will be given at both The

Vascular Society meeting and the BSIR meeting, which will be on topics of mutual interest. In addition, Professor Andy Adam, President of The Royal College of Radiologists, will be giving an interesting polemical lecture at the opening session of the meeting. I would encourage all of you to attend the opening day which we hope will prove to be a fascinating start to the meeting.

I hope that the Lifetime Achievement Awards, which I have introduced this year, will be continued by future Presidents. This is to recognise vascular surgeons who have made a valuable contribution to our discipline but who may not have been recognised in any other way. It is with great pleasure that I will present this award to Brian Heather from Gloucester and Malcolm Simms from Birmingham. Malcolm has been at the forefront of developing treatments for critical leg ischaemia and has been a leader of surgical techniques and medical education. Brian Heather was instrumental in developing the first abdominal aneurysm screening programme in the country and, along with Alan Scott, facilitated the introduction of the screening programme which is shortly to be rolled out nationally. His contribution to the field of vascular surgery cannot be underestimated. I am very pleased that they have both accepted this award.

I would like to thank Waquar Yusuf who has made a valuable contribution to medical education as the Society's Vascular Tutor. We should have appointed his successor by the time of the AGM. Waquar has developed some innovative courses during his tenure, particularly with regard to endovascular interventions, and Council and I are very grateful for his efforts.

I would also like to thank Tim Lees for the hard work he has done in expanding the National Vascular Database during his term of office as Audit and Research Committee Chairman. He has managed the difficult transition of the National Vascular Database from Dendrite to Dr Foster and has been at the centre of many initiatives to try to improve clinical outcomes. He leaves the NVD in a much better state and I am sure his successor - David Mitchell - will continue the good work. Cliff Shearman has been excellent as the Chairman of the Training and Education Committee and has established the curriculum that will be the basis for our bid for separate specialty status. Cliff will take over as President at the meeting and I wish him well for the year ahead.

Members of Council 2008-2009

President	Mr P R Taylor
President Elect	Professor C Shearman
Vice-President Elect	Mr P M Lamont
Honorary Secretary	Mr J J Earnshaw
Honorary Treasurer	Mr S D Parvin
Ordinary members	Mr D Baker Mr P Blair Mr G Gilling-Smith Mr R Holdsworth Professor S Homer-Vanniasinkam Mr S MacSweeney Mr P Madhavan Professor A R Naylor Professor G Stansby
Training & Education Committee Chairman:	Professor C Shearman
Training & Education Committee Chairman Elect:	Professor J D Beard
Audit & Research Committee Chairman:	Mr T Lees
Audit & Research Committee Chairman Elect:	Mr D C Mitchell
Affiliate member	Mr R Hinchliffe
Vascular Tutor	Mr W Yusuf
Observers	Dr D Ettles, The British Society of Interventional Radiology (BSIR) Dr N Riazzudin, The Society for Vascular Technology (SVT) Mrs S Ward, The Society of Vascular Nurses (SVN) Mr D Combie, British Lymphology Society (BLS)

Committees 2008-2009

AUDIT AND RESEARCH COMMITTEE

Mr T Lees (Chairman)
Mr J J Earnshaw
Mrs S Baker
Mr D Baker
Professor S Homer-Vanniasinkam
Dr D Prytherch
Dr S Thomas
Mr P Holt
Mr D C Mitchell (Chairman Elect)
Mr P Madhavan
Mr S D Parvin
Professor G Stansby
Mr P Barker
Dr D Wilson-Nunn
Dr I Robertson
Mr V Smyth

TRAINING AND EDUCATION COMMITTEE

Professor C Shearman (Chairman)
Mr G Gilling-Smith
Mr R Holdsworth
Mr P Blair
Dr I Francis
Professor J D Beard (Chairman Elect)
Professor A R Naylor
Mr W Yusuf
Mr S MacSweeney
Mr R Hinchliffe

PROFESSIONAL STANDARDS COMMITTEE

Mr P M Lamont (Chairman)
Mr J Clarke
Professor C Shearman
Mr P R Taylor
Professor M J Gough
Mr T Lees
Mr R B Galland

CIRCULATION FOUNDATION COMMITTEE

Mr A May (Chairman)
Professor M Horrocks
Mr D C Berridge
Mr J Thompson
Professor J Belch
Professor M J Gough
Mrs C Flatman
Professor G Hamilton
Mr J Wolfe
Mr T Lees
Mr R Baird
Professor A Watkinson
Ms J Burns

Membership of Vascular Advisory Committee

All Members of Council, plus Vascular Advisors:

Mr B Braithwaite, East Midlands
Mr S Fraser, Scotland (East)
Mr A Guy, Mersey
Mr J Mosley, North Western
Mr D Orr, Scotland (West)
Mr T Loosemoore, South West Thames
Mr D Mehigan, Eire
Miss S Renton, North West Thames
Mr S Singh, South Yorkshire and North Derbyshire
Mr M Tyrrell, South East Thames
Mr J Clarke, East Anglia
Mr A Garnham, West Midlands
Mr R Hannon, Northern Ireland
Ms S Hill, Wales
Mr C Irvine, Yorkshire
Mr T Magee, Oxford
Mr G Morris, Wessex
Mr M Salter, North East Thames
Mr J Thompson, South Western
Mr M G Wyatt, Northern

Vascular Members of the SAC in General Surgery:

Mr P M Lamont
Mr S Silverman
Ms A Howd
Captain Surgeon A Walker
Professor M J Gough
Mr G Griffiths
Mr R Vohra
Mr M G Wyatt

Annual General Meetings

Year	Venue	President	Secretary	Treasurer
1966	Inaugural Meeting The Middlesex Hospital, London	Mr Sol Cohen	Mr JA Gillespie	Mr JA Gillespie
1967	Edinburgh	Mr Sol Cohen		
1968	Hammersmith Hospital, London	Mr PGC Martin		
1969	Royal Infirmary, Glasgow	Professor AW Mackay	Mr A Marston	Mr A Marston
1970	University College, Dublin	Professor FP Fitzgerald		
1971	St Mary's Hospital, London	Mr HHG Eastcott		
1972	The University, Dundee	Professor Sir D Douglas	Mr DGA Eadie	Mr DGA Eadie
1973	St Thomas's Hospital, London	Professor JB Kinmonth		
1974	Queen Elizabeth Hospital, B'ham	Professor G Slaney		
1975	St Bartholomew's Hospital, London	Professor GW Taylor	Mr CV Jamieson	Mr CV Jamieson
1976	Royal Infirmary, Bristol	Professor JH Peacock		
1977	Pfizer Foundation, Edinburgh	Mr AIS Macpherson		
1978	Liverpool	Mr CR Helsby	Professor AO Mansfield	Professor AO Mansfield
1979	John Radcliffe Hospital, Oxford	Mr D Tibbs		
1980	St Thomas's Hospital, London	Mr FB Cockett		
1981	University Hospital of Wales, Cardiff	Mr G Heard		
1982	University Hospital of South Manchester	Mr S Rose	Mr SG Darke	Mr SG Darke
1983	St Mary's Hospital, London	Mr JR Kenyon		
1984	Medical School, Birmingham	Professor F Ashton		
1985	The Middlesex Hospital, London	Mr A Marston		
1986	The Institute of Education, London	Mr M Birnstingl	Professor CV Ruckley	Professor CV Ruckley
1987	Civic Centre, Newcastle-upon-Tyne	Mr PH Dickinson		
1988	The University of Leeds	Mr J Shoesmith		
1989	Ninewells Hospital, Dundee	Professor W F Walker		
1990	Kensington Town Hall, London	Mr EJ Williams	Mr PL Harris	Mr PL Harris
1991	Royal College of Surgeons, Dublin	Mr WP Hederman		
1992	Metropole Hotel, London	Professor NL Browse		Mr MH Simms
1993	Royal Northern College of Music, Manchester	Mr D Charlesworth		
1994	Assembly Rooms, Edinburgh	Professor CV Ruckley	Mrs L de Cossart	
1995	Kensington Town Hall, London	Mr CW Jamieson		
1996	Bournemouth International Centre, Bournemouth	Mr SG Darke		Mr MJ Gough
1997	Royal Lancaster Hotel, London	Professor A O Mansfield		
1998	City Hall, Hull	Mr JMD Galloway	Professor WB Campbell	
1999	De Montfort Hall, Leicester	Professor PRF Bell		
2000	London Arena, Docklands, London	Professor RM Greenhalgh		Mr RB Galland
2001	Metropole Hotel, Brighton	Mr RN Baird		
2002	Waterfront Hall, Belfast	Professor AAB Barros D'Sa	Mr PM Lamont	
2003	Scottish Exhibition and Conference Centre, Glasgow	Professor KG Burnand		
2004	Harrogate International Centre, Harrogate	Mr PL Harris		Mr DC Berridge
2005	Bournemouth International Centre, Bournemouth	Professor M Horrocks		
2006	Edinburgh International Conference Centre, Edinburgh	Mr JHN Wolfe	Mr JJ Earnshaw	
2007	Manchester Central Convention Complex	Professor G Hamilton		
2008	Bournemouth International Centre, Bournemouth	Mr MJ Gough		Mr SD Parvin
2009	BT Convention Centre, Liverpool	Mr PR Taylor		

Presidents

Mr P R Taylor
President 2009


Professor MJ Gough **2008**


Professor G Hamilton **2007**


Mr JHN Wolfe **2006**


Professor M Horrocks **2005**


Mr PL Harris **2004**


Professor KG Burnand **2003**


Professor AO Mansfield **1997**


Mr JMD Galloway **1998**


Professor PRF Bell **1999**


Professor RM Greenhalgh **2000**

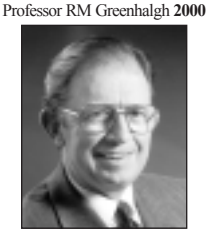

Mr R Baird **2001**


Professor AAB Barros D'Sa **2002**


Mr W Hederman **1991**


Professor NL Browse **1992**


Mr D Charlesworth **1993**


Professor CV Ruckley **1994**


Mr CW Jamieson **1995**


Mr SG Darke **1996**


Mr A Marston **1985**


Mr M Birnstingl **1986**


Mr PH Dickinson **1987**


Mr J Shoesmith **1988**


Professor WF Walker **1989**


Mr EJ Williams **1990**


Mr DJ Tibbs **1979**


Mr FB Cockett **1980**


Mr G Heard **1981**


Mr S Rose **1982**


Mr JR Kenyon **1983**


Professor F Ashton **1984**


Professor JB Kinmonth **1973**


Professor G Slaney **1974**


Professor GW Taylor **1975**


Professor JH Peacock **1976**


Mr AIS MacPherson **1977**


Mr CR Helsby **1978**


Mr S Cohen **1967**


Mr PGC Martin **1968**

Professor AW Mackay **1969**

Professor FP Fitzgerald **1970**

Mr HHG Eastcott **1971**

Professor Sir Donald Douglas **1972**

Prizes

The Sol Cohen (Founder's) Prize is for the best *clinical* paper. The award is a silver salver engraved with the Society's logo and the year, plus a personal cheque for £500.

The British Journal of Surgery Prize is for the best *scientific* paper. The award is a cheque for £600 payable to the Research Fund of the Department from which the paper was submitted.

The Venous Forum Prize is for the best paper in the *Venous Forum session*, organised by the Officers of the Venous Forum. The award is a cheque for £250.

The Richard Wood Memorial Prize will be awarded for the best paper presented by a *non-doctor* in the scientific meeting. The award is an engraved medal, and a cheque for £250.

The Brighton Prize will be awarded for the best paper on the topic of vascular infections. The award is a cheque for £250 and a certificate.

- Vascular trainees are eligible for the Sol Cohen (Founder's) Prize and the BJS Prize. Both vascular trainees and non-medics are eligible for the Venous Forum and Brighton prizes. The Richard Wood prize is for non-medics only.

- Applicants must be the first author of the abstract, must have made a substantial personal contribution to the work and must deliver the paper in person.

- Vascular trainees must be in a training post on the closing date for submission of abstracts.

List of prize winners

The Sol Cohen (Founder's) Prize

1992 P Chan, St Mary's Hospital Medical School, London
Abnormal growth regulation of vascular smooth muscle in patients with restenosis

1993 PA Stonebridge, Edinburgh Royal Infirmary
Angioscopically identified features related to infra inguinal bypass graft failure

1994 PJ Kent, Mater Misericordiae Hospital, Dublin
Prognosis of vibration induced white finger after cessation of occupational vibration exposure

1995 BD Braithwaite, on behalf of the Thrombolysis Study Group
Accelerated thrombolysis with high dose bolus t-PA is as safe and effective as low dose infusions - results of a randomised trial

1996 MM Thompson, Leicester Royal Infirmary
A comparison of CT and duplex scanning in assessing aortic morphology following endovascular aneurysm repair

1997 IM Loftus, Leicester Royal Infirmary
Vein graft aneurysms - conclusive proof of a systemic process

1998 P Renwick, Hull Royal Infirmary
Limb outcome following failed femoro-popliteal PTFE bypass for intermittent claudication

1999 ME Gaunt, Leicester Royal Infirmary
Intraoperative change in baroreceptor function during carotid endarterectomy

2000 FJ Meyer, St Thomas's Hospital, London
More venous leg ulcers are healed by three-layer paste than by four-layer bandages: a randomised, controlled prospective study

2001 N Lennard, Walsgrave Hospital, Coventry
Crescendo TIAs: the use of pre-operative TCD directed IV Dextran therapy to control symptoms and emboli prior to elective carotid endarterectomy

2002 J Barwell, Cheltenham General Hospital, Cheltenham
The Eschar Venous Ulcer Study: A randomised controlled trial assessing venous surgery in 500 leg ulcers

2003 R Wilson, St George's Hospital Medical School, London
The suitability of ruptured AAA for endovascular repair

2004 ZA Ali, Addenbrooke's Hospital, Cambridge
Remote ischaemic preconditioning reduces myocardial injury after abdominal aortic aneurysm repair

2005 R Aggarwal, Department of Biosurgery and Surgical Technology, Imperial College London and Regional Vascular Unit, St Mary's Hospital, London
Acquisition of endovascular skills by consultant vascular surgeons: effect of repetition in a virtual reality training model

2006 GS McMahon, University of Leicester, Leicester
Low-molecular-weight heparin significantly reduces embolisation after carotid endarterectomy: a randomised controlled trial.

2007 RA Weerakkody, Cambridge Vascular Unit, Cambridge
An evaluation of radiation exposure in endovascular abdominal aortic aneurysm repairs

2008 Joint winning paper
PJE Holt, St George's Regional Vascular Institute, London
Endovascular aneurysm repair independently demonstrates a volume-outcome effect &
Regionalisation of vascular surgery improves outcome: a model of service provision

Richard Wood Memorial Prize

2003 EA Nelson, Department of Health Sciences, University of York, York
A randomised controlled trial of 4-Layer and short-stretch compression bandages for venous leg ulcers (VenUS I)

2004 S Maxwell, Regional Vascular Unit and the Department of Medical Bacteriology, St Mary's Hospital, London
Methicillin-resistant Staphylococcus aureus (MRSA): are we winning the war against infrainguinal bypass graft infection?

2005 E Horrocks, St Mary's Hospital, London
Carotid endarterectomy under local anaesthetic - evaluating a high fidelity simulated environment for training and assessment

2006 LC Brown, for the EVAR Trial Participants, Imperial College, London
Endovascular, not open repair, should be used in the fittest patients: the application of fitness scoring to EVAR trial patients

2007 P Bourke, Regional Vascular Unit, St Mary's Hospital, London
The proposed 18-week target - is there time for investigations?

2008 C Oakley, Sheffield Hallam University and Vascular Institute, Sheffield
Nordic poles immediately improve walking distance in claudicants

Brighton Prize

2006 AHR Stewart, Gloucestershire Royal Hospital and Musgrove Park Hospital, Taunton
Systemic antibiotics prevent graft and wound infection in peripheral bypass surgery; a systematic review and meta-analysis

2008 RE Clough, Guy's and St Thomas' NHS Foundation Trust, London
Endovascular management of mycotic aortic aneurysms

SARS Prize

2006 WRW Wilson, University of Leicester, Leicester and St George's Hospital Medical School, London
Decreased cellular telomere content is observed locally and systematically in abdominal aortic aneurysms

2007 TK Ho, Department of Surgery, The Royal Free and University College Medical School, The Royal Free Hospital, London
Increased SDF-1 alpha and CXCRr4 but not SDF-1 beta expression in human critical limb ischaemia

Continued overleaf:

List of prize winners

The British Journal of Surgery Prize

1993 D Higman, Charing Cross Hospital, London
Nitric oxide production is impaired in the saphenous vein of smokers

1994 GT Stavri, King's College School of Medicine and Dentistry, London
The role of hypoxia in neovascularisation of atherosclerotic plaque

1995 AD Fox, Royal United Hospital, Bath
A new modular approach to endoluminal grafting for abdominal aortic aneurysms

1996 C Marshall, University of Newcastle upon Tyne
Intravascular adhesion: a new assay to assess neutrophil adhesiveness in whole blood

1997 IM Loftus, Leicester Royal Infirmary
Increased proteolytic activity in acute carotid plaques - therapeutic avenues to prevent stroke

1998 IJ Franklin, Charing Cross Hospital, London
Non-steroidal anti-inflammatory drugs to treat abdominal aortic aneurysms

1999 DW Harkin, Royal Victoria Hospital, Belfast
In major limb vessel trauma reperfusion injury is increased by delayed venous reflow and prevented by anti-oxidant pretreatment

2000 DW Harkin, Royal Victoria Hospital, Belfast
Ischaemic preconditioning (IPC) prior to lower limb ischaemia reperfusion protects against acute lung injury

2001 SL Drinkwater, St Thomas's Hospital, London
Venous ulcer exudates inhibit in vitro angiogenesis

2002 M Griffiths, Royal Free Hospital, London
Nicotine abolishes the hypoxic induction of VEGF in human microvascular endothelial cells

2003 DR Lewis, The Royal North Shore Hospital, University of Sydney, New South Wales, Australia
Point of care testing of aspirin resistance in patients with vascular disease

2004 V Vijayan, Bristol Royal Infirmary
The early and long term reduction of porcine saphenous vein graft thickening using a biodegradable polyglactin external sheath

2005 C Ruiz, Peripheral Vascular Unit, Glasgow Royal Infirmary
Pre-operative ischaemia of the long saphenous vein predisposes to intimal hyperplasia in bypass grafts through enhanced smooth muscle cell migration

2006 MJ Bown, University of Leicester, Leicester
The IL-10-1082 'A' allele and abdominal aortic aneurysm

2007 A Thompson, Cardiovascular Genetics Departments, University College London, and the Vascular Department, Royal West Sussex NHS Trust, Chichester
TGF3 and LTBP4 are associated with altered AAA growth: a candidate gene study

2008 TY Tang, Cambridge University Hospitals NHS Foundation Trust, Cambridge
Atorvastatin THerapy: Effects on Reduction Of Macrophage Activity (ATHEROMA). Evaluation using USPIO-enhanced magnetic resonance imaging in carotid disease

Venous Forum Prize

2001 I Singh, St Thomas's Hospital, London
Inhibition of experimental venous thrombosis with a human anti-factor VIII monoclonal antibody

2002 J Barwell, Cheltenham General Hospital, Cheltenham
The Eschar Venous Ulcer Study: A randomised controlled trial assessing venous surgery in 500 leg ulcers

2003 EA Nelson, Department of Health Sciences, University of York, York
A randomised controlled trial of 4-Layer and short-stretch compression bandages for venous leg ulcers (VenUS I)

2003 RJ Winterborn, Gloucestershire Royal Hospital, Gloucester
Late results of a randomised controlled trial of stripping the long saphenous vein

2004 B Kianifard, Royal Surrey County Hospital, Guildford
Perforator veins do not remain closed following long saphenous vein stripping - results of a randomised trial with a one year follow up

2005 RJ Winterborn, Department of Vascular Surgery, Gloucestershire Royal Hospital
Prospective study of short saphenous varicose vein surgery: six weeks' results

2006 R Eifell, Department of Surgery, Queen Elizabeth Hospital, Gateshead and Northern Vascular Centre, Freeman Hospital, Newcastle upon Tyne
Quantitative measurement of superficial venous surgery using continuous ambulatory venous pressure measurement (CAVPM)

2007 R Winterborn, Gloucestershire Royal Hospital
No advantage in performing flush saphenofemoral ligation: results of a randomised trial

2008 D Carradice, Academic Vascular Surgical Unit, Hull
A randomised trial of EVLT vs. surgery for varicose veins

Best Video

2007 R Bulbulia, M Whyman, L Emerson, L Visser, F Slim and K Poskitt, Cheltenham General Hospital
Laparoscopic aortic aneurysm repair

Best Educational/Training Video

2007 J Tsui, R De Souza, G Hamilton, Royal Free Hospital, London
Carotid endarterectomy: retro-jugular approach and eversion technique

Best Poster

2007 G Atturu, S Brouilette, M Bown, NJ Samani, NJM London, R Sayers, University of Leicester, Leicester
Leucocyte telomere length is reduced in patients with abdominal aortic aneurysm

John Kinmonth Memorial Lectureship

Founded in 1983 utilising a gift made in his lifetime by Professor John Bernard Kinmonth FRCS (Council 1977-82), and donations made in his memory. A bronze medal bearing the arms of the College on one side and a portrait head of John Kinmonth on the other, and engraved with the Lecturer's name and the year in which the lecture is delivered, is presented on each occasion.

Conditions an annual lecture on a vascular topic. A nomination is solicited from the President of The Vascular Society and goes before Council for approval. The lecture is usually delivered at the annual meeting of the Society.

Previous Lecturers

1983 Professor Graham Douglas Tracy - *"Choosing a treatment plan for patients with leg ischaemia."*

1984 Mr Roger Neale Baird - *"Recognition of carotid artery disease."*

1985 Mr Adrian Marston - *"The gut and its blood-supply."*

1986 Professor Sir Peter Morris - *"Whither carotid endarterectomy."*

1987 Professor John E Connolly - *"Can paraplegia in aortic surgery be prevented?"*

1988 Dr Thomas F O'Donnell - *"Management of the high risk abdominal aortic aneurysm"*

1989 Professor Averil O Mansfield - *"An artery and a vein dancing - the management of arteriovenous malformation"*

1990 Mr CW Jamieson - *"Dilemmas in improving vascular surgical services"*

1991 Professor Norman Browse - *"The lymphatics"*

1992 Professor Alexander Clowes - *"Vascular biology - the new frontier"*

1993 Dr Ray Gosling - *"The mechanics of atherosclerosis"*

1994 Dr Hero van Urk - *"Future development in endoluminal vascular surgery"*

1995 Dr Timothy Chuter - *"Clinical experience of stenting aneurysms"*

1996 Dr Jerry Goldstone - *"Vascular surgery: training, certification and practice; observations from the USA"*

1997 Mr Alan Scott - *"Screening and the management of abdominal aortic aneurysms - the missing links"*

1998 Mr Peter Harris - *"Vascular surgery: the European perspective"*

1999 Mr Simon G Darke - *"Optimal management of venous ulceration: an enigma slowly unfolding"*

2000 Professor Janet Powell - *"The good, the bad and the ugly - a tale of aneurysms"*

2001 Mr Jonothan Earnshaw - *"Audit of clinical outcomes in vascular surgery: a shield for our profession"*

2002 Professor David Bergqvist - *"Management of iatrogenic vascular injuries"*

2003 Professor Reginald Lord - *"Carotid disease: the burden of proof"*

2004 Professor Roger Greenhalgh - *"The impact of vascular clinical trials on clinical practice"*

2005 Mr John Wolfe - *"Operative vascular training and assessment: the last century, the present and the future"*

2006 Mr Peter Taylor - *"Achieving the Impossible"*

2007 Professor Kevin Burnand - *"Research in vascular diseases: achievements and unsolved problems"*

2008 Professor S Homer-Vanniasinkam - *"Translational vascular research: the road less travelled"*

Programme

18-20 November 2009
BT Convention Centre, Liverpool

WEDNESDAY 18TH NOVEMBER

9.00am-12.00noon
VENOUS FORUM — **Hall 1A**

Vein Updates:
Chairmen: Professor Alun Davies and Mr David Berridge

9.00-9.15am	**Management of venous injury**	Dr Armando Mansilha, Portugal
9.15-9.45am	**Current and future** Duplex imaging of venous disease MRI/CT venous imaging	 Ms Elaine Young, London Dr Giles Roditi, Glasgow
9.45-10.00am	**Evidence for venous screening**	Mr Mark Whiteley, Surrey
10.00-10.15am	**Endothermal ablation techniques**	Mr Bruce Braithwaite, Nottingham
10.15-10.30am	**Debate: Ambulatory phlebectomy/ sclerotherapy should be performed at the time of truncal ablation**	Mr Ian Chetter, Hull/ Professor Michael Gough, Leeds
10.30-11.00am	**Coffee**	**Hall 2**

DVT Updates:
Chairmen: Professor Alun Davies and Mr David Berridge

11.00-11.10am	**The optimal investigation of patients with an 'idiopathic' DVT - does this include excluding malignancy?**	Professor Gordon Lowe, Glasgow
11.10-11.20am	**Is calf DVT a benign entity?**	Mr Tim Lees, Newcastle
11.20-11.30am	**Is it negligent not to use compression hosiery?**	Professor Andrew Bradbury, Birmingham
11.30-11.40am	**Is TED stocking length important in prophylaxis?**	Mr Adam Howard, Colchester
11.40-11.50am	**Management of Paget Shroetter Syndrome**	Professor Gerard Stansby, Newcastle
11.50-12.00noon	**Panel discussion**	

9.00am-12noon
Society of Academic and Research Surgery — Hall 4B

Chairmen: Mr Frank Smith and Professor Julian Scott

9.00-9.10am **The association between methylene tetrahydrofolate reductase (MTHFR) genetic polymorphism and abdominal aortic aneurysm (AAA)**

Obukofe B, Bown M, London N, Sayers R
Vascular Surgery Group, Department of Cardiovascular Sciences, University of Leicester, Leicester

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9.10-9.20am **The biology of carotid plaques: once unstable, always unstable?**

Sritharan K, Powell J, Sandison A, Monaco C, Franklin I, Davies A
Imperial College London, London

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9.20-9.30am **Lymphangiogenesis: novel involvement in abdominal aortic aneurysm**

Allen C[1], Scott DJA[2], Jones P[1]
1 Leeds Institute of Molecular Medicine, Wellcome Trust Brenner Building, St. James's University Hospital, Leeds; 2 Leeds Vascular Institute, The General Infirmary at Leeds, Leeds and the Division of Cardiovascular & Diabetes Research, Leeds Institute of Genetics, Health and Therapeutics, University of Leeds, Leeds

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9.30-9.40am **Are Tie2-expressing monocytes the key to neovascularisation in critical limb ischaemia?**

Patel A, Smith A, Humphries J, Mattock K, Saha P, Waltham M, Modarai B
Academic Department of Surgery, Cardiovascular Division, St. Thomas' Campus, King's College London, London

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9.40-9.50am **Limitations of 18F-FDG PET imaging in patients with a symptomatic carotid artery stenosis on statins**

Shaikh S[1], Welsh A[2], Murray A[3], Ramalingam S[3], McKiddie F[2], Wilson H[4], Connolly T[5], Brown P[6], Brittenden J[1]
1 Department of Surgery, University of Aberdeen, Aberdeen; 2 Department of Nuclear Medicine, University of Aberdeen, Aberdeen; 3 Department of Radiology, University of Aberdeen, Aberdeen; 4 Institute of Medical Sciences, University of Aberdeen, Aberdeen; 5 Wyeth Translational Scientist; 6 Department of Pathology, Aberdeen Royal Infirmary, Aberdeen

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9.50-10.00am **Pre-operative glomerular filtration rate predicts renal outcome following emergency EVAR for ruptured abdominal aortic aneurysms**

Noorani A, Sadat U, Walsh S, Varty K, Hayes P, Boyle J
Cambridge Vascular Unit, Cambridge

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10.00-10.10am **The role of NK cells in the pathogenesis of abdominal aortic aneurysms: a phenotypic study**

Jagadesham V[1], Porter K[2], Carding S[3], Scott DJA[1,4]
1 Institute of Molecular & Cellular Biology, University of Leeds, Leeds Vascular Institute; The General Infirmary at Leeds, Leeds; 2 Academic Unit of Cardiovascular Medicine, University of Leeds, Leeds; 3 Institute of Food Research, Norwich Research Park, Norwich; 4 Cardiovascular & Diabetes Research, Leeds Institute of Genetics, Health and Therapeutics, University of Leeds, Leeds

page 37

10.10-10.20am **Serum proteomics and the search for biomarkers of abdominal aortic aneurysms**
Nordon I, Brar R, Hinchliffe R, Cockerill G, Loftus I, Thompson M
St. George's Vascular Institute, London
page 38

10.20-10.30am **^{1}H NMR-based metabolomics: a novel biomarker approach to peripheral arterial disease (PAD)**
Girn HRS[1], Turner E[2], Fisher J[2], Homer-Vanniasinkam S[1]
1 Leeds Vascular Institute, The General Infirmary at Leeds, Leeds; 2 School of Chemistry, University of Leeds, Leeds
page 40

10.30-11.00am **Coffee** **Hall 2**

Chairmen: Mr Rajiv Vohra and Mr Rod Chalmers

11.00-11.10am **Immediate postoperative B-Type natriuretic peptide and its predictive value**
Suttie S[1], Mofidi R[1], McCallum R[1], Christie S[2], McLeod S[2], Flett M[1], Nagy J[1], Griffiths G[1], Struthers A[3], Stonebridge P[1]
1 Department of Vascular Surgery, Ninewells Hospital, Dundee; 2 Department of Anaesthesia, Ninewells Hospital, Dundee; 3 Department of Clinical Pharmacology and Therapeutics, University of Dundee, Dundee
page 41

11.10-11.20am **Does initial balloon denudation enhance endothelial cell loss and tunica media injury in a great saphenous vein (GSV) model of foam sclerotherapy (FS) using sodium tetradecyl sulphate (STD)?**
Ikponmwosa A[1], Abbott C[1], Graham A[2], Homer-Vanniasinkam S[1], Gough MJ[1]
1 Leeds Vascular Institute, The General Infirmary at Leeds, Leeds; 2 Biomedical Sciences, Bradford University, Bradford
page 42

11.20-11.30am **Microvessel morphology and phenotype may determine plaque vulnerability: significance for symptomatic vs asymptomatic patients?**
Chowdhury M[1, 2], Ghosh J[1], Alexander Y[2], Smyth V[1], Serracino-Inglott F[1]
1 Department of Vascular & Endovascular Surgery, Manchester Royal Infirmary, Manchester; 2 Heart and Vascular Research Group, Faculty of Medical & Human Sciences, University of Manchester, Manchester
page 43

11.30am **Guest Lecture: The molecular basis for aneurysmal disease**
Professor Matt Thompson, St. George's Hospital, London
Introduced by Professor Shervanthi Homer-Vanniasinkam, Leeds

10.00am-12noon and 2.00-4.00pm
Endovascular Innovation Workshops **Hall 3A**

9.00am-4.00pm
Society of Vascular Nurses Annual Meeting **Hall 1B**

9.00am-4.00pm
Society for Vascular Technology Annual Meeting **Hall 1C**

12noon-1.00pm
Lunch and viewing of trade exhibition **Hall 2**

THE VASCULAR SOCIETY MEETING

1.00pm **Opening remarks** **Hall 1A**
The President

1.05pm **Opening lecture**
Professor Andreas Adam
President of the Royal College of Radiologists "It's surgery - but not as you know it!"

1.30pm **Joint Vascular Society/BSIR Symposium**
Chairmen: Mr Peter Taylor and Professor Peter Gaines

Is anything new in lower limb revascularisation? Professor Anna Maria Belli, London

Vascular trauma: lessons from Afghanistan Mr Tom Carrell, London

Debate: The results of the BASIL Trial show that a 'surgery first' revascularisation strategy is preferable in most patients with severe leg ischaemia
For: Professor Andrew Bradbury, Birmingham
Against: Dr Rob Morgan, London

2.45pm **Tea** **Hall 2**

3.15pm **Session 1: BJS Prize** **Hall 1A**
Chairmen: Mr Jonothan Earnshaw and Professor Cliff Shearman

3.15-3.30pm **Cost utility analysis of a randomised control trial of percutaneous transluminal angioplasty (PTA), supervised exercise programme (SEP) and combined treatment (PTA+SEP) for patients with intermittent claudication (IC) due to femoropopliteal disease**
Mazari F, Khan J, Abdul Rahman M, Mehta T, Gulati S, McCollum P, Chetter I
Academic Vascular Surgery Unit, University of Hull; Vascular Laboratory, Hull Royal Infirmary, Hull
page 44

3.30-3.45pm **Demonstration of angiogenic and tissue protective properties of erythropoietin in human critical leg ischaemia**
Joshi D[1], Ho TK[1], Tsui J[1], Selvakumar S[1], Khan K[2], Abraham D[2], Baker D[1]
1 Department of Vascular Surgery, Royal Free Hospital, UCL Medical School, London; 2 Centre for Rheumatology, Royal Free Hospital, UCL Medical School, London
page 45

3.45-4.00pm **Novel late-phase contrast-enhanced ultrasound to assess carotid atherosclerotic plaques in humans**
Shalhoub J[1], Owen D[2], Miller S[2], Gauthier T[3], Doryforou O[3], Franklin I[1], Leen E[3], Davies A[1]
1 Imperial Vascular Unit, Imperial College London, Charing Cross Hospital, London; 2 Division of Investigative Science, Imperial College London, Hammersmith Hospital, London; 3 Department of Imaging Science, Imperial College London, Hammersmith Hospital, London
page 46

4.00-4.15pm **Abdominal aortic aneurysms are associated with rhesus negative status and blood group A**

Ilyas S, Abayasekara K, Morrow D, Meyer F
Department of Vascular Surgery, Norfolk and Norwich University Hospital, Norwich

page 47

4.15-4.30pm **The impact of endovascular repair of ruptured abdominal aortic aneurysm and intra-abdominal pressure on gastrointestinal motility and bowel permeability**

Makar R, Badger S, O'Donnell M, Lee B, Lau L, Hannon R, Soong C
Department of Vascular Surgery, Belfast City Hospital, Belfast, Northern Ireland

page 48

4.30-4.45pm **Aspirin and clot structure in patients with abdominal aortic aneurysm (AAA): a mechanism for reduced AAA expansion?**

Aggarwal R, Iqbal F, Hess K, Scott DJA, Ajjan R
Division of Cardiovascular & Diabetes Research, Leeds Institute of Genetics, Health and Therapeutics, The LIGHT Laboratories, University of Leeds, Leeds

page 50

4.45pm **Session 2** **Hall 1A**

R Eligible for Richard Wood Prize

Chairmen: Mr Daryll Baker and Mr Paul Blair

4.45-4.55pm **ACE inhibitor therapy is underused in aortic disease despite a low prevalence of renal artery stenosis**

Muttardi K, Phua CK, Jenkins MP, Chapman N, Haydar A, Cheshire NJW, Bicknell CD
Imperial Vascular Unit, Imperial College Healthcare NHS Trust, London; Department of Biosurgery and Surgical Technology, Imperial College London, London; International Centre for Circulatory Health, Imperial College London, London

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4.55-5.05pm **The use of the extension technique in the management of dialysis access-associated steal syndrome - 8-year follow-up**

McKeown A, Al-Khaffaf H
East Lancashire Vascular Unit, Royal Blackburn Hospital, Blackburn

page 52

5.05-5.15pm **The influence of muscle training on resting blood flow and vessel diameter in the forearm: should patients exercise before vascular access formation?**

Kumar S, Seward J, Wilcox A, Torella F
Department of Vascular Surgery, University Hospital Aintree, Liverpool

page 53

5.15-5.25pm **Using a psychological model to investigate the relationship between illness beliefs and walking behaviour of patients with intermittent claudication** [R]

Cunningham M[1], Swanson V[1], Holdsworth R[2]
1 University of Stirling, Stirling; 2 NHS Forth Valley, Stirling

page 54

5.25-5.35pm **Differences in cellular composition and morphology between symptomatic carotid and femoral plaques**

Shaikh S[1], Wilson H[2], Thies F[2], Connolly T[3], Brown P[4], Brittenden J[1]

1 Department of Surgery, University of Aberdeen, Aberdeen; 2 Institute of Medical Sciences, University of Aberdeen, Aberdeen; 3 Wyeth Translational Scientist; 4 Department of Pathology, Aberdeen Royal Infirmary, Aberdeen

page 55

5.35-5.45pm **Multicentre randomised clinical trial on the role of autologous bone-marrow-aspirate-concentrate (BMAC)/CD34/(EPC) in non-reconstructable critically ischaemic limbs**

Gurunathan Mani S[1], Raju R[2], Kuppu Sampath V[2]

1 Dorset County Hospital, Dorset; 2 Sri Ramachandra University, Chennai, India

page 56

5.45-5.55pm **Pre-operative N terminal-pro-B type natriuretic peptide predicts major adverse cardiac events and death at medium-term follow-up after major vascular surgery**

Rajagopalan S[1], Croal B[2], Reeve J[2], Bachoo P[1], Hillis G[3], Brittenden J[1]

1 Vascular Unit, Aberdeen Royal Infirmary, Aberdeen; 2 Clinical Biochemistry, Aberdeen Royal Infirmary, Aberdeen; 3 Department of Cardiology, Aberdeen Royal Infirmary, Aberdeen

page 57

5.55-6.05pm **The status of the infrarenal aorta is important in determining neurological complications of thoracic endovascular aortic repair**

Modarai B[1], Clough R[1], Bell R[1], Waltham M[1], Carrell T[1], Zayed H[1], Reidy J[2], Sabharwal T[2], Thomas S[2], Salter R[2], Sandhu C[2], Taylor P[1]

1 Department of Vascular Surgery, Guy's and St. Thomas' NHS Foundation Trust, King's Health Partners, London; 2 Department of Interventional Radiology, Guy's and St. Thomas' NHS Foundation Trust, London

page 58

6.05-6.15pm **Modes and mechanisms of threat to target vessel patency following fenestrated endovascular repair of juxtarenal aneurysms**

Oshin O[1], Brennan J[1], McWilliams R[2], Fisher R[1], Gilling-Smith G[1], Vallabhaneni S[1]

1 Regional Vascular Unit and 2 Department of Radiology, Royal Liverpool University Hospital, Liverpool

page 60

6.15-6.25pm **Asymptomatic retinal artery emboli in people with diabetes. A target for carotid endarterectomy?**

Hadley G, Earnshaw J, Stratton I, Sykes J, Scanlon P

Gloucestershire Hospitals NHS Foundation Trust, Gloucester

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6.25-6.40pm
Presentation of Circulation Foundation Research Awards **Hall 1A**

6.40-7.30pm
Welcome drinks reception and judging of posters **Upper Galleria**

THURSDAY 19TH NOVEMBER

7.00am **Breakfast Symposium** **Hall 3B**

Treatment of Intermittent Claudication

Chairman: Professor Cliff Shearman

The role of medical treatment of intermittent claudication to improve symptoms Professor Gerard Stansby, Newcastle

The treatment of intermittent claudication after the MIMIC Trial Ms Louise Brown, London

Is there still a role for surgical bypass in patients with claudication? Professor Bruce Campbell, Exeter

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8.00am **Session 3** **Hall 1A**

Chairmen: Mr Tim Lees and Mr Richard Holdsworth

8.00-8.10am **Are cardiology investigations needed for asymptomatic patients undergoing vascular surgery?**

Riga C[1], Vazir A[3], Bourke T[1], Goebells A[2], Cheshire N[1], Jenkins M[1]

1 Regional Vascular Unit, St. Mary's Hospital, Imperial College London, London; 2 Regional Vascular Unit, St. Mary's Hospital; Department of Biosurgery and Surgical Technology, Imperial College London, London; 3 Department of Cardiology, St. Mary's Hospital, Imperial College London, London

page 62

8.10-8.20am **Cardiovascular events and the convergence of mid-term mortality after endovascular aneurysm repair (EVAR) or open repair of abdominal aortic aneurysm**

Brown L[1], Greenhalgh R[1], Powell J[1], Thompson S[2], on behalf of the EVAR Trial Participants

1 Imperial College London, London; 2 Medical Research Council Biostatistics Unit, Cambridge

page 63

8.20-8.30am **Duplex ultrasonography as a primary surveillance tool following endovascular aortic aneurysm repair**

Martin Z[1], Gray C[1], Lawler L[2], O'Malley K[1], O'Donohoe M[1], McDonnell C[1]

1 Department of Vascular Surgery, Mater Misericordiae University Hospital, Dublin; 2 Department of Radiology, Mater Misericordiae University Hospital, Dublin

page 64

8.30-8.40am **The evidence for candidate gene polymorphisms in the pathogenesis of abdominal aortic aneurysms (AAA)**

Obukofe B, Bown M, London N, Sayers R

Vascular Surgery Group, Department of Cardiovascular Sciences, University of Leicester, Leicester

page 65

8.40-8.50am **The effectiveness of endovascular simulator training for novices: can learning take place in the absence of expert feedback?**

Boyle E[1], O' Keefe D[1], Naughton P[2], Hill A[3], McDonnell C[4], Moneley D[2]

1 National Surgical Training Centre, Royal College of Surgeons in Ireland, Dublin, Ireland; 2 Department of Vascular Surgery, Beaumont Hospital, Dublin, Ireland; 3 Department of Surgery, Beaumont Hospital, Dublin, Ireland; 4 Department of Vascular Surgery, Mater Misericordiae University Hospital, Dublin, Ireland

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8.50-9.00am **Should vascular trainees come off the on-call rota?**

Weale A, Cooper D, Earnshaw J

Gloucestershire Royal Hospital, Gloucester

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9.00am **Aneurysm controversies**

Chairmen: Mr Rod Chalmers and Mr Geoffrey Gilling-Smith

Which is the best way to anaesthetise a patient for EVAR?	Dr Geraldine O'Sullivan, London
The management of synchronous malignancy and aortic aneurysms	Miss Rachel Bell, London
Why you should take part in the IMPROVE trial	Professor Nick Cheshire, London
EVAR - which is the best method of surveillance and for how long?	Mr Geoff Gilling-Smith, Liverpool
Quality Improvement Framework	Mr Jonothan Earnshaw, Gloucester

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10.15am **Development of endovascular surgery in Hong Kong and China**

Professor Stephen Cheng, Hong Kong

10.35am **Coffee** **Hall 2**

11.05am **Session 4** **Hall 1A**

R Eligible for Richard Wood Prize

Chairmen: Professor Ross Naylor and Professor Shervanthi Homer-Vanniasinkam

11.05-11.15am **Dietary supplementation with fish oil (eicosapentaenoic acid) is associated with decreased carotid plaque inflammation and increased stability**

Payne S[1], Shearman C[1], Cawood A[2], Ding R[2], Napper F[2], Young R[2], Williams J[3], Gallagher P[4], Calder P[2], Grimble B[2], Ye S[5]

1 Department of Vascular Surgery, Queen Alexandra Hospital, Portsmouth; 2 Department of Human Nutrition, University of Southampton, Southampton; 3 Department of Vascular Surgery, University of Southampton, Southampton; 4 Department of Pathology, University of Southampton, Southampton; 5 Department of Human Genetics, University of Southampton, Southampton

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11.15-11.25am **Sex differences in carotid plaque composition may explain apparent differences in benefit from carotid intervention in men and women**

Davies C[1], Rerkasem K[1, 2], Gallagher P[3], Grimble B[4], Calder P[4], Morris G[1], Baxter S[1], Phillips M[1], Shearman C[1]

1 Department of Vascular Surgery, University of Southampton, Southampton; 2 Department of Surgery, Chaing Mai University, Thailand; 3 Department of Pathology, University of Southampton, Southampton; 4 Department of Human Nutrition, University of Southampton, Southampton

page 70

11.25-11.35am **Asymptomatic carotid stenosis (ACST) - do women benefit from surgery?**

Halliday A, Hayter E, on behalf of the ACST Collaborators

St. George's University of London, London

page 71

11.35-11.45am **Carotid artery stenting: does it still have a role?**

Al-Jundi W, Beard J, Nawaz S, Gaines P, Cleveland T, Venables G, Randall M, Nassef A

Northern General Hospital, Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield

page 72

11.45-11.55am **Peri-operative trans-orbital Doppler imaging as an alternative for those patients with no suitable temporal bone window**

Jaipersad A, Sam R, Kay M, Tiivas C, Marshall C, Higman D, Imray C

Coventry and Warwickshire County Vascular Unit, University Hospitals Coventry and Warwickshire NHS Trust, Warwick Medical School, Coventry

page 73

11.55am-12.05pm **The evolving role of glycoprotein IIb/IIIa inhibitors in carotid surgery**

Gaunt A, Tiivas C, Van Dellen D, Jaipersad T, Sam R, Marshall C, Higman D, Imray C

Coventry and Warwickshire County Vascular Unit, University Hospitals Coventry and Warwickshire NHS Trust, Warwick Medical School, Coventry

page 74

12.05-12.15pm **Dual antiplatelet therapy prior to carotid endarterectomy reduces postoperative embolisation and thromboembolic events: postoperative transcranial Doppler monitoring is now unnecessary** [R]

Sharpe R, Dennis M, Nasim A, Sayers R, McCarthy M, London N, Naylor R

Leicester Royal Infirmary, Leicester

page 75

12.15-12.25pm **Lower prevalence of intraplaque haemorrhage in women explains sex differences in recurrent ischaemic events: implications for carotid endarterectomy selection**

Kandiyil N[1], Altaf N[1], Gladman J[2], MacSweeney S[3], Auer D[4]

1 Vascular Surgery and Academic Radiology, Nottingham University Hospitals NHS Trust, Nottingham; 2 Division of Rehabilitation and Ageing, Nottingham University Hospitals NHS Trust, Nottingham; 3 Vascular Surgery, Nottingham University Hospitals NHS Trust, Nottingham; 4 Academic Radiology, Nottingham University, Nottingham

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12.25-12.35pm **Carotid plaque haemorrhage and thromboembolism: prediction of microembolic signals and embolic cerebral ischaemia**

Altaf N[1], Goode S[2], Beech A[1], Gladman J[3], Morgan P[2], MacSweeney S[1], Auer D[2]

1 Department of Vascular and Endovascular Surgery, Queen's Medical Centre, Nottingham; 2 Academic Radiology, Nottingham University Hospitals NHS Trust, Nottingham; 3 Division of Rehabilitation and Ageing, Nottingham University Hospitals NHS Trust, Nottingham

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12.35pm **Vascular Access**
Chairman: Mr David Mitchell, Bristol

Setting up a vascular access service	Mr Max Troxler, Leeds
Endovascular training and vascular access	Mr Teun Wilmink, Birmingham/ Mr Andy Weale, Bristol
Care pathway	Mr David Mitchell, Bristol

1.10pm **Lunch** **Hall 2**

2.00pm **Session 5: Sol Cohen (Founder's) Prize** **Hall 1A**
Chairmen: Professor Gerard Stansby and Mr Shane MacSweeney

2.00-2.15pm **Caffeine improves walking distance in patients with claudication - a randomised, double-blind, placebo-controlled crossover study**

Momsen A[1], Jensen M[2], Norager C[1], Madsen M[1], Vestersgaard-Andersen T[3], Lindholt J[3]

1 Surgical Research Unit, Department of Surgery, Regional Hospital Herning, Denmark; 2 Surgical Research Unit, Department of Surgery, University Hospital of Aarhus, Denmark; 3 Vascular Surgical Research Unit, Department of Vascular Surgery, Regional Hospital Viborg, Denmark

page 78

2.15-2.30pm **The hidden cost of criteria-based commissioning for varicose veins**

Bagnall M, Vig S, Grice S, Trivedi P, Khan M, Derodra J

Department of Vascular Surgery, Mayday University Hospital, Croydon

page 80

2.30-2.45pm **Heparin activates platelet 12-LOX - transient aspirin resistance explained?**

McMahon G, Jones C, Hayes P, Naylor A, Goodall A

Department of Cardiovascular Sciences, University of Leicester, Leicester

page 81

2.45-3.00pm **Ruptured aneurysms in England: a propensity scored analysis of outcomes**

Holt P[1], Karthikesalingam A[1], Poloniecki J[2], Hinchliffe R[1], Loftus I[1], Thompson M[1]

1 St. George's Vascular Institute, London; 2 Community Health Sciences, St. George's University of London, London

page 82

3.00-3.15pm **Survival after ruptured abdominal aortic aneurysm repair in the over-80s**

Metcalfe J, Smith FCT, Baird RN, Brooks MJ, Lamont PM

Department of Vascular Surgery, Bristol Royal Infirmary, Bristol

page 83

3.15-3.30pm **Screened patients' preferences in the delivery of abdominal aortic aneurysm repair: a rating scale analysis**

Holt P[1], Gogalniceanu P[1], Murray S[1], Poloniecki J[2], Hinchliffe R[1], Loftus I[1], Thompson M[1]

1 St. George's Vascular Institute, London; 2 Community Health Sciences, St. George's University of London, London

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3.30pm **Tea** **Hall 2**

4.00pm **Updates/Hot Topics** **Hall 1A**

Chairmen: Professor Jonathan Beard and Professor Alun Davies

Carotid trials	Professor Ross Naylor, Leicester
The diabetic foot	Professor Gerard Stansby, Newcastle
National Vascular Database	Mr Tim Lees, Newcastle

4.45-5.05pm **Mini-vein symposium**

Chairmen: Professor Jonathan Beard and Professor Alun Davies

VNUS	Mr Ian Franklin, London
EVLT	Professor Michael Gough, Leeds
Sclerotherapy	Mr Ian Loftus, London
The truth	Mr Douglas McWhinnie, Milton Keynes

5.05pm **Debate:**
All major vascular surgery should be performed in centralised specialist units

Chairman: Professor Bruce Campbell

For: Mr Rod Chalmers, Edinburgh and Mr Michael Wyatt, Newcastle
Against: Mr Mike Lewis, Glamorgan and Mr Douglas McWhinnie, Milton Keynes

5.30-6.30pm **Annual Business Meeting**

7.30 for 8.00pm Annual Dinner **BT Convention Centre**

FRIDAY 20TH NOVEMBER

8.00am **Session 6** **Hall 1A**

R Eligible for Richard Wood Prize; V Eligible for Venous Forum Prize

Chairmen: Mr Peter Lamont and Mr Prakash Madhavan

8.00-8.10am **A national survey by the vascular surgical fellows of primary care trust criteria for intervention for varicose veins** [V]

Drinkwater S[1], Corfield L[2], Mylankal K[3], Goebells A[1], Jenkins M[1]

1 Regional Vascular Unit, St. Mary's Hospital, Paddington, London; 2 Department of Vascular Surgery, St. Thomas' Hospital, Westminster, London; 3 Academic Vascular Unit, Hull Royal Infirmary, Hull

page 85

8.10-8.20am **Recurrent varicose veins are more common following surgery than EVLT - results of a randomised controlled trial** V

Carradice D, Mekako A, Hatfield J, Chetter I

Academic Vascular Surgical Unit, Hull York Medical School

page 86

8.20-8.30am **Early results of a randomised clinical trial (RCT) comparing VNUS® ClosureFAST™ Ablation and Laser for Varicose Veins (VALVV)** V

Shepherd AC, Gohel MS, Brown LC, Metcalfe MJ, Hamish M, Davies AH

Imperial Vascular Unit, Imperial College, Charing Cross Hospital, London

page 87

8.30-8.40am **Screening for malignancy or systemic disorder in superficial thrombophlebitis** V

Chiang N, Kporku E, Vasudevan T, Haggart P

Department of Vascular Surgery, Waikato Hospital, New Zealand

page 88

8.40-8.50am **A 10-year experience of retrievable inferior vena cava filters**

Saha P[1], Ahmad A[1], Rolph R[1], Patel A[1], Waltham M[1], Hunt B[2], Sabharwal T[3], Modarai B[1]

1 Department of Vascular Surgery, Guy's and St. Thomas' NHS Foundation Trust, King's Health Partners, London; 2 Department of Haematology, Guy's and St. Thomas' NHS Foundation Trust, London; 3 Department of Interventional Radiology, Guy's and St. Thomas' NHS Foundation Trust, London

page 90

8.50-9.00am **Occupation-induced lower limb congestion in a normal population "My feet are killing me"** V

Wall M, Nicolson A, Choh C, Simms M

University Hospital Birmingham, Birmingham

page 91

9.00-9.10am **Above-knee reversed saphenous vein femoropopliteal bypass for intermittent claudication: the forgotten operation** R

Dawson A, Holdsworth R

Department of Vascular Surgery, Stirling Royal Infirmary, Stirling

page 92

9.10-9.20am **Can we improve mortality after lower limb amputation? An analysis of the National Vascular Database**

Weale A, Earnshaw J

Gloucestershire Royal Hospital, Gloucester, on behalf of the Audit and Research Committee of the VSGBI

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9.20am **Educational Symposium**
Chairman: Professor Cliff Shearman

Objective Assessment of Training Professor Jonathan Beard, Sheffield

Delivering High Quality Training Professor Nigel Standfield, London

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9.50am **Session 7** **Hall 1A**
Chairmen: Mr Simon Parvin and Professor Matt Thompson

9.50-10.00am **Angiotensin converting enzyme inhibitors (ACEI) do not decrease abdominal aortic aneurysm (AAA) size or growth rate**
Obukofe B, Bown M, London N, Sayers R
Vascular Surgery Group, Department of Cardiovascular Sciences, University of Leicester, Leicester
page 94

10.00-10.10am **Cardiopulmonary exercise testing provides a discriminating predictive tool for early and late outcomes in patients with an AAA**
Peters N, Thompson A, Lovegrove R, Ledwidge S, Catton T, Kitching A, Magee T, Galland R
Royal Berkshire NHS Trust, Reading
page 95

10.10-10.20am **Abdominal aortic aneurysm (AAA) wall thickness at regions of high and low wall stress: implications for aortic wall stress computation and rupture prediction**
Malkawi A[1], Cheng Z[2], Hinchliffe R[1], Loftus I[1], Xu Y[2], Thompson M[1]
1 St. George's Vascular Institute, St. George's Healthcare NHS Trust, London; 2 Department of Chemical Engineering and Chemical Technology, Imperial College London, London
page 96

10.20-10.30am **The neutrophil to lymphocyte ratio (NLR) predicts peri-operative mortality following elective and urgent repair of abdominal aortic aneurysms**
Appleton N, Morris-Stiff G, Lewis M
Department of Surgery, Royal Glamorgan Hospital, Llantrisant, Wales
page 97

10.30-10.40am **Ready-to-fenestrate stent grafts in the treatment of juxtarenal aortic aneurysms**
Manning BJ[1], Hinchliffe R[2], Richards T[1], Ivancev K[1], Harris P[1]
1 Multidisciplinary Endovascular Team, University College London Hospital, London; 2 St. George's Vascular Institute, London
page 98

10.40-10.50am **Neurological complications following thoracic endoluminal intervention: stroke is irreversible and fatal whereas paraplegia can be reversed**
Clough R[1], Bell R[1], Zayed H[1], Modarai B[1], Waltham M[1], Carrell T[1], Reidy J[2], Taylor P[1]
1 Department of Vascular Surgery, Guy's and St. Thomas' NHS Foundation Trust, London; 2 Department of Radiology, Guy's and St. Thomas' NHS Foundation Trust, London
page 99

10.50-11.00am **Outcomes of the endovascular management of aortic arch aneurysm: implications for management of the left subclavian artery**
Holt P, Johnstone C, Hinchliffe R, Morgan R, Jahingiri M, Loftus I, Thompson M
St. George's Vascular Institute, London

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11.00am **Coffee** **Hall 2**

11.20am **Aortic Symposium** **Hall 1A**
Chairman: Mr Peter Taylor

Modern blood pressure management	Dr David Treacher, London
When and how to treat an aortic dissection	Professor Michael Dake, Stanford, USA
Which aneurysms should be treated endovascularly?	Dr Michel Makaroun, Pittsburgh, USA
When are proximal and distal hybrids justified?	Professor Matt Thompson, London
When should branched and fenestrated devices be used?	Dr Roy Greenberg, Ohio, USA

12.30pm **Living with a Legend - Dr DeBakey**
Professor Hazim Safi, Texas, USA

12.45pm **Presentations:**
Honorary Members
Lifetime Achievement Awards
Prizes: Sol Cohen (Founder's) Prize; BJS Prize; Richard Wood Prize; and Venous Forum Prize

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1.00pm **Inauguration of new President**

1.05-1.45pm **Kinmonth Lecture:**
Perspectives on the future of vascular surgery and aortic interventions
Dr Roy Greenberg

Continuing Medical Education
Delegates will be provided with a Certificate of Attendance which they can add to their appraisal folder as evidence in their appraisal that they have attended a CPD meeting.

Posters

18-20 November 2009

BT Convention Centre, Liverpool

Posters will be displayed in the upper galleria at the conference centre during the meeting.

Poster number

1 **Is gadolinium contrast still required for cerebral perfusion imaging in patients with carotid steno-occlusive disease?**

Sideso E[1], MacIntosh B[2], Donahue M[2], Jezzard P[2], Handa A[3], Kennedy J[4]

1 Vascular Surgical Unit/Nuffield Department of Medicine & Surgery, University of Oxford, John Radcliffe Hospital, Oxford; 2 Clinical Neurology, FMRIB, University of Oxford, John Radcliffe Hospital, Oxford; 3 Vascular Surgical Unit/Nuffield Department of Surgery, University of Oxford, John Radcliffe Hospital, Oxford; 4 Acute Stroke Programme, Nuffield Department of Medicine, University of Oxford, John Radcliffe Hospital, Oxford

2 **International Carotid Stenting Study - surgical results**

Richards T[1], Featherstone R[2], Ederle J[2], Harris P[1], Brown M[2]

1 Multidisciplinary Endovascular Team, UCLH, London; 2 Institute of Neurology, UCLH, London

3 **Study on carotid plaque with dynamic contrast-enhanced 3-T MRI scan**

Menezes L[1], Kotze C[2], Goh V[3], Taylor J[3], Cross J[4], Rodriguez-Justo M[1], Collins D[5], Stirling J[3], Rocha R[6], Orton M[5], Wong W[3], Mohan H[7], Ell P[1], Groves A[1], Yusuf S[2]

1 Institute of Nuclear Medicine, University College London, London; 2 Vascular Surgery, Brighton and Sussex University Hospitals, Brighton; 3 Paul Strickland Scanner Centre, Mount Vernon Hospital, Northwood, Middlesex; 4 Department of Radiology, University of Cambridge Teaching Hospital, Cambridge; 5 CR-UK Clinical MR Research Group, Royal Marsden Hospital, Sutton; 6 Department of Histopathology, University College London, London; 7 Department of Nuclear Medicine, Guy's Hospital, London

4 **Are patients diagnosed with amaurosis fugax by optometrists delayed by their referral pattern to vascular surgeons in England and Wales?**

Fitchett J[1], Nicholson J[2], Richardson L[2], Magee T[2], Galland R[2], Rocker M[1], Lewis M[1]

1 Royal Glamorgan Hospital, Llantrisant, South Wales; 2 Royal Berkshire Hospital, Reading

5 **Acute limb ischaemia in aortic dissection: keep it simple but watch closely**

Corfield L, McCormack D, Clough R, Drinkwater S, Bell R, Reidy J, Taylor P

Guy's and St. Thomas' NHS Foundation Trust, London

6 **Popliteo-pedal bypass surgery for critical limb ischaemia - a single-centre 10-year experience**

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1 Department of Vascular Surgery, Guy's and St. Thomas' NHS Foundation Trust, London; 2 Division of Imaging Sciences, King's College London, London

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1 Regional Vascular Unit and 2 Department of Radiology, Royal Liverpool University Hospital, Liverpool

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Bennett P[1, 2], Silverman S[2], Gill P[3], Lip G[1]

1 University of Birmingham Centre for Cardiovascular Sciences; 2 Department of Vascular Surgery, Sandwell & West Birmingham Hospitals NHS Trust; 3 University of Birmingham School of Health and Population Sciences, Birmingham

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Riga C[1], Cheshire N[1], Hamady M[2], Bicknell C[1]

1 Regional Vascular Unit, St. Mary's Hospital & Department of Biosurgery and Surgical Technology, Imperial College London, London; 2 Department of Interventional Radiology, St. Mary's Hospital, Imperial College London, London

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Abboudi M, Nagpal K, Moorthy K, Cheshire N, Bicknell C

Department of Biosurgery and Surgical Technology, Imperial College London, London

Abstracts

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The association between methylene tetrahydrofolate reductase (MTHFR) genetic polymorphism and abdominal aortic aneurysm (AAA)

Obukofe B, Bown M, London N, Sayers R

Vascular Surgery Group, Department of Cardiovascular Sciences, University of Leicester, Leicester

Objective

The methylene tetrahydrofolate reductase (MTHFR) C677T polymorphism results in a substitution of thymidine nucleotide for cytidine at position 677 of the MTHFR gene resulting in a change from the wild type 'C' allele to the risk (minor) 'T' allele and this is referred to as single nucleotide polymorphism (SNP). Homozygosity for the 'T' allele has been associated with AAA, although this is not consistent. Our aim is to confirm the association between MTHFR SNP and AAA.

Method

We recruited 1352 predominantly male (99.94%) white Caucasians of whom there were 678 cases and 674 controls in a case-control study design with a mean age of 77.22 years. Both groups were evenly matched for demographic characteristics. Blood samples were obtained from both groups and genotyped for the MTHFR genotypes. The amplicons were subjected to an overnight restriction enzyme (Hinf1) digestion before gel electrophoresis. A Chi-square test of allele difference was done and $p<0.05$ was accepted as significant.

Results

The MTHFR genotypes in the control group were in Hardy-Weinberg Equilibrium (p=0.211) and distributed as follows: TT (59), CT (257) and CC (358). Conversely, the genotype distributions in cases were: TT (65), CT (292) and CC (321). The allele specific odds ratio (OR) was 1.260 [95% CI, 1.018-1.560; p=0.033] and χ^2=4.50. The Armitage Trend test OR was 1.144, p=0.062.

Conclusion

We do not have enough evidence to refute the association between MTHFR genetic polymorphism and AAA.

The biology of carotid plaques: once unstable, always unstable?

Sritharan K, Powell J, Sandison A, Monaco C, Franklin I, Davies A
Imperial College London, London

Objective

Following a cerebrovascular event, rapid referral for corrective carotid procedures improves long-term prognosis. We address the hypothesis that following a cerebrovascular event, carotid atherosclerotic plaques remain vulnerable to further erosion of fibrous plaque caps by proteolysis.

Method

Carotid endarterectomy plaques were obtained from 22 patients with previous cerebrovascular events (spanning 1 year) and 12 patients undergoing surgery for asymptomatic disease. Plaques were assessed using immunohistological markers for macrophages (CD68), the metalloproteinases MT1-MMP and MMP-2, and for TIMP-2. The expression of these proteins was also assessed in RNA extracted from the plaques.

Results

MT1-MMP and MMP-2 staining was greater in ruptured versus intact fibrous caps; crude percentage staining was 28.5±13 versus 1.0±1.7 ($p=0.0002$) and 21.7±11 versus 4.3±5.9 ($p=0.0005$), respectively. Ruptured plaques with increased MT1-MMP and MMP-2 staining were evident for up to 1 year after the first cerebrovascular event, but rare in asymptomatic patients. Similarly, the expression of both MT1-MMP and MMP-2 (adjusted for confounders), was higher in symptomatic plaques, 26±47 ($p=0.001$) and 5.6±6.2 ($p=0.006$), respectively. This increased expression did not wane with time from initial cerebrovascular event ($r2=0.02$, $p=0.50$). In contrast, there was no significant difference in TIMP-2 expression between plaques from symptomatic and asymptomatic patients.

Conclusion

After rupture of a carotid plaque gives rise to symptoms, the area does not appear to be healed and remains potentially vulnerable with increased expression of MTI-MMP and MMP-2. This data provides a biological rationale for the need to treat carotid patients urgently.

Lymphangiogenesis: novel involvement in abdominal aortic aneurysm

Allen C[1], Scott DJA[2], Jones P[1]

1 Leeds Institute of Molecular Medicine, Wellcome Trust Brenner Building, St. James's University Hospital, Leeds; 2 Leeds Vascular Institute, The General Infirmary at Leeds, Leeds and the Division of Cardiovascular & Diabetes Research, Leeds Institute of Genetics, Health and Therapeutics, University of Leeds, Leeds

Objective

Ongoing angiogenesis is implicated in the inflammatory, proteolytic and hypoxic environments, which characterise abdominal aortic aneurysm (AAA). Any involvement of lymphatic vessels in AAA is uncharacterised, although lymphangiogenesis has been associated with chronic inflammatory conditions. This study aimed to delineate the relationship between inflammation and neovascularisation in AAA.

Method

AAA samples and pre-operative CT scans were obtained from patients (n=14, median age=74 years, interquartile range=71-78 years) undergoing elective repair, alongside 'normal' aorta (n=9, 74 years, 70-79 years). Specific immunostains for blood (CD31) and lymphatic (D2-40) vessels, (lymph) angiogenic regulators (Ang-1, Ang-2, VEGFR-3), and pro-inflammatory enzymes (MMP-2, MMP-9) allowed characterisation and quantitation of vasculature. Statistical analysis was performed using Mann-Whitney-U and Spearman's rank tests.

Results

The AAA wall contained high levels of inflammatory infiltrate; micovascular densities of blood ($p<0.001$) and lymphatic ($p=0.003$) vessels were significantly increased in AAA samples over controls. Maximal AAA vascularity was observed in inflammatory areas; both CD31 ($rho=0.625$, $p=0.017$) and D2-40 ($rho=0.675$, $p=0.008$) vessels displayed significant positive correlations with the extent of inflammation. Increased VEGFR-3, MMP-2, MMP-9, and Ang-1 expression was also evident within inflammatory AAA areas. CD31 vascularity displayed a positive correlation with AAA diameter ($rho=0.674$, $p=0.023$), a marker of disease progression.

Conclusion

These findings demonstrate lymphatic vessel involvement in AAA. The inflammatory AAA wall is an abundant source of lymph/angiogenic growth factors (e.g. VEGF-A, VEGF-C); neovascularisation may serve to potentiate the inflammatory response, and influence AAA progression. Larger sample sizes and pre-clinical models are required to determine the clinical significance of these findings.

Are Tie2-expressing monocytes the key to neovascularisation in critical limb ischaemia?

Patel A, Smith A, Humphries J, Mattock K, Saha P, Waltham M, Modarai B

Academic Department of Surgery, Cardiovascular Division, St. Thomas' Campus, King's College London, London

Objective

Unselected mononuclear cell populations, delivered to salvage critically ischaemic limbs, have only had modest benefits. One subset that expresses the monocyte marker, CD14, and the angiopoietin receptor, Tie2, promotes angiogenesis in other pathologies. We hypothesise that this subset has an important role in neovascularisation in critical limb ischaemia (CLI).

Method

Flow cytometry was used to determine the proportion of circulating mononuclear cells expressing CD14/Tie2 in blood from patients with CLI and controls. This was repeated 12 weeks after revascularisation/amputation. Proximal (normoxic) and distal (ischaemic) muscle biopsies were taken during amputation and immunostained for CD14+ve/Tie2+ve cells.

Results

Twenty patients with CLI were recruited (13 male; mean age 73yrs [SEM ±2.7], Rutherford class 4 [n=11], class 5 [n=6] and class 6 [n=3]). Mean ankle-brachial pressure index was 0.4 (±0.06). Patients with CLI had nearly 10-fold more CD14+ve/Tie2+ve cells than both age/sex-matched (n=15) and young (n=10) controls (3.18% [±0.38] vs 0.37% [±0.09] and 0.29% [±0.05], respectively, $p<0.0001$). A significant reduction in circulating CD14+ve/Tie2+ve cells (0.56% [±0.10], $p=0.0039$) was found in the 10 patients that agreed to follow-up after revascularisation (n=8) or amputation (n=2). Perivascular CD14+ve/Tie2+ve cells were found in biopsies of ischaemic muscle, but not in normoxic muscle.

Conclusion

Circulating CD14+ve/Tie2+ve cell numbers are increased and recruited to ischaemic muscle in patients with CLI, and return to normal following removal of the ischaemic stimulus. A better understanding of the properties of this subset in the ischaemic environment may lead to the development of a more specific cell-based therapy to promote revascularisation of the critically ischaemic limb.

Limitations of 18F-FDG PET imaging in patients with a symptomatic carotid artery stenosis on statins

Shaikh S[1], Welsh A[2], Murray A[3], Ramalingam S[3], McKiddie F[2], Wilson H[4], Connolly T[5], Brown P[6], Brittenden J[1]

1 Department of Surgery, University of Aberdeen, Aberdeen; 2 Department of Nuclear Medicine, University of Aberdeen, Aberdeen; 3 Department of Radiology, University of Aberdeen, Aberdeen; 4 Institute of Medical Sciences, University of Aberdeen, Aberdeen; 5 Wyeth Translational Scientist; 6 Department of Pathology, Aberdeen Royal Infirmary, Aberdeen

Objective

Atherosclerotic plaque rupture is associated with inflammatory cell activity and occurs in or adjacent to the macrophage rich area. 18F-FDG PET uptake has been shown to occur within macrophages in symptomatic carotid plaques. We aimed to determine 18F-FDG-uptake in patients with symptomatic carotid disease who were on appropriate secondary prevention therapy and to compare this with markers of plaque inflammation.

Method

Sequential patients presenting with unilateral symptomatic significant carotid artery stenosis who were due to undergo carotid endarterectomy were recruited. An 18F-FDG PET co-registered CTA scan was carried out prior to surgery. Plaque immunohistochemistry (CD68, CD3), and H&E staining for modified AHA classification were performed.

Results

Thirty-four patients were recruited. All of the carotid plaque specimens were classified as unstable plaque (grade 3). The maximal 18F-FDG uptake on the symptomatic side was significantly higher compared to the asymptomatic contralateral side (Median [IQR] - 9.71 [5.14] versus 8.64 [5.16]; p=0.013). One patient who was not on statin therapy had higher (>3IQR) 18F-FDG PET uptake and CD68 counts. 18F-FDG uptake did not correlate with the macrophage or T-lymphocyte count. 18F-FDG uptake correlated with the severity of stenosis (r=0.48, p=0.008) but not with presenting symptoms.

Conclusion

PET 18F-FDG uptake was significantly increased in the symptomatic carotid artery side compared to the contralateral side but did not correlate with markers of plaque inflammation. The ability of 18F-FDG PET uptake to monitor plaque inflammation and the potential response to novel anti-inflammatory therapeutic agents in addition to statin therapy may be limited.

Pre-operative glomerular filtration rate predicts renal outcome following emergency EVAR for ruptured abdominal aortic aneurysms

Noorani A, Sadat U, Walsh S, Varty K, Hayes P, Boyle J

Cambridge Vascular Unit, Cambridge

Objective

Recent evidence has suggested that patients undergoing emergency EVAR (eEVAR) for ruptured AAA (RAAA) have a higher incidence of renal complications than those undergoing open repair. The aim of this study was to prospectively evaluate renal outcomes in patients undergoing eEVAR for RAAA and correlate pre-operative renal function with postoperative renal dysfunction and the need for renal replacement therapy (RRT).

Method

Data were collected prospectively from January 2006 to July 2009. Estimated glomerular filtration rates (eGFR) were calculated using the Modification of Diet Renal Disease (MDRD) Study equation before and 48 hours after eEVAR. A Spearman Rank test assessed the correlation between pre-operative and postoperative eGFR. The relationship between pre-operative eGFR and subsequent RRT was evaluated.

Results

Thirty-seven patients (30 male), median age 77 years (IQR 74-79), underwent eEVAR. The median eGFR fell from 51ml/min/1.73m^2 (IQR 35-71) on admission to 48ml/min/1.73m^2 (IQR 25-68) 48 hours postoperatively ($p=0.078$). There was a strong correlation between pre-operative and postoperative eGFR ($R=0.81$, $p<0.000001$). Eight patients (21%) required RRT. Pre-operative eGFR was significantly lower in those patients who subsequently required RRT, 28ml/min/1.73m^2 compared to 56ml/min/1.73m^2 in the non-RRT group ($p<0.001$).

Conclusion

This study has demonstrated that pre-operative eGFR is a strong predictor of renal outcome and the need for RRT following eEVAR for ruptured AAA. Furthermore, it may suggest that intra-operative variables such as contrast administration and endovascular manipulation are less important aetiological factors. Further studies are required to establish the aetiology and impact of renal injury following eEVAR.

The role of NK cells in the pathogenesis of abdominal aortic aneurysms: a phenotypic study

Jagadesham V[1], Porter K[2], Carding S[3], Scott DJA[1,4]

1 Institute of Molecular & Cellular Biology, University of Leeds, Leeds Vascular Institute, The General Infirmary at Leeds, Leeds; 2 Academic Unit of Cardiovascular Medicine, University of Leeds, Leeds; 3 Institute of Food Research, Norwich Research Park, Norwich; 4 Cardiovascular & Diabetes Research, Leeds Institute of Genetics, Health and Therapeutics, University of Leeds, Leeds

Objective

Aortic smooth muscle cell (aSMC) apoptosis is a hallmark feature of AAA. Peripheral blood (PB) NK cells are increased in AAA patients and display increased cytotoxicity against aSMC. The explanation for this increased cytotoxicity against aSMC is unclear. This study explored the potential molecular and cellular factors responsible for the increased NK cell cytotoxicity in AAA.

Method

The phenotype of freshly isolated PB NK cells from AAA patients (n=40) and controls (n=26) was analysed by multi-parametric flow cytometry with focus on the activatory receptors, NKp30, Nkp44, NKp46 and NKG2D. NK cells from intraluminal blood (ILB) and the AAA tissue were analysed for region-specific phenotypes. The response of NK cells from both groups to IL-2 stimulation was also investigated.

Results

There was no difference in the levels of expression of activatory receptors by NK cells from either group. Amongst AAA patients (n=10) there were no differences in the levels of expression of activatory receptors present in PB or ILB. In contrast tissue NK cells (n=3) displayed a significant reduction in the cell surface density of NKG2D ($p=0.02$, Students t-test), suggesting an interaction with NKG2D ligands. In response to IL-2, NK cells from AAA patients demonstrated higher levels of CD69 expression and greater stability in activatory receptor expression.

Conclusion

Despite the lack of phenotypic difference, the disparity in cytotoxicity against aSMC may be explained by the expression of NKG2D ligands in AAA. Furthermore, NK cells from AAA patients display a lower threshold for activation *in vitro*, which may be of relevance in the pathogenesis of AAA.

Serum proteomics and the search for biomarkers of abdominal aortic aneurysms

Nordon I, Brar R, Hinchliffe R, Cockerill G, Loftus I, Thompson M

St. George's Vascular Institute, London

Objective

Proteomics is evolving as an important research technique in cardiovascular disease. Previous studies support the hypothesis that abdominal aortic aneurysms (AAA) are local manifestations of a systemic dilating diathesis. We present exploratory research for a systemic biomarker of AAA in serum.

Method

Forty patients, 20 with large AAAs and 20 matched controls were prospectively recruited. Serum was harvested, enriched and mined for differential protein expression between these populations. Difference in gel electrophoresis (DiGE) using a 2-D platform, cyanine labelling and Progenesis Samespots software (Nonlinear dynamics, UK) identified protein spots with significantly altered intensity. MS/MS liquid chromatography mass spectrometry (Thermo Finnigan, USA) aligned to the Seaquest protein database characterised proteins of interest.

Results

Four hundred and thirty-six protein spots were demonstrated on the gels. Thirteen protein spots of interest, demonstrating fold change (1.7-4) between the two patient cohorts and consistent significant differential expression (ANOVA, $p<.003$), were picked for identification. A total of 4/13 spots were identified according to their MS/MS mass spectra. Identified spots represented fragments of proteins highly abundant in serum.

Conclusion

Despite early encouraging findings it is apparent that issues of variability surrounding sample harvest, processing, enrichment and the challenge of identifying minimally expressed proteins currently limit this avenue of research. No proteins identified in this study had the biological plausibility to represent a possible biomarker of aneurysmal disease.

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^{1}H-NMR-based metabolomics: a novel biomarker approach to peripheral arterial disease (PAD)

Girn HRS[1], Turner E[2], Fisher J[2], Homer-Vanniasinkam S[1]

1 Leeds Vascular Institute, The General Infirmary at Leeds, Leeds; 2 School of Chemistry, University of Leeds, Leeds

Objective

Combining existing biomarkers with traditional risk factors adds only moderately to predictions of future cardiovascular events in an individual. Our aim was to check the viability of pattern-recognition techniques applied to NMR-spectral data as a biomarker of PAD that would differentiate between PAD groups.

Method

Fasting plasma samples were taken from 18 critical limb ischaemic (CLI) patients, 18 stable claudicants (SC), and 15 age-matched controls. 1H-NMR spectra were measured at 499.97MHz on a Varian Unity Inova 500 spectrometer at 21°C. Principal Component Analysis (PCA) was performed for identifying variation in the spectral data and Partial Least Squares Discriminant Analysis (PLS-DA) for identifying maximum separation between defined class samples using SIMCA-P+ 11 software.

Results

The PCA model successfully distinguished between controls and PAD sub-groups. The region at δ3.27 (H5 myo-inositol) of the spectra was found to be most influential in differentiating between controls and PAD, and SC and CLI sub-groups, while the region at δ3.64 (where H1/H3 of myo-inositol, and glycerol and choline protons resonate) was found to be important in differentiating between controls and the whole PAD group. A Kruskal-Wallis test was applied to bin areas in the regions of δ3.27, δ3.64 and δ3.22, and significant differences ($p<0.05$) were found in these regions between the controls, SC and CLI groups.

Conclusion

This study confirms the viability of metabolomic profiling for screening PAD patients on the basis of pattern-recognition techniques applied to NMR spectral data, and myo-inositol was detected as a novel PAD biomarker.

Immediate postoperative B-type natriuretic peptide and its predictive value

Suttie S[1], Mofidi R[1], McCallum R[1], Christie S[2], McLeod S[2], Flett M[1], Nagy J[1], Griffiths G[1], Struthers A[3], Stonebridge P[1]

1 Department of Vascular Surgery, Ninewells Hospital, Dundee; 2 Department of Anaesthesia, Ninewells Hospital, Dundee; 3 Department of Clinical Pharmacology and Therapeutics, University of Dundee, Dundee

Objective

Major vascular surgery carries a high risk of major cardiovascular morbidity and mortality. A means of predicting peri-operative myocardial events is required. Pre-operative B-type natriuretic peptide (BNP) has been evaluated for this purpose. The aims of this study were to determine the postoperative course of BNP levels and correlate these levels with outcome.

Method

Forty-five patients undergoing major vascular surgery underwent serial venous blood sampling for troponin-T and BNP and serial electrocardiograms (ECG), pre-operatively and immediately postoperative and at days one through four postoperatively. Receiver Operator Characteristic and Kaplan Meier curves with Log Rank statistics were used to determine cut-off levels and survival differences.

Results

Seven patients had myocardial damage, as defined by troponin-T. An immediate postoperative BNP (cut-off 171pg/ml) was better able to predict cardiac damage (p=0.027) than pre-operative BNP levels (cut-off 281pg/ml, p=0.042) and on day one postoperatively (cut-off 182pg/ml, p=0.032). Pre-operative BNP levels were found to be a predictor of postoperative survival. Patients with a pre-operative BNP >281pg/ml had a mean survival of 12.7 months (+/- 2.5) compared to 17.6 months (+/- 0.7) for patients with a BNP <281pg/ml, p=0.044.

Conclusion

Pre-operative BNP is an accurate determinant of postoperative cardiac morbidity and all-cause survival, with BNP in the immediate postoperative period being an even more accurate predictor of cardiac events.

Does initial balloon denudation enhance endothelial cell loss and tunica media injury in a great saphenous vein (GSV) model of foam sclerotherapy (FS) using sodium tetradecyl sulphate (STD)?

Ikponmwosa A[1], Abbott C[1], Graham A[2], Homer-Vanniasinkam S[1], Gough MJ[1]

1 Leeds Vascular Institute, The General Infirmary at Leeds, Leeds; 2 Biomedical Sciences, Bradford University, Bradford

Objective

Although collagen denaturation is considered pivotal to permanent vein ablation after radiofrequency/laser therapy, recanalisation rates (20-32% at ≤3 years) after truncal vein FS suggests thrombotic occlusion without irreversible vein wall injury. This study assesses FS-inflicted vein injury with and without initial endothelial denudation.

Method

Control segments (1.5cm proximal GSV) were harvested from 20 patients undergoing saphenofemoral ligation. The next 1.5cm of GSV were also harvested before (n=10) and after (n=10) *in situ* balloon denudation, filled with 1% or 3% STD foam (5/concentration/group) for 5 minutes, flushed and formalin-fixed. GSV sections underwent H&E, elastin and collagen staining. Percentage endothelial cell loss (ECL) and percentage depth of tunica media injury (TMI) were determined. Collagen injury was further assessed by transmission electron microscopy (TEM) at various depths (intima, media, adventitia).

Results

Control samples showed no injury. Whilst 1% and 3% STD foam caused 86.3±2.7% and 92.2±1.6% ECL ($p<0.001$; 1% v 3%, $p=0.55$), islands of EC remained in all sections. Balloon denudation increased ECL ($p=0.01$; 1%: 96.9±0.3%, 3%: 98.1±0.3%; 1% v 3%, $p=0.07$). TMI (smooth muscle vacuolation) was minimal, extending for 8.9±0.5% (1%) and 12±2.1% (3%) of its depth (1% v 3%, $p=0.61$) and was not enhanced by balloon denudation (1%: 8.7±1.8%, 3%: 11.3±1.1%; 1% v 3%, $p=0.26$). No elastin disruption occurred and intact collagen bundles were observed (TEM) at all depths.

Conclusion

Balloon denudation increased ECL, but minimal TMI, persisting endothelial cells and the absence of collagen disruption (perhaps explaining the capacity for recanalisation) make it unlikely to enhance the efficacy of FS regardless of STD concentration.

Microvessel morphology and phenotype may determine plaque vulnerability: significance for symptomatic vs asymptomatic patients?

Chowdhury M[1, 2], Ghosh J[1], Alexander Y[2], Smyth V[1], Serracino-Inglott F[1]

1 Department of Vascular & Endovascular Surgery, Manchester Royal Infirmary, Manchester; 2 Heart and Vascular Research Group, Faculty of Medical & Human Sciences, University of Manchester, Manchester

Objective

A challenge facing vascular specialists is differentiating patients with asymptomatic carotid disease who are at risk from plaque instability. We hypothesize that locally released angiogenic growth factors contribute to microvessel instability within plaques and may act as a biomarker to predict patients at risk of future stroke. This study aims to investigate the difference in gene expression and potential serum biomarkers within carotid endarterectomy specimens in symptomatic vs. asymptomatic patients.

Method

Carotid endarterectomy specimens from symptomatic and asymptomatic patients were interrogated for angiogenic growth factor expression histologically using immunofluorescence, and biochemically using Q-PCR. On the basis of plaque studies, Bio-Plex™ suspension array was used to assess circulating biomarkers in venous blood taken from the same patients.

Results

Immunohistological analysis detected Hepatocyte Growth Factor (HGF) and its receptor, c-Met, in microvessel CD31-positive endothelia, and alpha-SMA-positive cells. Q-PCR demonstrated up-regulation of angiogenic growth factors, CD105, HGF ($p<0.001$) and c-Met ($p=0.011$) in symptomatic vs. asymptomatic plaques. Immunofluorescence demonstrated significantly greater neovessel density in symptomatic plaques ($p=0.042$) with elevated expression of HGF and c-Met. Bio-Plex™ suspension array demonstrated elevated HGF ($p=0.016$) and decreased PDGF ($p=0.034$) serum levels in symptomatic vs. asymptomatic patients or healthy controls, suggesting diminished recruitment of mural cells to stabilise new microvessels.

Conclusion

This study supports the hypothesis that plaque instability may be mediated by increased HGF-induced formation of new microvessels, and decreased vessel stability resulting from decreased PDGF. Suspension array technology has the potential to identify circulating biomarkers that correlate with angiogenesis and plaque rupture risk.

Cost utility analysis of a randomised control trial of percutaneous transluminal angioplasty (PTA), supervised exercise programme (SEP) and combined treatment (PTA+SEP) for patients with intermittent claudication (IC) due to femoropopliteal disease

Mazari F, Khan J, Abdul Rahman M, Mehta T, Gulati S, McCollum P, Chetter I

Academic Vascular Surgery Unit, University of Hull; Vascular Laboratory, Hull Royal Infirmary, Hull

Objective

To compare costs and utilities of PTA, SEP and combined treatment in patients with femoropopliteal IC to establish the most cost-effective treatment.

Method

Patients with femoropopliteal IC were randomised to receive PTA, SEP or PTA+SEP. Patients with critical limb ischaemia were excluded. Patients were assessed before and at 1, 3, 6 and 12 months post-intervention. Clinical and quality of life indicators were recorded at each visit. An SF-6D health utility index was calculated from SF-36 and plotted for all time points. QALYs were generated by calculating the area under curve. Costs were calculated using NHS2009-10 PBR-tariffs, the NIHR-CRN investigation pricing index and BUPA pricelists. Adjustments to treatment costs were made for re-interventions. Cost/QALY and incremental costs were calculated. Sensitivity analyses were carried out to check robustness of results.

Results

One hundred and seventy-eight patients (PTA 60, SEP 60, PTA+SEP 60) were randomised. All treatments resulted in a statistically significant improvement in SF-6D index (Friedman test, $p<0.05$). Inter-group analysis: QALYs: there was no significant difference (Kruskal-Wallis test, $p>0.05$) between treatments in mean QALYs gained (PTA 0.620 [95% CI 0.588-0.652], SEP 0.629 [95% CI 0.597-0.660], PTA+SEP 0.649 [95% CI 0.622-0.675]). Costs: adjusted mean cost/procedure was significantly higher (Kruskal-Wallis test, $p>0.05$) for PTA (£6049.23) compared to SEP (£3198.13) and PTA+SEP (£5830.74). Similarly, cost/QALY was significantly higher for PTA (£9756.82) compared to SEP (£5084.47) and PTA+SEP (£8984.19). This showed an incremental £26,642.37/QALY if PTA is used alone compared to PTA+SEP.

Conclusion

SEP is the most cost-effective first-line treatment for mild to moderate IC. SEP combined with PTA is more cost-effective than PTA alone and should be provided as standard treatment.

Demonstration of angiogenic and tissue protective properties of erythropoietin in human critical leg ischaemia

Joshi D[1], Ho TK[1], Tsui J[1], Selvakumar S[1], Khan K[2], Abraham D[2], Baker D[1]

1 Department of Vascular Surgery, Royal Free Hospital, UCL Medical School, London; 2 Centre for Rheumatology, Royal Free Hospital, UCL Medical School, London

Objective

Erythropoietin (EPO) is tissue protective and angiogenic in pre-clinical models of critical leg ischaemia (CLI). In this study, the expression of EPO and its recently discovered tissue-protective heteroreceptor (EPOR and βcR) was studied in CLI and normal human skeletal muscle (SkM). In addition, angiogenic effects of EPO on human microvascular endothelial cells (HMEC) were investigated *in vitro*.

Method

Human gastrocnemius muscle was obtained from patients with CLI (n=12) and controls (n=12). Immunohistochemistry, immunofluorescence and western blotting were performed to display and quantify the expression of EPO, EPOR and βcR. HMEC were used *in vitro*. Cell proliferation was measured using a cell-count method. Apoptosis was determined by counting pyknotic nuclei after DAPI-staining and CASPASE-3 assay. Matrigel was used to assess capillary-tube formation.

Results

Immunohistochemistry showed clear expression of EPO, EPOR and βcR in ischaemic and normal skeletal myofibrils along with microvessels. There was increased intensity of staining in CLI for all three proteins ($p<0.05$). Western blotting showed increased expression of EPO and EPOR ($p<0.05$) but not βcR ($p>0.05$). Immunofluorescence showed co-localization of EPOR and βcR in sarcolemma and cytoplasm of myofibrils, indicating the presence of tissue-protective heteroreceptor. EPO stimulated cell proliferation, attenuated apoptosis and promoted capillary-tube formation of HMEC ($p<0.05$). These effects were prevented by adding EPO-blocking antibody.

Conclusion

The expression of EPO and its novel heteroreceptor in human skeletal myofibril has been shown for the first time. EPO may protect tissue via its heteroreceptor. Additionally, EPO promotes angiogenesis *in vitro*. Both properties may be beneficial in the treatment of CLI. These results were robust and valid in all sensitivity analyses.

Novel late-phase contrast-enhanced ultrasound to assess carotid atherosclerotic plaques in humans

Shalhoub J[1], Owen D[2], Miller S[2], Gauthier T[3], Doryforou O[3], Franklin I[1], Leen E[3], Davies A[1]

1 Imperial Vascular Unit, Imperial College London, Charing Cross Hospital, London; 2 Division of Investigative Science, Imperial College London, Hammersmith Hospital, London; 3 Department of Imaging Science, Imperial College London, Hammersmith Hospital, London

Objective

Non-targeted microbubbles are retained by activated endothelium and may therefore have the potential to detect inflammation *in vivo*. The purpose of this study was to determine whether non-targeted microbubbles such as SonoVue® (Bracco, Geneva, Switzerland) are retained in human carotid plaque in sufficient number to be detected by a novel ultrasound technique, and are of potential value in discriminating between plaque type.

Method

Ethical approval was obtained. Following informed consent, 37 patients with carotid atherosclerosis were studied with late-phase contrast-enhanced ultrasound (LP-CEUS). Using raw linear data, Qlab software was used to quantify echo intensity of the plaque, which was normalised to lumen intensity. A gray-scale median (GSM) was also calculated.

Results

Of the 37 patients, in 16 (43%) a plaque (symptomatic) in the territory of a recent cerebrovascular event was studied and in 21 (57%) an asymptomatic plaque was studied. Normalised late-phase plaque intensity was greater in the symptomatic group 0.3899 (95% CI: -0.1056 to 0.8854) than the asymptomatic group 0.6869 (95% CI: -1.036 to -0.3380), (p=0.0005). There was a moderate (rho=-0.44, p=0.016) inverse correlation between normalised late-phase plaque intensity and GSM score. There was no correlation between normalised LP-CEUS plaque intensity and percentage luminal stenosis (p=0.27).

Conclusion

By quantifying microbubble retention within the carotid plaque, LP-CEUS is able to show clear differences between symptomatic and asymptomatic plaques. This technique may therefore have promise as a tissue-specific marker of inflammation, and a role in the risk stratification of atherosclerotic carotid stenosis.

Abdominal aortic aneurysms are associated with rhesus negative status and blood group A

Ilyas S, Abayasekara K, Morrow D, Meyer F

Department of Vascular Surgery, Norfolk and Norwich University Hospital, Norwich

Objective

Specific diseases are known to be associated with particular blood groups. There are no published studies investigating the relationship between abdominal aortic aneurysms (AAA) and blood groups. The aim of this study was to determine if AAA are associated with specific blood groups.

Method

Blood groups of consecutive patients who had AAA repair over a period of 5 years in a single vascular unit were reviewed. The results were then compared with the normal distribution of blood groups in the region. This was determined by reviewing the blood groups of 1067 consecutive patients above the age of 65. Statistical analyses were performed using Chi-squared tests.

Results

Six hundred and twenty-two patients had AAA repair over 5 years. Thirty-nine percent of patients had emergency AAA repair as compared to 61% electives. Patients who had undergone AAA repair were significantly more likely to be rhesus negative (16.7 versus 12.5% in normal population; p=0.01). An association was also found between blood group A and AAA (47.9% versus 42% in normal; p=0.08).

Conclusion

There is an increased incidence of AAA in rhesus negative subjects. There may also be an association with blood group A. These findings need to be verified by larger multicentre studies. If these associations are confirmed, they might facilitate targeted AAA screening in groups not covered by the national screening programme, such as women.

The impact of endovascular repair of ruptured abdominal aortic aneurysm and intra-abdominal pressure on gastrointestinal motility and bowel permeability

Makar R, Badger S, O'Donnell M, Lee B, Lau L, Hannon R, Soong C

Department of Vascular Surgery, Belfast City Hospital, Belfast, Northern Ireland

Objective

The study aim was to determine if emergency endovascular aneurysm repair (eEVR) affects intra-abdominal pressure (IAP) and gastrointestinal dysfunction compared to open repair (eOR).

Method

Thirty patients were recruited (eEVR=14; eOR=16). Gastric motility was measured using a paracetamol absorption test at day 1 and day 3 postoperatively. Intestinal permeability was assessed by a urinary lactulose-mannitol (L/M) test at the 1st, 3rd and 5th day postoperatively. Clinical parameters and tolerance to feeding were recorded daily. IAP was measured at 2 and 6 hours, then daily for 5 days.

Results

The IAP was significantly lower with eEVR throughout ($p<0.05$), except day 2 and day 3. Paracetamol absorption increased in the eEVR group at day 3 compared to day 1 ($p=0.03$), while there was no inter-group difference. The eOR group had a significantly higher L/M ratio at day 3 ($p=0.02$) and the peak ($p=0.03$). The return of normal bowel sounds, passing of flatus/bowel motion and the tolerance to oral/NG feeding ($p=0.02$, $p=0.003$ and $p=0.004$, respectively) were earlier in the eEVR group. The L/M ratio at day 3 correlated with IAP ($r=0.54$, 0.62 and $p=0.006$, and 0.001) and with IAP at the preceding time points as well as at day 3, at 6 hours ($r=0.50$, $p=0.01$), day 1 ($r=0.49$, $p=0.01$), day 2 ($r=0.55$, $p=0.006$), day 3 ($r=0.60$, $p=0.002$). Similarly, the L/M ratio at day 5 demonstrated correlation with IAP at 6 hours ($r=0,42$, $p=0.04$), day 2 ($r=0.45$, $p=0.04$) and day 3 ($r=0.51$, $p=-0.01$).

Conclusion

eEVR was associated with improved gastrointestinal motility and bowel permeability compared to eOR. IAP could play a causative role in impairment of bowel permeability.

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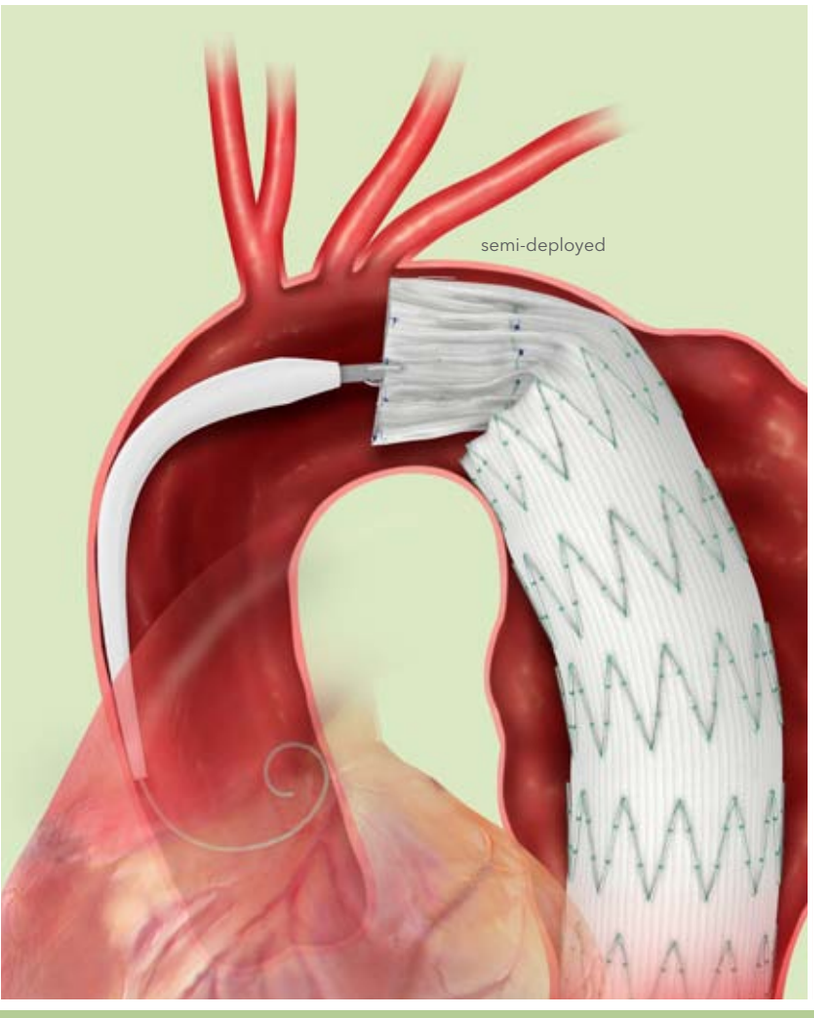

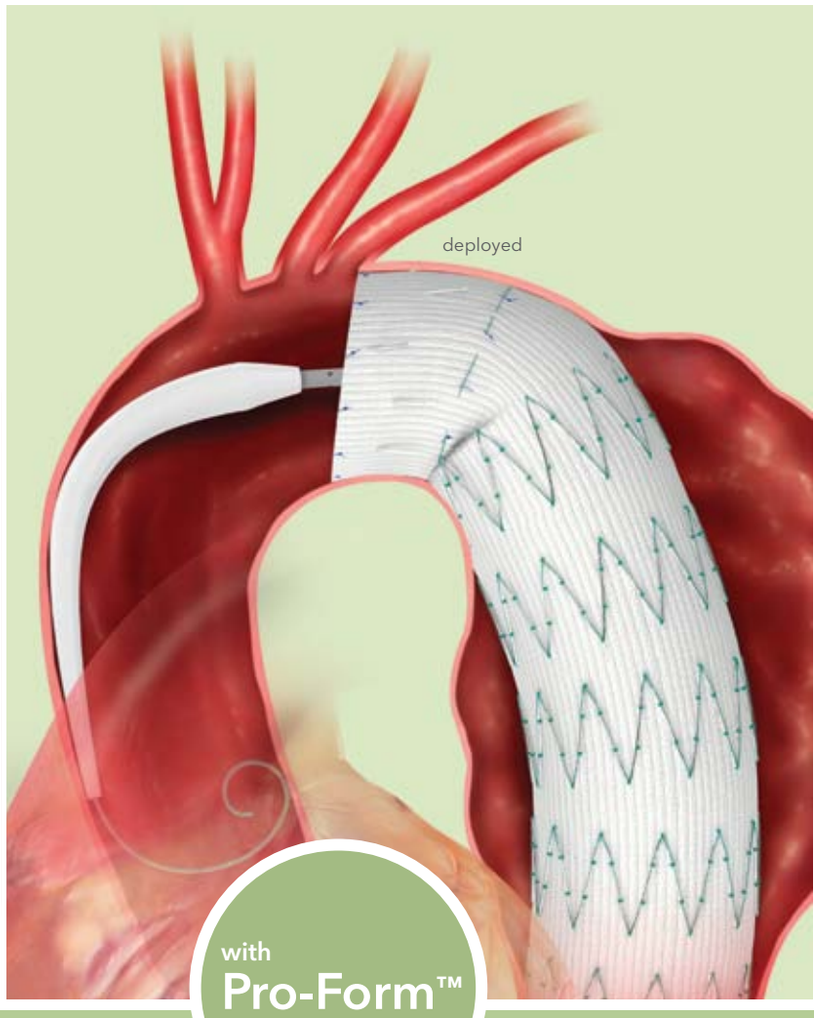

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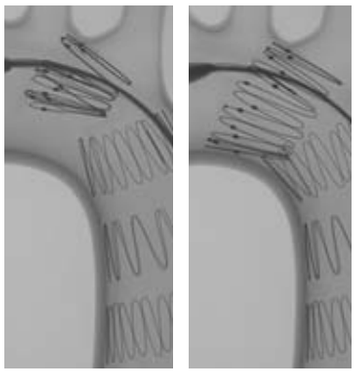

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Aspirin and clot structure in patients with abdominal aortic aneurysm (AAA): a mechanism for reduced AAA expansion?

Aggarwal R, Iqbal F, Hess K, Scott DJA, Ajjan R

Division of Cardiovascular & Diabetes Research, Leeds Institute of Genetics, Health and Therapeutics, The LIGHT Laboratories, University of Leeds, Leeds

Objective

Aortic abdominal aneurysm (AAA) is a common condition and the formation of intra-luminal thrombus has been linked to AAA expansion. Aspirin therapy is associated with reduction in AAA growth by unknown mechanisms. As aspirin directly influences fibrin clot function, independent of platelet inhibition, we explored the effects of aspirin on clot structure and fibrinolysis in patients with AAA.

Method

Using a validated turbidimetric assay, we assessed clot structure and lysis in three groups of age-matched male patients categorised as: i) AAA >3cm on aspirin (n=45, age=71); ii) AAA >3cm not on aspirin (n=49, age=72); and iii) untreated healthy controls (n=49, age=72). The following parameters were analysed: maximum absorbance (MA), a measure of clot density, and lysis time (LT) from full clot formation to 50% lysis, which indicates fibrinolytic potential. Fibrinogen levels were measured using Clauss techniques.

Results

Mean (±SEM) MA was 0.31±0.021 and 0.39±0.016 arbitrary unit (au) in aspirin and non-aspirin treated AAA patients, respectively ($p<0.05$). LT was 504±27 sec in aspirin-treated AAA patients vs 609±22 sec in those not on aspirin ($p<0.05$). MA and LT of the control group was 0.30±0.01 au and 482±15 sec, respectively, both of which were equivalent to AAA patients on aspirin. Despite similar clot structure characteristics, aspirin-treated AAA patients had significantly higher fibrinogen levels compared with controls, suggesting a direct effect of aspirin on the fibrinogen molecule.

Conclusion

AAA patients on aspirin have improved fibrinolysis parameters, likely related to qualitative changes in fibrinogen, which may be one mechanism for reduced AAA expansion.

ACE inhibitor therapy is underused in aortic disease despite a low prevalence of renal artery stenosis

Muttardi K, Phua CK, Jenkins MP, Chapman N, Haydar A, Cheshire NJW, Bicknell CD

Imperial Vascular Unit, Imperial College Healthcare NHS Trust, London; Department of Biosurgery and Surgical Technology, Imperial College London, London; International Centre for Circulatory Health, Imperial College London, London

Objective

Angiotensin converting enzyme (ACE) inhibitors and angiotensin receptor blockers (ARBs) improve prognosis in patients with ischaemic heart disease (IHD), congestive cardiac failure (CCF), stroke, diabetes and hypertension. However, they should be used with caution in patients with possible renovascular disease. We assessed whether these potentially beneficial therapies are underused in patients with aortic disease due to concerns regarding flow limiting (>70%) renal artery stenosis (RAS).

Method

A prospective analysis of patients admitted for aortic surgery was performed (January-July 2009). Comorbidity, ACE inhibitor/ARB use and renal function were recorded. CT angiograms were reviewed by a single blinded radiologist for presence/severity of RAS.

Results

Fifty-six consecutive patients (median age 72 years [IQR 66.5, 77], 47 male) were identified (48 aortic aneurysms, 6 dissections, 1 occlusive and 1 mycotic disease). Comorbidities were IHD 24 (42.9%), CCF 5 (8.9%), stroke 9 (16%), diabetes 5 (8.9%) and hypertension 48 (85.7%). Overall, 52/56 (92.9%) had an established indication for ACE/ARB therapy. On admission, 30/56 (53.5%) were receiving ACE inhibitors/ARBs. Thirteen patients were excluded from further study (4 previous hybrid/branched stent graft, 7 no/poor quality imaging, 2 renal transplant). Of the remaining patients, CT angiogram examination demonstrated 10/43 patients (23.3%) had RAS (9 unilateral, 1 bilateral) of whom only 5/43 (11.6%) had RAS >70%.

Conclusion

A large proportion of aortic patients do not receive ACE/ARB therapy despite definite indications even though the prevalence of flow-limiting RAS is low. After the exclusion of RAS at angiography, careful introduction of ACE inhibitor therapy with appropriate monitoring could be considered for many more patients.

The use of the extension technique in the management of dialysis access-associated steal syndrome - 8-year follow-up

McKeown A, Al-Khaffaf H

East Lancashire Vascular Unit, Royal Blackburn Hospital, Blackburn

Objective

To report the effectiveness of the extension technique in the management of dialysis access-associated steal syndrome (DASS).

Method

Between May 2001 and May 2009, 19 patients dialyzing through brachiocephalic (16) or brachiobasilic (3) fistulas presented with symptoms and signs of steal syndrome. These patients were managed by using the extension technique. This entails closing the fistula and moving the anastomosis of the cephalic or the basilic veins from the brachial artery to either the radial or the ulnar arteries 2-3cm below the brachial bifurcation. In ten patients a jump graft was needed, while in nine patients it was possible to get enough length of the cephalic vein such that no additional grafts were needed. The male:female ratio was 10:9 with an age range of 29-78. Nine patients were diabetics. All patients were evaluated for resolution of symptoms, patency and adequacy of needling.

Results

There was a complete resolution of steal symptoms in 18 patients (94.7%). The procedure could not be performed in one patient due to marked calcification of the brachial artery and its bifurcation, and the fistula was ligated. In one patient the fistula suddenly thrombosed but was salvaged radiologically. Another patient developed a stenosis which was managed radiologically. Three patients had gangrenous changes and required digital amputation. In two patients the fistula thrombosed during follow-up (10.5%).

Conclusion

Our 8-year experience demonstrates that the extension technique is an effective treatment for DASS.

The influence of muscle training on resting blood flow and vessel diameter in the forearm: should patients exercise before vascular access formation?

Kumar S, Seward J, Wilcox A, Torella F

Department of Vascular Surgery, University Hospital Aintree, Liverpool

Objective

Blood flow and vessel diameter are predictors of vascular access success. We investigated whether a simple exercise regimen could influence these variables.

Method

Twenty-three patients with stage 3/4 chronic kidney disease were prescribed a simple exercise regimen, consisting of repeatedly squeezing a squash ball for at least 30 minutes/day for four weeks. Only one forearm was exercised, the investigators blinded to the patients' choice. All underwent arterial and venous duplex, hand grip strength and blood pressure measurements of both arms before and after the intervention according to a standardised protocol.

Results

Twelve patients exercised their dominant and 11 their non-dominant arm. In the trained arm, on completion of the exercise regimen, there was a statistically significant increased hand grip strength, by a median (IQR) of 4 (0-8) Kg ($p=.001$), and in the diameters of the brachial artery (.2 [.1-.3] mm; $p<.001$), radial artery (.3 [.2-.4] mm; $p<.001$) and cephalic vein (.6 [.4-1.2] mm in the forearm and 1.1 [.4-1.2] mm above the elbow; $p<.001$). Furthermore, there was an increased brachial mean velocity (3 [1-7] cm/sec; $p=.009$) and peak systolic velocity (8 [1-15] cm/sec; $p=.02$), despite a marginally lower mean blood pressure (-3 [2 to -12] mmHg; $p=.039$). There was no change in any of these parameters in the non-exercised arm.

Conclusion

In patients with chronic kidney disease, a simple forearm exercise regimen increases resting blood flow and both arterial and venous diameters. Forearm exercise may thus be beneficial prior to vascular access formation and should be tested in clinical trials.

Using a psychological model to investigate the relationship between illness beliefs and walking behaviour of patients with intermittent claudication

Cunningham M[1], Swanson V[1], Holdsworth R[2]

1 University of Stirling, Stirling; 2 NHS Forth Valley, Stirling

Objective

Recommended treatment for intermittent claudication is to keep walking. However, little is known about the illness beliefs or walking behaviour of patients with intermittent claudication. Leventhal's (1998) Self-Regulatory Model suggests that patients group their ideas about illness around five illness representations: identity, cause, timeline, consequences and cure or control. These beliefs provide a framework for the patient to make sense of their symptoms, assess health risk and take action. Illness beliefs have been shown to be modifiable, with resulting improvements in health behaviour (Petrie, 2002). The objective of this study was to use Leventhal's model to explore the relationship between illness beliefs and walking behaviour of patients with intermittent claudication.

Method

Semi-structured interviews (n=20) were conducted and analysed using a Framework Approach. Interviews explored participants' illness beliefs, based on Leventhal's model, and health beliefs and behaviours, in particular, attitudes to walking.

Results

No participants had increased their walking as a result of being diagnosed with intermittent claudication. They viewed the disease as an acute condition over which they had little control. Control was primarily achieved through stopping walking, to avoid pain. Many participants felt they could not increase their walking distance without surgical intervention. Participants were largely unaware of the causes of the disease, or of their increased risk of future health problems.

Conclusion

The findings highlight several illness beliefs which could be addressed in a brief psychological intervention to increase walking in patients with intermittent claudication. The design of such an intervention will be discussed.

Differences in cellular composition and morphology between symptomatic carotid and femoral plaques

Shaikh S[1], Wilson H[2], Thies F[2], Connolly T[3], Brown P[4], Brittenden J[1]

1 Department of Surgery, University of Aberdeen, Aberdeen; 2 Institute of Medical Sciences, University of Aberdeen, Aberdeen; 3 Wyeth Translational Scientist; 4 Department of Pathology, Aberdeen Royal Infirmary, Aberdeen

Objective

Atherosclerosis is now considered a systemic inflammatory disease in which leucocytes have the potential to accelerate or alleviate the pathogenesis. The aim of this study was to compare morphological and inflammatory cell characteristics of carotid and femoral plaques.

Method

Sequential symptomatic patients undergoing carotid endarterectomy (n=32) or lower limb surgery (femoral endarterectomy/lower limb bypass, n=25) were recruited. Plaques were processed for: H&E staining, immunohistochemistry detection of total T-lymphoctes, macrophages (CD68) and classically (iNOS, MHC class-II) and alternatively (dectin-1, CD163) activated macrophages. LDL fatty-acid compositions of phospholipid, cholesteryl-ester, and triacylglycerol were measured using liquid chromatography.

Results

All patients were on statin therapy. All plaques were unstable (grade 3) according to the modified AHA classification. T-lymphocytes were increased in carotid plaques compared to femoral (median [IQR]; 9.38 [5.63] versus 2.51 [4.98]; $p<0.001$). CD68 counts were significantly higher in carotid plaques compared to femoral (median [IQR]; 39.76 [21.61] versus 13.20 [15.13], intact cells/mm^2 $p<0.001$). The proportion of classically activated pro-inflammatory macrophages was significantly higher in carotid compared to femoral plaques, whereas the proportion of alternatively activated, anti-inflammatory macrophages was higher in femoral plaques ($p<0.001$). Cholesteryl esters were higher in carotid compared to femoral plaques (median [IQR]; 3.00 [1.88] versus 1.96 [1.07]g/100g total fatty acid; $p<0.001$).

Conclusion

This is the first study to show that carotid plaques have significantly higher numbers/unit area of T-lymphocytes and macrophages than femoral plaques and significantly more of the macrophages are polarised towards a pro-inflammatory phenotype. These differences in plaque composition may affect the response to treatment strategies.

Multicentre randomised clinical trial on the role of autologous bone-marrow-aspirate-concentrate (BMAC)/CD34/(EPC) in non-reconstructable critically ischaemic limbs

Gurunathan Mani S[1], Raju R[2], Kuppu Sampath V[2]

1 Dorset County Hospital, Dorset; 2 Sri Ramachandra University, Chennai, India

Objective

In critically ischaemic limbs with absent distal run-off, the options are very limited and most patients end up with losing their limbs. Our aim is to explore the role of BMAC/CD34/EPC cells in preventing amputations/improving the rest pain in critically ischaemic limbs. CD34 cells are considered to be the stem cells for neovascularisation, when they are injected into ischaemic limbs.

Method

A multicentre randomised clinical trial (India, USA and Germany) was conducted, with preliminary data from a single centre, between January 2008-November 2009. Sixty patients with lower limb CLI as per the Rutherford classification 4 or 5, were randomised into two arms: 30 - intramuscular injections, 30 - intra-arterial infusion + IM injection. 240ml of bone marrow was harvested from the posterior superior iliac spine, out of which 40ml of BMAC was separated using a SMART Prep-2 cell separator, which separates a concentrate of mononuclear cells and platelets from plasma and red cells, and used for injections/infusions. Follow-up was conducted at 1, 4, 8, 12 and 26 weeks.

Results

Sixty patients had completed clinical treatment, out of which 30 patients had completed their 6-month follow-up and their data analysed. The interim report showed a p value of <0.0001 in the follow-up analysis of $TcPO_2$, ABPI and pain assessment (VAS). Four patients had major amputations. Three were lost to follow-up. Twenty-three patients had pain-free limb survival.

Conclusion

Autologous bone marrow concentrate therapy is a feasible and less morbid procedure for non-reconstructable critically ischaemic limbs. We had a limb salvage rate of 76% in our study. The long-term results are awaited.

Pre-operative N terminal-pro-B type natriuretic peptide predicts major adverse cardiac events and death at medium-term follow-up after major vascular surgery

Rajagopalan S[1], Croal B[2], Reeve J[2], Bachoo P[1], Hillis G[3], Brittenden J[1]

1 Vascular Unit, Aberdeen Royal Infirmary, Aberdeen; 2 Clinical Biochemistry, Aberdeen Royal Infirmary, Aberdeen; 3 Department of Cardiology, Aberdeen Royal Infirmary, Aberdeen

Objective

Recent interest has focused on the role of biomarkers to predict outcome in patients undergoing major vascular surgery. We have previously shown that pre-operative NT-pro-BNP is a good predictor of postoperative myocardial injury. We aimed to determine if pre- and postoperative NT-pro-BNP levels could predict a major adverse cardiac event (MACE) in the medium term in this patient cohort.

Method

Patients who underwent major elective vascular surgery were followed up for up to 2 years (n=136). First MACE episode and all-cause mortality were identified from the case notes and the patient management system database of the hospital intranet.

Results

One patient was lost to follow-up. By 2 years there had been 21 MACE events and 25 deaths. Receiver operator curve (ROC) analysis showed that a pre-operative NT-pro-BNP level with a cut-off of 359pg/ml had a sensitivity of 78% and specificity of 73% (area under the curve [AUC] 78%, $p<0.001$) to detect a MACE and sensitivity of 80% and specificity of 74 % (AUC 84%, $p<0.001$) in predicting all-cause mortality. The overall 2-year survival rate was 84%, 93% in the <359pg/ml group and 68% in the >359pg/ml group ($p<0.05$). The first MACE episode occurred in 7% in the <359pg/ml group and 30% in the >359pg/ml group ($p=0.001$). Pre-operative NT-pro-BNP >359pg/ml and postoperative elevation of troponin I >0.10ng/ml were both independent predictors of intermediate adverse outcome. Postoperative NT-pro-BNP was a predictor of mortality but not a MACE.

Conclusion

This study has shown that pre-operative NT-pro-BNP and postoperative troponin elevation are independent predictors of a MACE and mortality on medium-term follow-up.

The status of the infrarenal aorta is important in determining neurological complications of thoracic endovascular aortic repair

Modarai B[1], Clough R[1], Bell R[1], Waltham M[1], Carrell T[1], Zayed H[1], Reidy J[2], Sabharwal T[2], Thomas S[2], Salter R[2], Sandhu C[2], Taylor P[1]

1 Department of Vascular Surgery, Guy's and St. Thomas' NHS Foundation Trust, King's Health Partners, London; 2 Department of Interventional Radiology, Guy's and St. Thomas' NHS Foundation Trust, London

Objective

To determine outcomes after endovascular repair of the thoracic aorta in cases where coverage of the supra-aortic trunks (SAT) is necessary.

Method

A prospective database of thoracic stent graft procedures carried out in a single centre was analysed for outcomes following coverage of one or more SAT.

Results

A consecutive series of 288 patients were treated between 1997-2009. Ninety-five (33.0%) had either a co-existing abdominal aortic aneurysm (AAA) or had had a previous infrarenal aortic procedure. In 121 (42.0%) patients one or more SAT were covered: i) left subclavian artery (LSA, n=87); ii) LSA + left common carotid (LCCA, n=32); iii) LSA + LCCA + innominate (n=2). The LSA was covered without revascularisation in 67 (77%) patients. The mortality, paraplegia and stroke rate in the SAT covered group was higher at 10 (8.1%), 8 (6.7%) and 9 (7.5%), respectively, compared with 12 (7.2%), 8 (4.8%) and 6 (3.6%) in the 167 patients in whom the SAT were not covered, but this did not reach significance. Multiple logistic regression analysis showed that presence of an AAA or a previous infrarenal aortic procedure was associated with an increased risk of paraplegia and stroke (p=0.011 and p=0.025, respectively).

Conclusion

In this series the status of the infrarenal aorta was more important than coverage of the SAT in determining neurological events following thoracic endograft repair. This may be related to the atherosclerotic burden in these patients. The risk of a stroke in patients without coverage of the SAT is related to guide wire manipulations and may respond to cerebral protection measures.

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Modes and mechanisms of threat to target vessel patency following fenestrated endovascular repair of juxtarenal aneurysms

Oshin O[1], Brennan J[1], McWilliams R[2], Fisher R[1], Gilling-Smith G[1], Vallabhaneni S[1]

1 Regional Vascular Unit and 2 Department of Radiology, Royal Liverpool University Hospital, Liverpool

Objective

To elucidate possible modes and mechanisms of actual or threatened loss of target vessel patency after fenestrated endovascular repair of juxtarenal aneurysms (FEVAR).

Method

Pre and postoperative images, stent-graft plan and operation notes were reviewed of patients in whom either suboptimal alignment of fenestrations was observed or actual or threatened target vessel loss has occurred to identify the mode and the potential mechanism leading to target vessel threat. Image analysis was conducted on 3D workstations.

Results

From a cohort of 65 consecutive FEVAR patients with 179 target vessels, four patients lost one target vessel each, seven had a total of ten target vessels threatened and a further four had misalignment of scallops, but with no threat to the target vessels. Secondary interventions were undertaken in three patients in order to revascularise or to prevent occlusion of target vessels. All issues were recognised within the first year of follow-up. Identified modes were distortion of the target vessel stent and partial shuttering of target vessel ostia by fenestrations. Possible mechanisms involved could be grouped as relating to stent-graft planning (n=3), primary deployment (n=5), unforeseen interaction between stent-graft and native aorta (n=2) and postoperative changes (n=4), with more than one mechanism at work in some.

Conclusion

Target vessel-related issues will affect a significant proportion of patients undergoing FEVAR. The mechanisms leading to target vessel threat are diverse; however, in the mid term, actual target vessel loss is uncommon suggesting a degree of tolerance between the aorta and fenestrated stent-graft.

Asymptomatic retinal artery emboli in people with diabetes. A target for carotid endarterectomy?

Hadley G, Earnshaw J, Stratton I, Sykes J, Scanlon P

Gloucestershire Hospitals NHS Foundation Trust, Gloucester

Objective

A cohort review of diabetic patients with asymptomatic retinal artery emboli.

Method

A Diabetic Eye Screening programme offers digital photographic screening to 24,000 people. Patients with asymptomatic emboli referred for vascular imaging between 2001 and 2008 were reviewed.

Results

Two hundred and ten people were identified, 0.3% per year. Of these, 112 had a single embolus, 95 had two, three had three. The median age of 73 years (range 52 to 93) was older than the general screening population ($p<0.0001$). Median follow-up was 1.6 years and 37 had died. Two had carotid endarterectomy before referral. Vascular imaging of the internal carotid artery was undertaken on 187 subjects and complete data were available on 157. Numbers with <=30%, 30-70%, >70% stenosis were 83, 57, 17 (53%, 36%, 11%) in the ipsilateral internal carotid artery, and 101, 48 and 8 (64%, 31%, 5%) contralaterally ($p=0.05$ for trend). One patient with a severe stenosis had a stroke 2 weeks after duplex imaging. Subsequently, carotid endarterectomy was carried out on eight subjects, two of 65 with a stenosis 31-70% and six of 21 with a stenosis >70%. Three of eight have subsequently died, 1, 2 and 5 years after surgery, five are alive 1-3 years after surgery. The proportion who had died from any cause since emboli were identified was 7%, 13%, 20% and 26% at 1, 2, 3 and 4 years, respectively.

Conclusion

Diabetics with asymptomatic retinal emboli are high risk. More detailed analysis will enable research to focus on a more defined pathway of care for these patients.

Are cardiology investigations needed for asymptomatic patients undergoing vascular surgery?

Riga C[1], Vazir A[3], Bourke T[1], Goebells A[2], Cheshire N[1], Jenkins M[1]

1 Regional Vascular Unit, St. Mary's Hospital, Imperial College London, London; 2 Regional Vascular Unit, St. Mary's Hospital; Department of Biosurgery and Surgical Technology, Imperial College London, London; 3 Department of Cardiology, St. Mary's Hospital, Imperial College London, London

Objective

Cardiovascular complications are the leading cause of death after vascular surgery. Dobutamine stress echocardiography (DSE) is thought to be useful in risk stratifying patients pre-operatively, but its ability to predict peri-operative cardiac events or deaths is unknown. We looked at its utility in predicting events in vascular patients.

Method

We retrospectively assessed the frequency of peri-operative deaths and troponin I (TnI) elevation (defined as a TnI level >0.1ng/ml) in 151 consecutive asymptomatic patients (mean age 71 years, 124 male) who had pre-operative assessment with DSE before high-risk vascular surgery over a period of 3 years.

Results

Forty-five of the 151 patients had a positive DSE for reversible ischaemia. Of these, 30 underwent coronary angiography and 13 had revascularisation with coronary stenting. Thirty-two had beta-blockade peri-operatively due to lack of revascularisation strategy or less significant reversible ischaemia. Five (11%) patients had an elevated TnI and 4 (9%) died peri-operatively, but none of the deaths was cardiac in origin. One hundred and six patients had a negative DSE for ischaemia. Of these, 10 (9%) had elevated TnI postoperatively and 9 (8%) died peri-operatively, but again no deaths were cardiac in origin. The frequency of TnI elevation postoperatively was lower in patients with a negative DSE than with a positive DSE (z-test: 9 versus 11%; $p<0.001$).

Conclusion

Pre-operative DSE might identify asymptomatic patients with reversible ischaemia. A policy of aggressive revascularisation or medical therapy as appropriate can reduce cardiac deaths in a vascular population.

Cardiovascular events and the convergence of mid-term mortality after endovascular aneurysm repair (EVAR) or open repair of abdominal aortic aneurysm

Brown L[1], Greenhalgh R[1], Powell J[1], Thompson S[2], on behalf of the EVAR Trial Participants

1 Imperial College London, London; 2 Medical Research Council Biostatistics Unit, Cambridge

Objective

Despite an early reduction in operative mortality after EVAR, there is little difference in all-cause mortality between EVAR and open repair after 2 years. We have investigated the hypothesis that a 'catch-up' of cardiovascular events in the EVAR patients explains this mortality convergence.

Method

A total of 1252 patients randomised into the EVAR Trial 1 between September 1999 and August 2004 were followed for fatal and non-fatal myocardial infarction or stroke until July 2009. Data were obtained from hospital audits and death certificates. Cox regression was used to investigate time to first cardiovascular event between randomised groups as well as during different time periods since randomisation.

Results

During 5445 person-years of follow-up, a total of 171 first cardiovascular events occurred (70 fatal and 78 strokes). Overall, the 626 patients in the EVAR group had a slightly lower event rate (2.8 per 100 person-years) than the 626 patients in the open repair group (3.5 per 100 person-years), but this was not statistically significant; adjusted hazard ratio 0.83 [95% CI 0.62-1.13], p=0.241. The reduction in events was most pronounced during the first 6 months; adjusted hazard ratio 0.60 [95% CI 0.33-1.09], p=0.092 and remained during the first 2 years beyond which no difference was demonstrated.

Conclusion

There is little evidence to suggest that a 'catch-up' in cardiovascular events in the patients that survive EVAR explains the convergence in mortality with open repair at 2 years. On the contrary, EVAR may lead to lower rates of cardiovascular events during this period.

Duplex ultrasonography as a primary surveillance tool following endovascular aortic aneurysm repair

Martin Z[1], Gray C[1], Lawler L[2], O'Malley K[1], O'Donohoe M[1], McDonnell C[1]

1 Department of Vascular Surgery, Mater Misericordiae University Hospital, Dublin; 2 Department of Radiology, Mater Misericordiae University Hospital, Dublin

Objective

Computed tomography (CT) of the aorta is the preferred imaging modality in postoperative EVAR surveillance. Concerns regarding high radiation dose and contrast nephrotoxicity led us to evaluate duplex ultrasonography (DUS) as the primary surveillance tool in patients who have undergone EVAR.

Method

From 2003-May 2009 105 EVARs were performed, 86 (82%) were male. Mean age was 73.3 years (range 54-95). Postoperative DUS and CT scans were performed prior to discharge and again at 6 months and annually thereafter. The two modalities were compared for accuracy in detection and classification of endoleaks.

Results

Seventy-eight endoleaks were detected on duplex, thirty on CT. Five Type I or Type III endoleaks were reported on duplex, with four evident on CT. One Type I/III endoleak on duplex was actually a Type 2 on CT. All Type I or Type III endoleaks detected on CT were evident on duplex. Seventy-three Type II endoleaks were detected on duplex, 26 on CT. In no case was an endoleak detected on CT but not on duplex. Duplex was 100% sensitive and 36% specific in the detection of endoleak following EVAR compared to CT. The positive predictive value for DUS was 38% and the negative predictive value 100%.

Conclusion

Development of an algorithm where duplex ultrasound is used as the primary imaging modality following EVAR will reduce the number of CTs necessary in the postoperative surveillance programme.

The evidence for candidate gene polymorphisms in the pathogenesis of abdominal aortic aneurysms (AAA)

Obukofe B, Bown M, London N, Sayers R

Vascular Surgery Group, Department of Cardiovascular Sciences, University of Leicester, Leicester

Objective

The angiotensin converting enzyme (ACE) insertion-deletion (INDEL) and methylene tetrahydrofolate reductase (MTHFR) single nucleotide polymorphism (SNP) may be implicated in the pathogenesis of AAA. The aim of this study was to determine any association between these genetic polymorphisms and AAA.

Method

We recruited 1185 patients with AAA and 910 screened controls. Nine hundred and eighty-five cases and 812 controls were genotyped for the ACE INDEL and 678 cases and 674 controls for the MTHFR SNP using polymerase chain reaction-based techniques. Primary analysis of the locally generated data and a secondary meta-analysis were both performed (combining our data with published genetic association studies of ACE and MTHFR), resulting in a pooled sample size of 7110 (cases=3970, controls=3140) for ACE I/D and 2621 for MTHFR (cases=1400, controls=1221).

Results

The distribution of the MTHFR genotypes for cases vs. controls were as follows: CC (321 vs. 358); CT (292 vs. 257) and TT (65 vs. 59). The controls were in Hardy-Weinberg Equilibrium (p=0.211) and the allele specific odds ratio (OR) was 1.260 [95% CI, 1.018-1.560; p=0.033] and χ^2=4.50. The pooled (meta-analysis) per-allele odds ratio (OR) was 1.435 [95% CI, 1.097-1.876; p=0.0083]. For the ACE INDEL, genotype frequencies were as follows: DD (340 vs. 283); ID (428 vs. 352) and II (217 vs. 177). The allele specific OR was 0.989 [95% CI, 0.866-1.129; p=0.864] and χ^2=0.03. The pooled per-allele OR was 1.222 [95% CI, 1.035-1.443; p=0.017].

Conclusion

We have demonstrated that ACE and MTHFR genetic polymorphisms are associated with AAA.

The effectiveness of endovascular simulator training for novices: can learning take place in the absence of expert feedback?

Boyle E[1], O' Keefe D[1], Naughton P[2], Hill A[3], McDonnell C[4], Moneley D[2]

1 National Surgical Training Centre, Royal College of Surgeons in Ireland, Dublin, Ireland; 2 Department of Vascular Surgery, Beaumont Hospital, Dublin, Ireland; 3 Department of Surgery, Beaumont Hospital, Dublin, Ireland; 4 Department of Vascular Surgery, Mater Misericordiae University Hospital, Dublin, Ireland

Objective

Complex endovascular skills are difficult to obtain in the clinical environment. Virtual reality (VR) simulator training is a valuable addition to current training curricula but is there a benefit in the absence of expert trainers?

Method

Eighteen endovascular novices performed a renal artery angioplasty/stenting (RAS) on the VIST simulator. All trainees had identical pre-procedural teaching. They were divided into three groups: i) group A (n=6, control) - no performance feedback; ii) group B (n=6, non-expert feedback) - feedback after every procedure from a non-expert facilitator; and iii) group C (n=6, expert feedback) - feedback after every procedure from a consultant vascular surgeon. Each trainee completed RAS six times. Performance metrics included procedural and fluoroscopy time, contrast volume, accuracy of balloon placement, and handling errors. Data were analysed using SPSS version 15.

Results

A clear learning curve was observed across the six trials. There were no significant differences between the three groups for procedural or fluoroscopy time or contrast use, but group C made fewer errors ($p=0.004$). Bonferroni post-hoc testing revealed significant differences between groups A and C ($p=0.006$), and groups B and C ($p=0.014$). Group C performed best for accuracy of instrument placement although the differences were not significant.

Conclusion

VR simulator training for novices can significantly improve general performance in the absence of expert trainers, but procedure-specific qualitative metrics are improved with expert feedback.

Should vascular trainees come off the on-call rota?

Weale A, Cooper D, Earnshaw J

Gloucestershire Royal Hospital, Gloucester

Objective

Delivering training in emergency and elective vascular surgery outside centres with a dedicated vascular middle grade on-call is problematic, due to rota working patterns which necessitate time away from vascular trainers. We hypothesised, in our district general hospital, where there is an aneurysm screening service, that the majority of emergency vascular cases are operated on in normal hours.

Method

The emergency theatre electronic log was retrieved (1/4/04-1/4/09). Cases were divided into surgical specialty using OPCS codes. Operations were defined as 'in hours' (Monday-Friday 08:00-17:00), or 'out of hours' (weekends or week days 17:01-07:59). We performed logistic regression analysis.

Results

Over 5 years, 280 vascular cases (4.4% all cases; median 50 cases/year) were performed on the emergency list. One hundred and twenty-nine were performed out of hours; 84 during the week but after 5pm and 45 at weekends. Only 18 cases occurred after midnight and the majority of out-of-hours cases were done prior to 9pm (n=88 [68%] commenced, and n=68 [53%] completed). Out-of-hours cases were: 16 AAA (61% of all AAA done on emergency list); 43 lower limb revascularisations (44%); 35 amputations (31%); 11 control arterial haemorrhage (50%), and 3 vascular access (42%). When compared to general surgical cases (n=3733), vascular cases were significantly less likely to take place out of hours (OR: 0.711 p=0.006).

Conclusion

Most vascular emergency operating occurs 'in hours'. It may be more effective for vascular trainees to stop traditional on-call and adopt a flexible non-resident approach to out-of-hours work, thus maximising training opportunities.

Dietary supplementation with fish oil (eicosapentaenoic acid) is associated with decreased carotid plaque inflammation and increased stability

Payne S[1], Shearman C[1], Cawood A[2], Ding R[2], Napper F[2], Young R[2], Williams J[3], Gallagher P[4], Calder P[2], Grimble B[2], Ye S[5]

1 Department of Vascular Surgery, Queen Alexandra Hospital, Portsmouth; 2 Department of Human Nutrition, University of Southampton, Southampton; 3 Department of Vascular Surgery, University of Southampton, Southampton; 4 Department of Pathology, University of Southampton, Southampton; 5 Department of Human Genetics, University of Southampton, Southampton

Objective

To determine if n-3 polyunsaturated fatty acids (PUFAs), found in oily fish, are incorporated into atherosclerotic plaque and are associated with decreased inflammation and increased plaque stability.

Method

A randomised, double-blind, placebo-controlled trial of patients due to have carotid endarterectomy was conducted. One hundred and twenty-one patients were randomised to placebo (group 1) or n-3 PUFA capsules (group 2) containing the main esters found in oily fish, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Capsules were consumed daily until surgery (median 21 days). Fatty acid compositions of plasma and carotid plaque and inflammatory gene expression were determined. Plaques were assessed and scored according to a validated, modified AHA system.

Results

Group 2 EPA and DHA increased compared to group 1 by 150% and 57%, respectively ($p < 0.0001$). EPA, but not DHA, increased in plaque from group 2 by 100% compared to group 1 ($p<0.0001$). Group 2 plaques had fewer foam cells ($p=0.0390$). Plaque EPA was associated with plaque stability ($p=0.0209$), reduced plaque inflammation ($p=0.0108$), fewer T cells ($p=0.0097$) and histological score of plaque stability ($p=0.0425$). Group 2 plaques had lower levels of mRNA for matrix metalloproteinases-7, 9 and 12, interleukin-6 and intracellular adhesion molecule 1.

Conclusion

Dietary fish oil supplementation is safe, economical and acceptable to patients. It rapidly alters atherosclerotic plaque lipid composition and is associated with a number of features which strongly suggested increased plaque stability which may be of clinical benefit.

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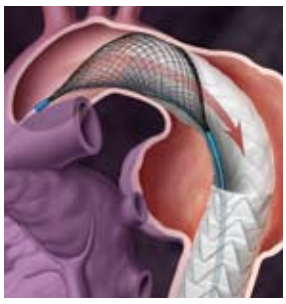

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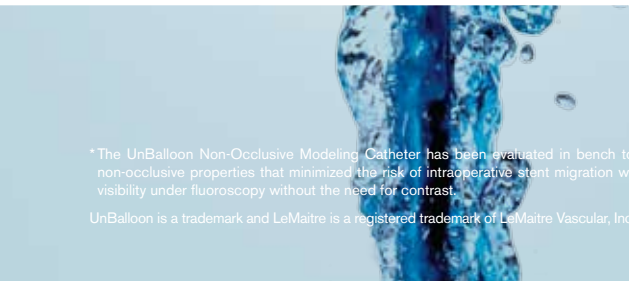

*The UnBalloon Non-Occlusive Modeling Catheter has been evaluated in bench top comparative testing against traditional occlusive modeling catheters. These tests found that The UnBalloon Catheter demonstrated non-occlusive properties that minimized the risk of intraoperative stent migration while modeling; blood pressure spikes associated with aortic occlusion, and provided comparable radial force. The nitinol mesh provided visibility under fluoroscopy without the need for contrast.

 [1] Data on file at LeMaitre Vascular.

Sex differences in carotid plaque composition may explain apparent differences in benefit from carotid intervention in men and women

Davies C[1], Rerkasem K[1, 2], Gallagher P[3], Grimble B[4], Calder P[4], Morris G[1], Baxter S[1], Phillips M[1], Shearman C[1]

1 Department of Vascular Surgery, University of Southampton, Southampton; 2 Department of Surgery, Chaing Mai University, Thailand; 3 Department of Pathology, University of Southampton, Southampton; 4 Department of Human Nutrition, University of Southampton, Southampton

Objective

In the carotid surgery trials women appear to gain less benefit than men. Even in the medical treatment arm of these studies stroke risk was lower in women than men. Reasons for these differences are unclear. We studied factors which might influence carotid plaque stability in men and women.

Method

In a prospective study of patients undergoing carotid endarterectomy we collected blood samples and plaques for histological examination. Lipid profiles were determined and inflammatory indicators, hsCRP, soluble E selectin, plasma soluble intercellular adhesion molecule-1 (sICAM-1) and soluble vascular cell adhesion molecule-1 (sVCAM-1) were measured. Plaques were sectioned and scored by two observers, unaware of the sex of the patients, using the European Carotid Plaque Study Group criteria.

Results

One hundred and forty-one patients (81:60 male:female) were recruited. Groups were well matched for cardiovascular risk factors, treatment indications and degree of stenosis. Antiplatelet and statin therapy use was similar between the sexes. Although hsCRP was greater in males (males 8.11 vs females 4.85) this did not achieve significance. However, there were significant differences between males and females in plaque fibrous tissue (males 29.8 vs females 38.8; $p>0.02$) and lipid content (males 58.2 vs females 47.8; $p>0.01$).

Conclusion

The results suggest that women have more stable plaques than men. This observation is supported by ultrasound studies demonstrating plaques in women are less echolucent than men. This may have implications for patient selection for interventional treatment and implies future studies of carotid interventions should be stratified for sex.

Asymptomatic carotid stenosis (ACST) - do women benefit from surgery?

Halliday A, Hayter E, on behalf of the ACST Collaborators

St. George's University of London, London

Objective

Symptomatic carotid surgery trials (ECST and NASCET) found that women, though benefiting from endarterectomy (CEA) for carotid stenosis, require surgery earlier, as benefit was otherwise outweighed by operative risk. In asymptomatic patients, the Asymptomatic Carotid Surgery Trial (ACST) randomised 3120 patients between immediate or deferred CEA and followed patients for up to 15 years. At 5 years benefit of surgery was less clear for women than men. The trial continued follow-up to clarify whether early benefit from prophylactic CEA was maintained to 10 years.

Method

Patients in the ACST (2044 men, 1076 women) were followed annually until 2008. The operative morbidity and mortality, events/person-years and annual event rate (%SE) and ratio of annual event rates in immediate and deferred groups were compared for both sexes.

Results

Women did not have a significantly higher peri-operative risk than men. At 10 years most patients were still alive and non-peri-operative stroke risk was similar and significantly lower for those having immediate CEA. At 10 years there was no overall benefit for those >75 years at randomisation, but both men and women <75 years had similar overall gain (stroke or peri-operative death, ~6%).

Conclusion

By 10 years, the benefit (risk of stroke or peri-operative death) is similar for men and women in the ACST. The annual risk reduction (~6%) previously seen at 5 years is maintained, and patients under 75 years generally live long enough to benefit from immediate CEA.

Carotid artery stenting: does it still have a role?

Al-Jundi W, Beard J, Nawaz S, Gaines P, Cleveland T, Venables G, Randall M, Nassef A

Northern General Hospital, Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield

Objective

The recent early results from the International Carotid Stenting Study (ICSS) have reinforced the message from the SPACE and EVA-3S trials that carotid artery stenting (CAS) is not as safe as carotid endarterectomy (CEA). We present the early and long-term follow-up data from a single high-volume centre, for patients receiving stents for symptomatic high-grade carotid stenoses.

Method

Prospectively collected data in a single centre were analysed. Since 2002, our carotid stenting technique has been optimized to include dedicated stents, the use of cerebral protection devices whenever possible, and mandatory use of statin and dual antiplatelet therapy. Stroke rates were measured at 30 days and at yearly follow-up by an independent neurologist.

Results

Between March 1996 and August 2008, 562 CAS procedures were performed. Two hundred and ninety-six patients have been treated since 2002. Cumulative ipsilateral stroke rates for all patients were 4.8%, 7%, 8%, 8.5%, 9.5% and 10.7% at 30 days, 1, 2, 3, 4 and 5 years, respectively. The rates improved to 2.7%, 4.1%, 4.5%, 4.5%, 4.5% and 4.5% after 2002. These rates are better than the early stroke rates for ICSS (per protocol analysis: 7.0% vs. 3.3% for CAS and CEA, respectively).

Conclusion

We have demonstrated that CAS performed in a high-volume centre by experienced interventionalists is safe. In such centres, suitable patients could therefore be offered a choice of treatment. However, the trials suggest that CAS may suffer from a lack of generalisability. The reasons for this require further investigation.

Peri-operative trans-orbital Doppler imaging as an alternative for those patients with no suitable temporal bone window

Jaipersad A, Sam R, Kay M, Tiivas C, Marshall C, Higman D, Imray C

Coventry and Warwickshire County Vascular Unit, University Hospitals Coventry and Warwickshire NHS Trust, Warwick Medical School, Coventry

Objective

Transcranial Doppler (TCD) is a non-invasive ultrasound technique widely used for the evaluation of both haemodynamic and microembolic signals in carotid surgery (CEA). However, a significant perceived limitation of the technique is that approximately 10-15% of patients have no suitable temporal bone window (TBW). We aimed to assess the feasibility of using the ipsilateral trans-orbital window (TOD) for monitoring of patients with no suitable TBW.

Method

All patients undergoing CEA were assessed in a standard fashion for a TBW using a PC Dop 842 (SciMed, Bristol, UK) 2 MHz transducer probe. Those patients with no TBW were then assessed for a TOD window, using the same equipment.

Results

In a single unit, between 2005-2008, 318 CEAs were performed. Twenty-nine (9.1%) of the 318 patients had no suitable ipsilateral TBW; however, 25 (86%) of the 29 had satisfactory TOD windows. Of the 318, only 4 (1.2%) patients could not be monitored peri-operatively. TOD directed intravenous antiplatelet agents were used to treat microembolisation rates >50 h-1.

Conclusion

In this study only 1-2% of patients have no suitable acoustic window. Hypoperfusion, shunt occlusion, hyperperfusion and high microembolic loads are all potential causes of cerebrovascular complications following CEA. TOD flow imaging has not previously been described in relation to CEA, and appears to offer an alternative in those patients without a TBW.

The evolving role of glycoprotein IIb/IIIa inhibitors in carotid surgery

Gaunt A, Tiivas C, Van Dellen D, Jaipersad T, Sam R, Marshall C, Higman D, Imray C

Coventry and Warwickshire County Vascular Unit, University Hospitals Coventry and Warwickshire NHS Trust, Warwick Medical School, Coventry

Objective

Patients with transient focal neurological symptoms and transcranial Doppler (TCD)-detected microembolic signals (MES) are at high risk of stroke. Tirofiban is a potent intravenous antiplatelet agent currently licensed for use in acute coronary syndrome. We assessed the drug's safety and efficacy in relation to carotid surgery (CEA).

Method

Patients with a critical internal carotid artery stenosis (>70%) and clinically significant MES were studied. Tirofiban was used to treat: A) pre-operative patients with focal symptoms and MES; B) postoperative CEA patients with MES >50h-1.

Results

MES control: 67 patients (46 M: 21 F), median age 69 (range 42-92), received TCD-directed tirofiban, 31 pre-op (A), 38 post-op (B), (2 both). Pre-op MES (A), median (range), decreased from 7 (1-260) to 0 (0-9), after a median of 30 minutes and post-op (B) from 94 (36-300) to 0 (0-36) after a median of 45.5 minutes ($p<0.001$ Wilcoxon Rank Test). Complications included: thrombotic - one non-disabling CVA, full recovery 1 month; bleeding - one upper gastrointestinal bleed necessitating cessation of tirofiban; one surgical evacuation of haematoma; one death from an intracerebral haemorrhage, 3 days post-discharge; one cardiac death, 2 days post-discharge. The peri-operative stroke rate was 3% (2/67), the peri-operative stroke/death rate was 6% (4/67), and the peri-operative stroke/death/major cardiac event rate was 7.5% (5/67).

Conclusion

Tirofiban, a cardiac antiplatelet agent, appears to be safe and effective in MES control before and after CEA. The apparent reduction in cardiac complications when compared with other similar studies merits further assessment.

Dual antiplatelet therapy prior to carotid endarterectomy reduces postoperative embolisation and thromboembolic events: postoperative transcranial Doppler monitoring is now unnecessary

Sharpe R, Dennis M, Nasim A, Sayers R, McCarthy M, London N, Naylor R
Leicester Royal Infirmary, Leicester

Objective

Thrombotic stroke following carotid endarterectomy (CEA) is preceded by high-grade embolisation (detected using transcranial Doppler [TCD]) and is prevented by incremental Dextran in high-risk individuals. However, this strategy is labour intensive and Dextran manufacture has now ceased. A randomised trial suggested that clopidogrel (in addition to routine aspirin) significantly reduced post-CEA embolisation. We hypothesized that dual antiplatelet therapy might prevent postoperative thromboembolic events, thereby rendering postoperative TCD monitoring unnecessary.

Method

Retrospective audit of prospectively acquired data in 297 patients undergoing CEA between 01.08.2006-30.07.2009 was conducted. All received aspirin (75mg daily) in addition to a single 75mg dose of clopidogrel the night before surgery. All underwent completion angioscopy and those with a temporal window underwent intra- and post-operative TCD monitoring.

Results

High-rate embolisation requiring intravenous Dextran occurred in only one patient (0.3%), significantly less than the 3.2% rate in 821 preceding cases where clopidogrel was not administered. There were no peri-operative deaths, but two (0.6%) suffered non-disabling strokes (extension of pre-existing deficit, haemorrhage into lentiform nucleus after hypertensive crisis). The 30-day death/stroke rate (0.6%) was significantly lower than the 2.6% rate observed in the preceding 821 patients (p=0.026) and was notable for the complete absence of fatal cardiac events, carotid thromboses and focal embolic strokes.

Conclusion

75mg clopidogrel (in addition to aspirin) was associated with significant reductions in postoperative embolisation, Dextran utilisation and 30-day death/stroke. As a consequence of this audit, 75mg clopidogrel will continue to be given pre-operatively and routine postoperative TCD monitoring has now ceased.

Lower prevalence of intraplaque haemorrhage in women explains sex differences in recurrent ischaemic events: implications for carotid endarterectomy selection

Kandiyil N[1], Altaf N[1], Gladman J[2], MacSweeney S[3], Auer D[4]

1 Vascular Surgery and Academic Radiology, Nottingham University Hospitals NHS Trust, Nottingham; 2 Division of Rehabilitation and Ageing, Nottingham University Hospitals NHS Trust, Nottingham; 3 Vascular Surgery, Nottingham University Hospitals NHS Trust, Nottingham; 4 Academic Radiology, Nottingham University Hospitals NHS Trust, Nottingham

Objective

Women benefit less from carotid endarterectomy (CEA) than men. We studied whether women have less aggressive carotid disease as evidenced by lower magnetic resonance intraplaque haemorrhage (MRIPH) prevalence when controlling for other risk factors. Secondly, we explored whether the lower prevalence of MRIPH in women explains the gender difference in rates of recurrent symptomatic events.

Method

Retrospective analysis was conducted on all research MRI scans from 2003-2009. Patients with recently symptomatic carotid stenosis (50-99%) were imaged using a specialised MRI technique and followed up for recurrent ischaemic symptoms.

Results

Two hundred and thirty-one (M: 150) patient MRI scans were identified for this study. Controlling known vascular risk factors; men were significantly more likely to have ipsilateral MRIPH than women (OR 4.5, 95% CI 2.3-9.0, p<0.0001). One hundred and fifty-seven (110 men) patients were prospectively followed up for recurrent cerebrovascular events. There were more recurrent ischaemic events in men than women (male: 28/82 vs female: 6/41; p=0.035). But for those positive with MRIPH there were similar rates of recurrent symptoms in men and women (male: 27/81 (33%) vs. female 6/21 (29%); p=0.19).

Conclusion

This is the first study to show that MRIPH is less prevalent in women than in men with TIA/stroke. This lower prevalence of MRIPH seems to mediate the lower risk of recurrent cerebrovascular events we observed in women, as women and men had equal risks when gender comparison was limited to subgroups of MRIPH positive patients. A simple non-invasive MRI scan of the carotid plaque may help to select which women will benefit from CEA and which can safely avoid it.

Carotid plaque haemorrhage and thromboembolism: prediction of microembolic signals and embolic cerebral ischaemia

Altaf N[1], Goode S[2], Beech A[1], Gladman J[3], Morgan P[2], MacSweeney S[1], Auer D[2]

1 Department of Vascular and Endovascular Surgery, Queen's Medical Centre, Nottingham; 2 Academic Radiology, Nottingham University Hospitals NHS Trust, Nottingham; 3 Division of Rehabilitation and Ageing, Nottingham University Hospitals NHS Trust, Nottingham

Objective

Thromboembolisation is the prevalent mechanism of carotid artery strokes. Plaque haemorrhage (PH) is found in complicated carotid plaques and is detected by magnetic resonance imaging (MRI). The aim of this study was to assess whether carotid plaque haemorrhage detected by MRI (MRI PH) was associated with thromboembolic activity.

Method

Patients with high-grade symptomatic carotid stenosis were prospectively recruited. All underwent MRI assessment of the carotid arteries for PH and brain diffusion weighted imaging (DWI) of the brain. Transcranial Doppler (TCD) of the symptomatic carotid artery was performed over an hour to assess the presence of microembolic signals (MES).

Results

Fifty-one patients (23 females, mean age 72 +/- 11 years) had successful MRI scans and 46 of these patients had successful TCD examinations. Thirty-two (63%) had PH in the index carotid artery (MRI PH+). The presence of PH increased the risk of ipsilateral DWI abnormalities with an odds ratio of 6.2 (95% CI 1.7-21.8; $p<0.05$). Multiple DWI abnormalities of multiple ages were only seen in patients with MRI PH+ plaques (MRI PH+:12/32 vs. MRIPH-: 0/19, $p<0.05$). The presence of PH also increased the presence of MES (OR= 6.0; 95% CI 1.8-19.9), $p=0.003$.

Conclusion

Patients with MRI PH+ carotid plaques showed increased spontaneous microembolic TCD activity and more cerebral ischaemic lesions as detected by DWI. Multiple DWI lesions of different ages, implying recurrent lesions over time, were only seen in MRI PH+ patients. These findings further validate MRI PH carotid imaging in identifying patients with active carotid artery disease.

Caffeine improves walking distance in patients with claudication - a randomised, double-blind, placebo-controlled crossover study

Momsen A[1], Jensen M[2], Norager C[1], Madsen M[1], Vestersgaard-Andersen T[3], Lindholt J[3]

1 Surgical Research Unit, Department of Surgery, Regional Hospital Herning, Denmark; 2 Surgical Research Unit, Department of Surgery, University Hospital of Aarhus, Denmark; 3 Vascular Surgical Research Unit, Department of Vascular Surgery, Regional Hospital Viborg, Denmark

Objective

Intermittent claudication (IC) is a disabling symptom of peripheral arterial disease for which only few medical treatments are available. IC increases with age, and it is expected that the prevalence will increase concomitantly with the aging population. This study investigated the effect of caffeine on physical capacity in patients with IC. We hypothesize that caffeine can be a cheap, safe drug to improve the patients' exercise tolerance.

Method

The study included 88 patients with IC Fontaine Stage II, ankle brachial index <0.9, >40 years, <100kg, recruited by vascular surgeons in outpatient clinics. Randomisation was computerised and performed in blocks of four and stratified by gender. All patients were tested twice with a one-week interval. Participants abstained from caffeine for 48 hours before each test and received either placebo or caffeine (6mg/kg). After 75 minutes, we measured pain-free (PWD) and maximal walking distance (MWD) on a treadmill. Secondary outcomes are perceived pain, ankle brachial pressure index (ABI), maximal isometric knee extension strength, sub-maximal knee extension endurance, postural stability, reaction times and cognitive function. Analysis was by intention-to-treat and $p<0.05$ was regarded as significant.

Results

Caffeine significantly increased MWD by 27% (95% CI: 12-43), PWD by 20% (95% CI: 4-39), maximal strength by 10% (95% CI: 3-17) and endurance by 21% (95% CI: 2-46) relative to placebo. Postural stability was significantly reduced by 22%. Neither reaction time nor cognitive function were affected.

Conclusion

In patients with moderate IC, caffeine significantly increased their walking distance, knee extension strength and endurance, but decreased balance.

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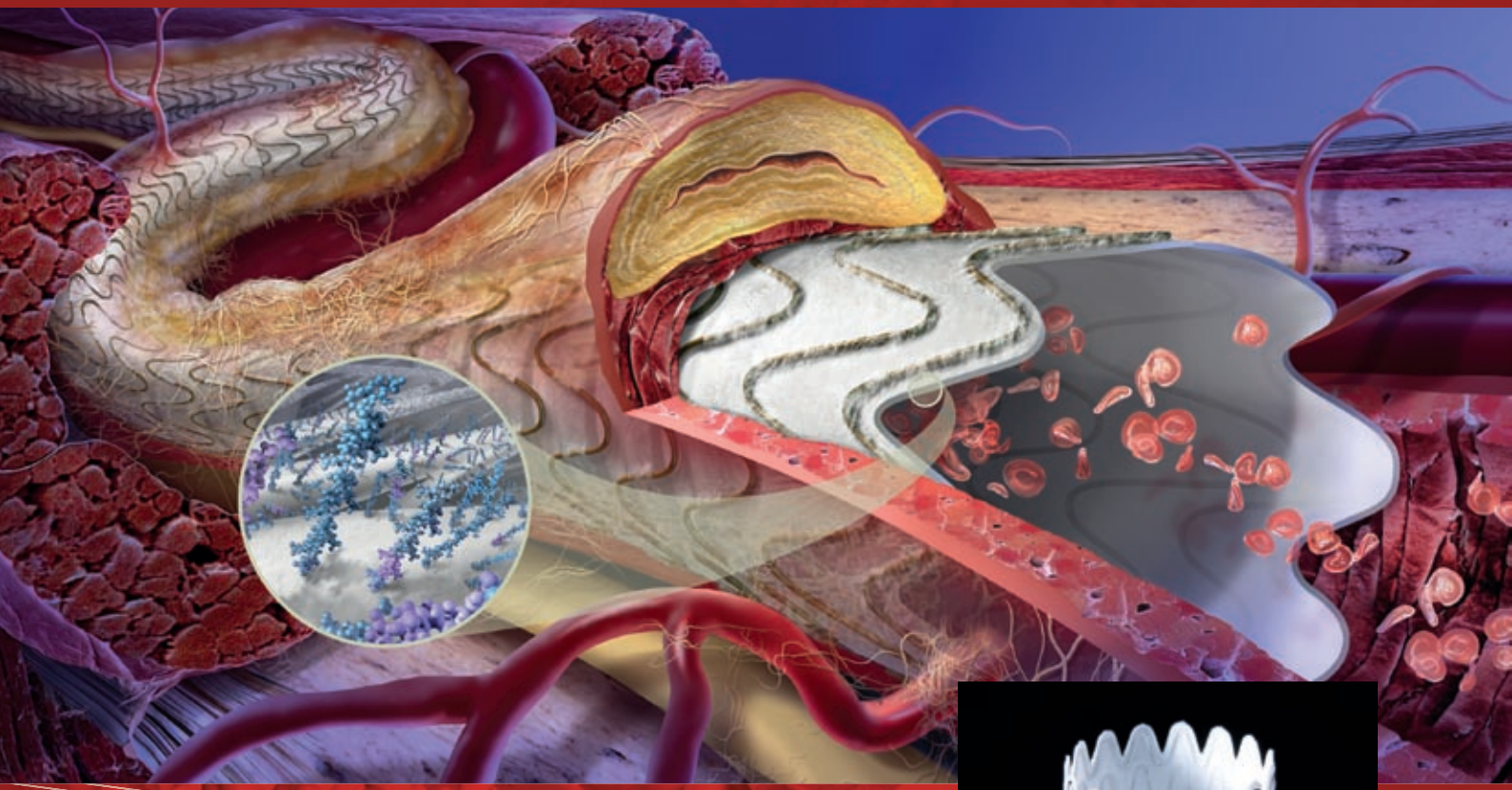

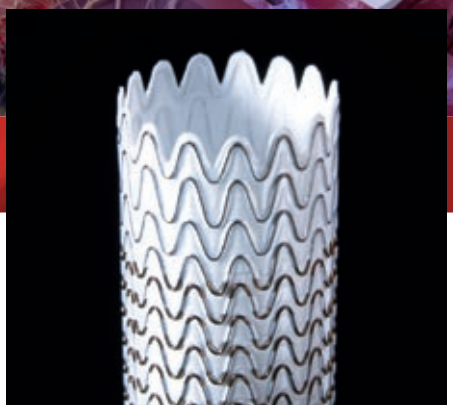

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The hidden cost of criteria-based commissioning for varicose veins

Bagnall M, Vig S, Grice S, Trivedi P, Khan M, Derodra J

Department of Vascular Surgery, Mayday University Hospital, Croydon

Objective

Five thousand two hundred and eighty-nine varicose vein interventions were undertaken across London 05/06 costing £5.6 million. The London Health Observatory suggested that criteria-based commissioning would reduce spend by 20-80%. An Effective Care Commissioning Initiative (ECCI) was introduced April 07. All patients judged by vascular surgeons to merit varicose vein surgery, but who failed to meet the ECCI criteria could appeal in writing to a PCT Exceptional Circumstances Panel (ECP). This study looks at the impact of the criteria on pathways and cost at Trust level.

Method

All patients in whom venous intervention was deemed to be clinically appropriate were referred to the ECP. All patient interactions were collated with data collected retrospectively from discharge summaries, clinic letters and appeal letters. Numbers of varicose vein operations performed in 2007/8-2008/9 were obtained from the hospital coding database. Costs of procedures, administration and clinic visits were estimated from the tariff costs.

Results

Sixty-one out of 65 patients were successful on appeal (Revenue £65,514). Of four rejected, one underwent private surgery, and one resigned from their job to avoid symptoms. The ECP pathway saved the PCT £4296, but generated an extra 108 letters and 89 recurrent clinic visits costing £3240 and £6052, respectively. This study does not include PCT administrative and panel costs. The average length of ECP pathway is 60 weeks (range: 25-117 weeks).

Conclusion

Sixty-one out of 65 patients deemed to require venous surgery by consultant vascular surgeons on clinical grounds were granted funding under the ECP. This additional pathway does not appear to be necessary, incurring unnecessary costs for all and threatens 18 week pathways.

Heparin activates platelet 12-LOX - transient aspirin resistance explained?

McMahon G, Jones C, Hayes P, Naylor A, Goodall A

Department of Cardiovascular Sciences, University of Leicester, Leicester

Objective

Heparin administered to patients during carotid endarterectomy (CEA) causes transient aspirin resistance, demonstrated by significantly increased platelet aggregation to arachidonic acid (AA) and adenosine diphosphate (ADP). Compared to unfractionated heparin (UFH), low-molecular-weight heparin (LMWH) reduces both postoperative embolisation and the platelet aggregation response to ADP. Since aspirin irreversibly inhibits platelet cyclo-oxygenase-1 (COX-1), we hypothesized that heparin activates the platelet enzyme 12-lipoxygenase (12-LOX).

Method

Fifty-eight aspirinated CEA patients were randomised to 5000IU UFH (n=31) or 2500IU LMWH (dalteparin, n=27) intravenously before carotid clamping. We measured platelet aggregation in response to AA and ADP, and products of the COX-1 and 12-LOX pathways (thromboxane B_2 [TXB_2] and 12-hydroxyeicosatretraenoic acid [12-HETE]).

Results

Platelet aggregation to AA increased significantly ($p<0.0001$) following heparinisation, but was unaffected by heparin type ($p=0.42$). The platelets of patients randomised to LMWH exhibited significantly lower aggregation to ADP ($p<0.0001$). TXB_2 concentration was unchanged following either LMWH ($p=0.82$) or UFH ($p=0.77$), indicating effective aspirin inhibition of COX-1. Conversely, there was activation of 12-LOX, with 12-HETE concentration increasing significantly following heparinisation ($p<0.0001$). UFH promoted even greater generation of 12-HETE than LMWH ($p=0.04$). Furthermore, higher magnitude aggregation to ADP was associated with significantly greater 12-HETE generation ($p=0.007$).

Conclusion

The inhibition of COX-1 by aspirin is irreversible. The heparin-induced increase in platelet aggregation is associated with activation of platelet 12-LOX. This is diminished by LMWH, as is postoperative embolisation. 12-LOX may be a potential target for reducing the thromboembolic complications of CEA.

Ruptured aneurysms in England: a propensity scored analysis of outcomes

Holt P[1], Karthikesalingam A[1], Poloniecki J[2], Hinchliffe R[1], Loftus I[1], Thompson M[1]

1 St. George's Vascular Institute, London; 2 Community Health Sciences, St. George's University of London, London

Objective

This study aimed to determine the population outcome of ruptured abdominal aortic aneurysm (rAAA) in England and the role of endovascular repair (EVAR).

Method

Data were obtained from the Hospital Episode Statistics between 1/4/2003 and 31/3/2008. Propensity scoring was used to compare the outcomes of matched patients undergoing EVAR and open repair. The relationship between workload and outcome was determined using modelling techniques.

Results

Three thousand seven hundred and twenty-five urgent and 4,414 rAAA repairs were performed. Mortality rates were 46.3% for rAAA repairs and 21.3% for urgent repairs. The use of EVAR was 16.3% and 7.59% of urgent and rAAA repairs, respectively. EVAR was associated with significantly reduced mortality for rAAA (OR 0.527 [95% CI 0.416-0.668]; $p<0.0001$) and urgent repair (0.531 [95% CI 0.415-0.680]; $p<0.0001$). A propensity scored analysis confirmed the beneficial effect of EVAR for rAAA repair ($p=0.0003$). rAAA repair at hospitals with a higher elective aneurysm workload was associated with lower mortality rates irrespective of the mode of treatment ($p<0.0001$). Higher-volume hospitals were more likely to operate on rAAA cases ($p=0.0332$).

Conclusion

EVAR offered a survival advantage over open repair for non-elective AAA. Services for the treatment of rAAA should incorporate access to EVAR and should be based in units with a high elective caseload.

Survival after ruptured abdominal aortic aneurysm repair in the over-80s

Metcalfe J, Smith FCT, Baird RN, Brooks MJ, Lamont PM

Department of Vascular Surgery, Bristol Royal Infirmary, Bristol

Objective

As life expectancy improves an increasing number of over 80-year-olds are presenting with ruptured abdominal aortic aneurysms (rAAA). Only a few small studies with cohorts of 50 or fewer have examined outcomes in these patients. With limited life expectancy in this age group, there is no consensus whether surgery is appropriate. This study aims to determine short and long-term survival after rAAA repair in the over-80s.

Method

A prospectively collected and validated unit patient database was interrogated to identify a consecutive series of 100 patients aged over 80 years undergoing rAAA repair. Primary care and hospital records were cross-referenced with the register of births, deaths and marriages. Intra-operative mortality, 30-day mortality and long-term survival were determined. Glasgow and Hardman scoring systems were correlated with patient outcome.

Results

Mean age was 83 years (range 80-93). Intra-operative mortality was 22/100 (22%) and 30-day mortality was 61/100 (61%). Corresponding unit figures for under 80s in the past 5 years were 13/128 (10%) and 47/128 (37%), p=0.001, Chi square. Mean long-term survival in patients surviving more than 30 days was 4.7 years (range 0.1-15yrs), bettering the overall national survival curve for octogenarians. rAAA scoring systems bore no correlation with outcome (r=-0.497, p=NS).

Conclusion

Although 30-day mortality is high in the over-80s, those who survive have a better life expectancy than their peers, with a mean survival of nearly 5 years. Scoring systems do not predict survival. rAAA repair is worthwhile in the over-80s deemed suitable for surgery.

Screened patients' preferences in the delivery of abdominal aortic aneurysm repair: a rating scale analysis

Holt P[1], Gogalniceanu P[1], Murray S[1], Poloniecki J[2], Hinchliffe R[1], Loftus I[1], Thompson M[1]

1 St. George's Vascular Institute, London; 2 Community Health Sciences, St. George's University of London, London

Objective

To determine patients' preferences for service attributes in a population screened for AAA.

Method

A questionnaire was designed in conjunction with a Patient Focus Group. The questionnaire encompassed various aspects of service provision, including outcomes. Questions were calibrated against the time a patient was willing to travel beyond the nearest hospital to access a service with each attribute. Subjects attending an aneurysm-screening programme in the local area were asked to complete a questionnaire prior to the screening ultrasound. Statistical comparisons between questions were made through pairwise analysis of the median travel times with the signed rank test. Wilcoxon rank sum analysed by the Kruskal-Wallis test was used to compare preference rankings between subgroups and was adjusted for multiple comparisons using the Bonferroni correction.

Results

Two hundred and sixty-two patients were asked to complete the questionnaire with a response rate of 98.5%. Of these, 93% stated a willingness to travel for up to one hour beyond their nearest hospital in order to access services with a 5% lower peri-operative mortality, a 2% lower amputation or stroke rate, an annual caseload of 50 elective aneurysm repairs per annum, with a routine availability of EVAR. These factors were more important than car parking, waiting lists, length of stay and seeing the same doctor every day.

Conclusion

Patients attending aneurysm screening were willing to travel beyond their nearest hospital to access various service attributes. In particular they showed a preference for services with a better outcome, high surgical volumes and endovascular surgery. These results should be used to inform strategic service reconfiguration.

A national survey by the vascular surgical fellows of primary care trust criteria for intervention for varicose veins

Drinkwater S[1], Corfield L[2], Mylankal K[3], Goebells A[1], Jenkins M[1]

1 Regional Vascular Unit, St. Mary's Hospital, Paddington, London; 2 Department of Vascular Surgery, St. Thomas' Hospital, Westminster, London; 3 Academic Vascular Unit, Hull Royal Infirmary, Hull

Objective

We aimed to determine whether there are regional variations in primary care trusts' (PCT)s funding policies for varicose veins.

Method

An email was sent to all 152 PCTs in England, inviting them to participate in an online survey, and asking for their written policy on treatment of varicose veins, if one existed.

Results

A written protocol specific to varicose vein treatment was only available from 27 PCTs. All would fund intervention for patients with leg ulceration, although in 5/27 this was only if the ulcer was non-healing or deteriorating with compression. Twenty-five out of 27 would fund treatment of varicosities associated with bleeding, but in six cases this was qualified by requiring hospital admission or blood transfusion. Twenty out of 27 would refer for recurrent thrombophlebitis, but in one instance, this was only after three recurrences. Fourteen out of 27 would intervene for skin changes, 6/27 for symptoms severely impairing the patient's quality of life, and 4/27 for chronic venous insufficiency diagnosed by the local vascular surgeon. Five out of 27 would refer for more minor symptoms such as oedema and itching. Four of these five were within the London Strategic Health Authority. Funding for endovenous treatments was rarely specifically mentioned in policies.

Conclusion

There is a countrywide variation in the type of venous symptoms that the PCTs will fund, with patients from London being more likely to have treatment for minor symptoms. Very few PCTs considered quality of life impairment a reason for treatment, despite good evidence.

Recurrent varicose veins are more common following surgery than EVLT - results of a randomised controlled trial

Carradice D, Mekako A, Hatfield J, Chetter I

Academic Vascular Surgical Unit, Hull York Medical School

Objective

The aim of this study is to establish the relative technical efficacies of conventional surgery and endovenous laser therapy (EVLT) for varicose veins.

Method

Two hundred and seventy-eight patients with varicose veins due to long saphenous vein (LSV) insufficiency were recruited and randomised equally to surgery and EVLT. Detailed duplex follow-up was performed at 1, 6, 12, 52 and 104 weeks.

Results

Initial technical success rates were higher post-EVLT, 100% vs 94% (p=0.003). Fewer patients had residual reflux in the LSV below the knee post-EVLT, 21.4% vs 36.2% (p=0.008). Neorevascularisation was seen in 5.8% at 3 months, 13.5% at 1 year and 23.6% at 2 years post-surgery. Recanalisation was seen in 1.9% of EVLT cases at 1 year and 3.7% at 2 years. Our criterion for clinical recurrence was a single new varicose vein >2mm. Rates were significantly higher following surgery at 1 year, 18.9% vs 5.7% (p=0.004). The most common cause of recurrence post-surgery was neorevascularisation, causing recurrence through the anterior saphenous vein (ASV), typically rejoining the distal LSV around the knee. The most common cause of recurrence post-EVLT is again through an incompetent ASV. Those with a patent saphenofemoral junction or an incompetent below knee LSV at 1 week were more likely to recur this way (OR 8.8, p=0.026 and OR 9.1 p=0.015).

Conclusion

EVLT demonstrates superior technical efficacy in the short to medium term compared with surgery. Particular attention should be paid to flush occlusion of the SFJ and below knee incompetent LSV.

Early results of a randomised clinical trial (RCT) comparing VNUS® ClosureFAST™ Ablation and Laser for Varicose Veins (VALVV)

Shepherd AC, Gohel MS, Brown LC, Metcalfe MJ, Hamish M, Davies AH

Imperial Vascular Unit, Imperial College, Charing Cross Hospital, London

Objective

Endovenous thermal ablation is associated with excellent technical, clinical and patient reported outcomes, although direct comparisons between modalities are scarce. The aim of this study was to compare endovenous laser ablation (EVLA) and radiofrequency ablation (RFA) in a RCT (ISRCTN66818013).

Method

Consecutive patients with primary great saphenous vein reflux were screened and consenting patients were randomised to EVLA (980nm) or RFA (VNUS® ClosureFAST™) at a single centre. Procedures were performed under general anaesthesia with concomitant phlebectomy; follow-up was at 1 and 6 weeks. The primary outcome was post-procedural pain (100mm visual analogue scale) and secondary outcomes were analgesia use and quality of life at 6 weeks (Aberdeen Varicose Vein Questionnaire [AVVQ]). Analysis was on intention to treat using linear regression, adjusted for baseline and treatment variables.

Results

One hundred and thirty-one patients were randomised to EVLA (n=64) and RFA (n=67) and baseline variables were comparable. Mean (SD) pain scores over 3 days were 26.4mm (22.1) for RFA and 36.8mm (22.5) for EVLA (p=0.012). Over 10 days, mean (SD) pain scores were 22.0mm (19.8) versus 34.3mm (21.1) for RFA and EVLA, respectively (p=0.001). Patients randomised to RFA used fewer analgesic tablets (mean [SD]) over 3 days (8.8 [9.5] vs 14.2 [10.7]; p=0.003) and 10 days (20.4 [22.6] vs 35.9 [29.4]; p=0.001) compared to EVLA. Changes in AVVQ score over 6 weeks were similar between the groups; mean (SD) change -10 (9.6) and -9.4 (9.0) for RFA (n=56) and EVLA (n=49), respectively (13 patients awaiting 6-week follow-up) (p=0.991, ANCOVA).

Conclusion

RFA using VNUS®ClosureFAST™ is associated with less post-procedure pain and reduced analgesia use compared to EVLA (980nm). However, improvements in disease-specific quality of life were similar at 6 weeks.

Screening for malignancy or systemic disorder in superficial thrombophlebitis

Chiang N, Kporku E, Vasudevan T, Haggart P

Department of Vascular Surgery, Waikato Hospital, New Zealand

Objective

Risk factors for superficial thrombophlebitis include malignancies, and haematological and autoimmune disorders. Investigations involving auto-antibody and thrombophilia screening, chest X-rays (CXR), ultrasound (USS), or computed tomography (CT) scans have been recommended. We aim to determine the effectiveness and extent of screening in patients with thrombophlebitis of the lower limb.

Method

Patients with thrombophlebitis of the long saphenous vein admitted to Waikato Hospital from 2004 until 2009 were studied from a prospective audit.

Results

Fifty-five patients were identified. Median age was 65 years with M:F of 1:1. Interestingly, the age of presentation was lower in the indigenous New Zealand Maori population than Europeans (48 vs 65, p=0.001). Seven (12.7%) had known malignancies and one (1.8%) had known haematological disorders. Five (9.1%) patients presented with deep vein involvement. For superficial thrombophlebitis alone, 35 (70%) had saphenofemoral ligation. During the index admission, 15 (27.3%) had a thrombophilia screen, six (10.9%) tumour marker measurements and four (7.3%) antibody screening. Two (8%) of these screening blood tests were positive for a newly diagnosed thrombophilia and raised tumour markers. Fifteen (27.3%) patients had a CXR and five (9.1%) had further investigations including USS, CT or MRI. All CXRs were negative and one CT scan confirmed the primary source of malignancy from raised tumour markers. 93.3% of all screening tests provided negative findings. Four (7.3%) patients died. Three had metastatic cancer, one of which was discovered during the admission. Interestingly, two (3.6%) patients still alive were diagnosed with malignancies within 12 months of index admission.

Conclusion

The value of screening investigations for thrombophlebitis is questionable.

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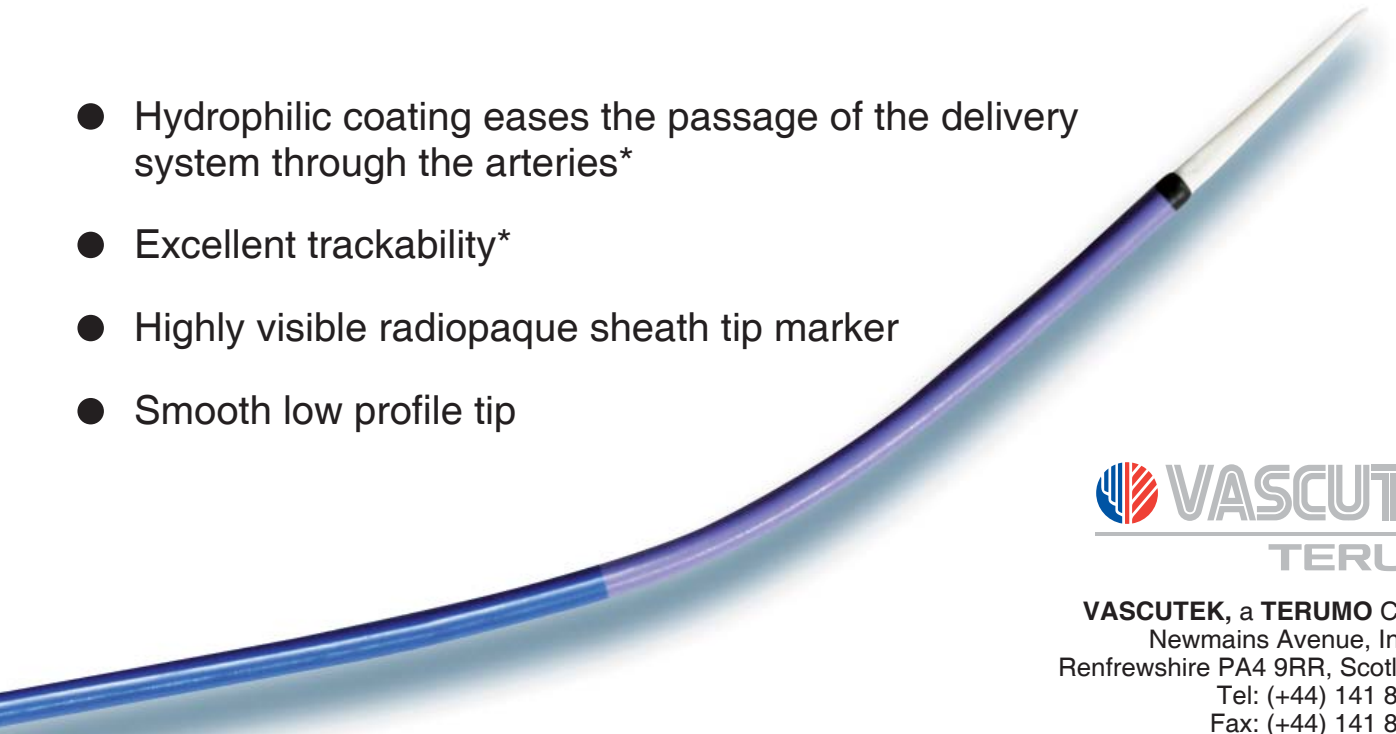

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A 10-year experience of retrievable inferior vena cava filters

Saha P[1], Ahmad A[1], Rolph R[1], Patel A[1], Waltham M[1], Hunt B[2], Sabharwal T[3], Modarai B[1]

1 Department of Vascular Surgery, Guy's and St. Thomas' NHS Foundation Trust, King's Health Partners, London; 2 Department of Haematology, Guy's and St. Thomas' NHS Foundation Trust, London; 3 Department of Interventional Radiology, Guy's and St. Thomas' NHS Foundation Trust, London

Objective

To review a single-centre experience with retrievable inferior vena cava filters (IVC) over a 10-year period.

Method

A retrospective database of all IVC filters inserted between 1998-2008 was analysed. Patient demographics and outcomes were recorded.

Results

The Gunther Tulip (Cook) IVC filter was used in a total of 112 patients (median age 66 [22-91], 58 female). Median follow-up was 60 (6-120) months. Indications for use of a filter included: i) in patients with established venous thromboembolism (VTE) and a contra-indication to anticoagulation (n=105, 94%); or ii) in patients considered high risk for VTE despite adequate anticoagulation (n=7, 6%). The majority of filters (n=109, 97%) were placed in the infrarenal vena cava. Tilting of the filter at the time of insertion was the most common complication (n=7). In 45 (40%) patients, filters were inserted for peri-operative cover and would all have been suitable for removal postoperatively. Filters were only retrieved in 6 (13%) of these patients at a median time of 19 (7-42) days after insertion. There were, however, no reports of adverse events associated with leaving filters *in situ*.

Conclusion

Only a handful of IVC filters were removed in the present series and it would appear that the failure to retrieve 'temporary' IVC filters is inconsequential. Closer follow-up of patients is required to determine if removal should become mandatory.

Occupation-induced lower limb congestion in a normal population - "My feet are killing me"

Wall M, Nicolson A, Choh C, Simms M

University Hospital Birmingham, Birmingham

Objective

To assess a possible work-related increase in lower limb tissue hardness in NHS theatre staff.

Method

All members of theatre staff were invited to participate. Age, gender, CEAP classification and BMI were recorded. At the initial reading each subject performed 30 heel raises and lay supine for 2 minutes, with 15° of foot elevation, for venous and lymphatic drainage. Calf circumference measurement and durometry (a hand-held spring-mounted device for measuring tissue hardness) were performed 15cm above the medial malleolus on each limb. Subjects returned throughout the day for repeat measurements after a period of standing from 2-8 hours.

Results

There were 106 participants, 72% female and 28% male. The average BMI was 26.6 (range 17.8- 49.4). All participants were CEAP classification 0-2. The average durometry reading rose by 4.2 standardised durometry units in each limb (from 27.6 to 31.8 right and 26.6 to 30.8 left), whilst calf circumference increased by 0.2-0.3cm, left and right respective, over the course of the day.

Conclusion

In a normal population we have demonstrated that prolonged standing at work induces significant increases in lower limb tissue hardness, which appears disproportionate to circumference change. Durometry may be a more sensitive and practical index of interstitial fluid sequestration than circumference change.

Above-knee reversed saphenous vein femoropopliteal bypass for intermittent claudication: the forgotten operation

Dawson A, Holdsworth R

Department of Vascular Surgery, Stirling Royal Infirmary, Stirling

Objective

Intermittent claudication is largely managed medically. A literature search has revealed only limited evidence of reports of vein grafting to the above-knee popliteal artery for intermittent claudication.

Method

Patients undergoing above-knee reversed saphenous vein femoropopliteal bypass for intermittent claudication have been prospectively observed. Graft patency rates are calculated using Kaplan Meier life table analysis.

Results

One hundred and fifty-three grafts have been undertaken in 130 patients (63.4% male; mean age at operation 65 years, range: 39-87years, median follow-up period 2 years). There were 28 grafts in diabetics (18%). Previous superficial femoral artery intervention was documented for 26 (17%) limbs and 24 had a previous inflow procedure. To date, 16 grafts (11%) have closed and 26 limbs have had an adjunct procedure (ten proximal angioplasties, seven graft angioplasties, six revisions, two below-knee extensions and one aorto-femoral graft thrombectomy). Twenty-eight patients (34 grafts) have died in the follow-up period. The primary assisted patency rates are 95%, 90% and 85% at 1, 3 and 5 years, respectively. No limbs have been lost as a direct result of a venous graft for intermittent claudication. One patient has had a subsequent amputation due to failure of a proximal aorto-femoral graft.

Conclusion

Observed patency rates for above-knee femoropopliteal vein grafts far exceed those of alternative interventions for an occluded superficial femoral artery. The question we ask is why is this surgical intervention so readily dismissed by the surgical community?

Can we improve mortality after lower limb amputation? An analysis of the National Vascular Database

Weale A, Earnshaw J

Gloucestershire Royal Hospital, Gloucester, on behalf of the Audit and Research Committee of the VSGBI

Objective

The outcome of major lower limb amputation is poor, with reported in-hospital mortality of up to 32%. Our aim was to identify factors influencing outcome, with particular emphasis on those which could be modified peri-operatively.

Method

All patients registered as undergoing lower limb amputation on the National Vascular Database (NVD) were included (n=2095). Univariable logistic regression was performed to identify which of the co-factors, routinely recorded in the NVD, were significantly associated with death in less than 30 days. The aim was then to enter significantly associated factors into a multivariable logistic regression analysis.

Results

One hundred and ninety-seven (9.4%) patients died within 30 days of operation. The following factors were significantly associated with death: amputation level (AKA v BKA Odds Ratio [OR]:1.87); age (OR:1.04); ASA grade (ASA3 v 2 OR:4.00; ASA4 v2 OR:13.6); pre-operative cardiac history (OR:2.02); smoking (OR:0.55); abnormal ECG (OR:1.65); end-stage renal failure (OR:1.95); haemoglobin (OR:1.36); white cell count (OR:1.76); urea (OR:2.77); creatinine (OR:2.79); potassium (OR:1.54); albumin (OR:2.12); INR (OR:1.52) and the level of pre-operative systolic blood pressure (OR:0.98). Unfortunately due to the large amount of missing co-factor data, only 636 (30.4%) of patients could be entered into a multivariable model rendering such analysis invalid.

Conclusion

Although many factors influencing in-hospital death are fixed, the lowering of pre-operative blood pressure, normalisation of haemoglobin, correction of electrolyte disturbance or coagulopathy, and attention to sepsis control and nutrition may reduce the death rate following amputation.

Angiotensin converting enzyme inhibitors (ACEI) do not decrease abdominal aortic aneurysm (AAA) size or growth rate.

Obukofe B, Bown M, London N, Sayers R

Vascular Surgery Group, Department of Cardiovascular Sciences, University of Leicester, Leicester

Objective

There has been a recent interest in the trials of pharmacological agents in the regression of AAA growth because this has both prognostic and surgical decision significance. Large AAA have significant comorbidities in addition to increased propensity to rupturing. Our objective is to determine whether patients taking ACEI have smaller AAA with a decreased rate of growth.

Method

We recruited 509 predominantly male, white Caucasians with confirmed AAA in a longitudinal study with repeated measurements of the maximal infrarenal AAA diameter using ultrasound scanning. Demographic and clinical data were recorded at times of scanning. The mean age was 77.22 years. A maximum likelihood method was employed and $p < 0.05$ was accepted as significant.

Results

The baseline AAA diameter for patients who were not on ACEI was 2.950cm (95% CI, 2.802-3.097cm; p=0.000) with a growth rate of 0.179cm/year (95% CI, 0.155-0.203cm/year; p=0.000). For those taking ACEI, the baseline AAA diameter was 3.113cm (95% CI, 2.729-3.298cm; p=0.363) whilst the growth rate of AAA in this category of patients was 0.203cm/year (95% CI, 0.14-0.267cm/year; p=0.226). Adjustment for other risk factors and drugs did not alter these findings.

Conclusion

There is no evidence to conclude that ACEI reduce the size or growth rate of AAA.

Cardiopulmonary exercise testing provides a discriminating predictive tool for early and late outcomes in patients with an AAA

Peters N, Thompson A, Lovegrove R, Ledwidge S, Catton T, Kitching A, Magee T, Galland R

Royal Berkshire NHS Trust, Reading

Objective

It is important to predict 30-day and long-term mortality when determining suitability for AAA repair. Despite EVAR II many surgeons believe there is a subgroup of patients unfit for open repair who do well from endovascular repair. It has also been suggested that there is a long-term survival advantage for some patients undergoing open repair. This study aims to demonstrate the ability of cardiopulmonary exercise (CPX) testing to predict the 30-day and mid-term outcome of AAA patients.

Method

Since July 2006 consecutive patients from a single centre identified with a large AAA were sent for CPX testing. Follow-up was completed on 1st August 2009. Univariate logistical regression was used to compare anaerobic threshold (AT) and ventilatory equivalent for CO_2 at AT (VE) with Detsky, APACHE II and VPOSSUM in predicting predefined early and mid-term outcome measures.

Results

One hundred and seven patients were identified with a large AAA (male 90%, open repair 59%, age 76 [IQR 71-80], FU 1.6yr [0.7-2.5]). VE and APACHE II predicted postoperative inotrope use (OR [95% CI] 1.158 [1.018-1.318], 1.143 [1.022-1.278]). Detsky score predicted length of ITU stay (p=0.008). One postoperative death occurred resulting in no measures predicting 30-day mortality. Mid-term mortality was predicted by AT (OR [95% CI] 0.672 [0.466-0.969]).

Conclusion

CPX testing provided the only means in this study of predicting both a measure of 30-day outcome and midterm mortality. CPX is set to become an increasingly important tool in determining the optimum management for AAA patients.

Abdominal aortic aneurysm (AAA) wall thickness at regions of high and low wall stress: implications for aortic wall stress computation and rupture prediction

Malkawi A[1], Cheng Z[2], Hinchliffe R[1], Loftus I[1], Xu Y[2], Thompson M[1]

1 St. George's Vascular Institute, St. George's Healthcare NHS Trust, London; 2 Department of Chemical Engineering and Chemical Technology, Imperial College, London

Objective

Peak wall stress (PWS) computation using finite element analysis (FEA) has been shown to be a predictor of AAA expansion and rupture. Computations are made assuming a standard aortic wall thickness (usually 2mm). We sought to examine the relationship of wall stress (WS) with AAA wall thickness and the effect of individualized wall thickness on PWS computation.

Method

FEA (ADINA, ADINA R&D Inc., Watertown, USA) was performed on seven patients with intact AAA scheduled for open repair. Coordinates of high and low WS were mapped using a 3D imaging workstation (3mensio Medical Imaging B.V. Bilthoven, Netherlands) and full-thickness biopsies taken at surgery. Initial analysis assumed universal AAA wall thickness of 2mm. Wall thickness was measured (AxioVs40 micro telescope system, Carl-Zeiss, Germany) and FEA was repeated using these values. Comparisons were made using a paired t-test.

Results

Seven paired AAA wall samples were obtained from high and low stress regions. The aortic wall was significantly thinner in regions of highest wall stress compared with lowest wall stress regions (629μm [548-710, 95% CI] versus 1576μm [987-2164, 95% CI] p=0.007). Mean adjusted PWS using actual aortic wall thickness was significantly higher (158KPa [98-219, 95% CI] versus 94.4KPa [50-138, 95% CI] p= 0.02).

Conclusion

AAA wall in regions exposed to high wall stress was significantly thinner than in low wall stress regions. Applying realistic aortic wall thickness value at high stress regions, although more complex, will result in more accurate wall stress computation and rupture prediction.

The neutrophil to lymphocyte ratio (NLR) predicts peri-operative mortality following elective and urgent repair of abdominal aortic aneurysms

Appleton N, Morris-Stiff G, Lewis M

Department of Surgery, Royal Glamorgan Hospital, Llantrisant, Wales

Objective

To assess the predictive value of NLR (as a measure of systemic inflammatory response) in relation to 30-day and overall mortality in patients undergoing elective and urgent open abdominal aortic aneurysm (AAA) repairs. Furthermore, to assess any correlation between NLR and age, size of AAA and gender.

Method

Data were collected for consecutive patients undergoing elective or urgent repair of their AAA by a single surgeon from January 1999 to December 2008. Neutrophil and lymyphocyte counts were evaluated from all pre-operative full blood counts and the ratio of the two calculated, with NLR>5 regarded as abnormal.

Results

Three hundred and fifty consecutive patients underwent AAA repair. Fifty-two had an NLR >5. The 30-day mortality rate was 10/52 (19%) in the NLR>5 group and 22/298 (7%) in the NLR<5 group (Chi-squared; p=0.006). All deaths in the NLR>5 group were due to myocardial infarction. Median NLR was higher in those that died within 30 days at 3.7 [IQR: 2.5 - 5.8] versus 2.7 [IQR: 2.1-3.8] (Mann-Whitney U; p=0.003). Regarding overall mortality, there was no relationship between the NLR>5 group - 34/222 (15%) and the NLR<5 group - 18/128 (14%) (Chi-squared; p=0.006). There was no difference between age, aneurysm size or gender and NLR. Six patients had histologically confirmed inflammatory aneurysms and their median NLR was 3.1.

Conclusion

Pre-operative NLR>5 appears to be a significant predictor of 30-day mortality in elective and urgent AAA surgery. It may identify a group with sub-clinical cardiovascular disease at risk of peri-operative myocardial infarction who could benefit from targeted investigations.

Ready-to-fenestrate stent grafts in the treatment of juxtarenal aortic aneurysms

Manning BJ[1], Hinchliffe R[2], Richards T[1], Ivancev K[1], Harris P[1]

1 Multidisciplinary Endovascular Team, University College London Hospital, London; 2 St. George's Vascular Institute, London

Objective

A prototype ready-to-fenestrate stent graft (RFSG) was designed with a fixed scallop, and eight potential fenestrations allowing for variation in the position of each renal artery (RA) relative to the SMA. We aimed to determine the proportion of juxtarenal aneurysms treatable using this potentially 'off-the-shelf' device.

Method

Four hundred and thirty-nine consecutive orders for custom-made-devices were analysed, and positions for potential fenestrations in the RFSG were determined based on the most frequent anatomical target vessel variations: a fixed SMA scallop 12mm deep at 12 o'clock, RA fenestrations at 9:15, 10:15 (allowing for target within range 8:45-10:45), 2:15 and 3:15 (target within range 1:45-3-45), each either 19 or 28mm from the graft edge (GE), (within range 15-32mm) and 6X8mm in diameter. Proximal diameters 24, 26, 28, 30, 32, and 36mm were chosen.

Results

Of 439 plans, 372 standard juxtarenal (SJR) cases, defined by inclusion of a scallop and 0, 1 or 2 small fenestrations (12, 13 and 75% of cases, respectively) were identified and used to test the applicability of the model. Mean clock position for the right RA was 9:30, for the left RA 3:00, being a mean of 21±5 and 22±5mm, respectively, from the GE. Clock position of the RA was within the RFSG range in 86% (right) and 88% (left) of cases, with 96% and 98%, respectively, within the allowable distance from the GE. Eighty-one percent of all SJR cases were potentially treatable using the RFSG model.

Conclusion

A RFSG device would allow for the treatment of the majority of juxtarenal aortic aneurysms, which currently require custom made devices.

Neurological complications following thoracic endoluminal intervention: stroke is irreversible and fatal whereas paraplegia can be reversed

Clough R[1], Bell R[1], Zayed H[1], Modarai B[1], Waltham M[1], Carrell T[1], Reidy J[2], Taylor P[1]

1 Department of Vascular Surgery, Guy's and St. Thomas' NHS Foundation Trust, London;
2 Department of Radiology, Guy's and St. Thomas' NHS Foundation Trust, London

Objective

The neurological complications of thoracic aortic endoluminal intervention may result in devastating consequences for the patient and remain an important cause of death. Rapid identification of these complications is important for early treatment which may reverse neurological deficit.

Method

A prospective database of a consecutive series of 293 patients having thoracic endografts was analysed to identify patients with neurological complications. The anaesthetic method was recorded.

Results

Twenty-three percent of patients had a general anaesthetic and 77% received regional or local anaesthesia. Four patients were converted from regional to general anaesthetic. Sixteen patients had paraplegia, one of whom died. Paraplegia was identified immediately with regional or local anaesthesia. A cerebrospinal fluid drain was immediately inserted to reduce the CSF pressure and improve spinal cord perfusion. Inotropes were used to promote hypertension. Paraplegia was reversed in 11 with one additional internal iliac artery angioplasty. Sixteen had a stroke of which six were fatal and seven permanent. Treatment was supportive.

Conclusion

Regional and local anaesthesia allows immediate recognition of paraplegia and facilitates effective treatment. The results for stroke were much worse and techniques to remove or dissolve embolic material in the cerebral circulation may improve outcome.

Outcomes of the endovascular management of aortic arch aneurysm: implications for management of the left subclavian artery

Holt P, Johnstone C, Hinchliffe R, Morgan R, Jahingiri M, Loftus I, Thompson M

St. George's Vascular Institute, London

Objective

To define the outcomes of treating aortic aneurysms involving the arch vessels, with a hybrid approach using extra-anatomic reconstruction and endovascular repair with non-fenestrated stents.

Method

A single-centre prospective review of arch aneurysm endovascular repairs over 8 years. Data were collected regarding patient demographics, aneurysm pathology and revascularisation procedures performed. Data were analysed to detect differences between groups and with logistic regression modelling. The outcome measures were postoperative death, stroke and paraplegia.

Results

Seventy-eight patients (65% male; mean age 65 years) underwent endovascular repair of aortic arch aneurysms between 2001-2009. In all cases, coverage of the left subclavian artery (LSA) was necessary to access an adequate proximal landing zone. Nine patients had an Ishimaru zone 0 proximal landing zone, 17 zone 1 and 52 zone 2. Fifty patients (64%) underwent elective endografting with in-hospital mortality of 4% and 28 patients (36%) underwent emergency procedures with a mortality rate of 14.3%. The LSA was revascularised in 31 elective (62%) and four emergency patients (14%). Revascularisation of the LSA was associated with significantly better outcomes in terms of a combined measure of death-stroke-paraplegia (OR 15.6 [95% CI 1.83-142]; p=0.012). Patients with an atherosclerotic aneurysm had worse outcomes than those with an aortic dissection (OR 5.52 [95% CI 1.26-24.4]; p=0.024), with dissections having preponderance towards emergency procedures (2.92 [95% CI 1.12-7.58]; p=0.035).

Conclusion

Aneurysms involving the aortic arch vessels can be effectively treated by staged endovascular-surgical hybrid procedures with good outcomes, which can be further improved through prior revascularisation of the LSA.

Annual General Business

Meeting Agenda

Thursday 19th November 2009 at 5.30-6.30pm

BT Convention Centre, Liverpool

1. Apologies
2. Minutes of AGM 2008
3. Any other business
4. President's Report: Mr Peter Taylor
5. Honorary Secretary's Report: Mr Jonothan Earnshaw
6. Honorary Treasurer's Report: Mr Simon Parvin
7. Audit and Research Committee Report: Mr Tim Lees
8. Training and Education Committee Report: Professor Cliff Shearman
9. Professional Standards Committee: Mr Peter Lamont
10. Vascular Tutor: Mr Waquar Yusuf
11. Circulation Foundation Committee: Mr Andrew May
12. President Elect's Report: Professor Cliff Shearman
13. Election of Officers: Result of ballot for Ordinary Members of Council

Honorary Secretary's Report

Jonothan Earnshaw

After the excitement last year of starting the process of seeking separate specialty status, it may seem as if this year has been more peaceful for the Society. The new Secretariat team in the Vascular Society Office has now bedded in as an effective and efficient unit, and I would like to extend grateful thanks to Jeanette, Neelam and Rebecca for their high quality work, and their continuing support to the Society.

Quality has been a much used word this year. The relatively poor results for elective aneurysm surgery in the UK were highlighted to colleagues at last year's AGM. They were also noted at the Department of Health, and The Vascular Society's response is under a degree of scrutiny. The revised Provision of Service for Patients with Vascular Disease published this spring gives guidance to improve services for patients with aortic aneurysms. The Quality Improvement Framework (QIF) led by the Society is in the forefront of a drive to improve outcomes. Tim Lees is fronting a bid to secure funding to embed the process and to monitor the expected improvement in aneurysm outcomes through ongoing audit of the results from the National Vascular Database. This professional approach is being monitored by the Vascular Programme Board, who lead for the Department of Health on vascular issues.

The QIF has also been endorsed by the NHS Abdominal Aortic Aneurysm Screening Programme (NAAASP). Ensuring the quality of aortic surgery is integral to the effectiveness of the new national Programme. Screening has now started using national standards in six early adopter local programmes, and four more will be commencing in the late autumn. There are plans to seek applications for more programmes to start in 2009/10. Details are available on both The Vascular Society and NAAASP websites.

Of course, improving quality should not be restricted to aneurysm disease. You will all be aware of the carotid audit expertly co-ordinated by Tim Lees in collaboration with the Royal College of Physicians. The audit mostly concerns the process of care of patients with TIA or minor stroke, with the aim of trying to speed up the delivery of interventions. It is widely agreed that improving access to urgent carotid intervention is the best way to reduce the stroke risk of patients who have had a TIA. In 2010 there is a plan to turn the Society's attention to major amputations. The perioperative mortality rate is currently 10% after major amputation for procedures recorded on the NVD. This is another area where there could be some improvement through a new QIF.

Other highlights for 2010 will be a spring meeting in Nottingham in conjunction with the Midland Vascular Society. The theme will be 'saving legs', and will include sessions on endovascular and open surgical techniques, and an update on the management of diabetic vascular disease. In the summer, a tripartite meeting (Endovascular Fusion) is planned between the Vascular Society, BSIR and BSET which will focus on endovascular interventions, and will include both invited lectures and open paper presentations.

Finally I would like to record grateful thanks to all the Society Officers, without whom all this work behind the scenes would not get done. Tim Lees leaves a job well done, and an excellent record of using outcome data to drive clinical improvements. Cliff Shearman steps down from his education and training post, where he has done the enormous groundwork needed for our separate specialty application. He will, of course, be stepping up as next year's President, where he may be called upon to lead the final negotiations. Finally, I would also like to offer my personal thanks to President Peter Taylor who has led the Society for the past twelve months in dynamic and ebullient style. His enthusiasm for promoting endovascular therapies will stand the Society in good stead as it moves towards specialty status.

Honorary Treasurer's Report

Simon Parvin

In what is my first report as your Treasurer, I am pleased to say that, despite a difficult economic climate, the Society continues to perform well and has excellent reserves.

Our meeting in Bournemouth produced a profit of £87,393, the Spring Meeting in Durham a profit of £6,474 and the Circulation Foundation Dinner in London another £7,990.15. Fundraising initiatives for the Circulation Foundation included the London Marathon, which raised at least £3,000, and Shane MacSweeney raised £1,335 for climbing Mont Blanc this summer.

The National Vascular Database moves from strength to strength, and despite requiring further investment, this is affordable without putting the viability of the Society at risk.

Given the current economic climate, I have decided to hold the cost of membership at 2009 levels for next year. In addition, the cost of registration at the Annual Meeting has been kept at the 2008 level for those who registered early. This year for the first time we have introduced a one-day and two-day rate, and will determine if this can be repeated in future years. The proposed membership fees for 2010 are shown below. Membership numbers remain stable at 654 generating just under £100,000 a year.

The AGMs for 2010 (Brighton) and 2011 (Edinburgh) are now fixed. For 2012-2014 the meeting will be held in Manchester. This enables us to take advantage of a very considerable discount for booking three consecutive years, particularly important in the current economic climate. Being central to the country, we hope that more of you will come to the meeting.

Both the main VS website and the Circulation Foundation website have been completely redesigned and are now fully functional. I would encourage all members to visit the Circulation Foundation site and to consider committing on-line to a regular donation. This is now very easy with just a couple of clicks.

During 2009 the Circulation Foundation has received another large bequest. We have already received £300,000, and there may be a little more to follow. With reserves of £750,000

the Circulation Foundation is now in a position to invest in a number of schemes which should increase donations and raise its profile.

The Circulation Foundation has again made grants totalling £54,000 this year. We hope to be able to increase the level of grant giving in future years.

Despite the recession, we continue to benefit from the support of our Major Sponsors, and I would like to thank them all: Angiodynamics, Cook, Gore, Le Maitre, Maquet and Vascutek.

During this year we have moved the accounting year end for VSGBI Ltd from December to June to bring all three accounts into line. This should be taken into consideration when reading the accounts which will be sent out to Members as soon as they become available.

Membership categories	Subscription rate	
	01.01.09	01.01.10
	£	£
Ordinary	185	185
Affiliate	100	100
Overseas	100	100
Associate	100	100
Senior	35	35
Honorary	Nil	Nil

Audit & Research Committee Report

Chairman: Tim Lees

National Vascular Database

Further developments have been made to the NVD over the last 12 months. Individual and centre data can be downloaded directly from the national database into an Excel spreadsheet. The upload facility is now also fully functional and is being used by several vascular centres. For those centres choosing to use this method of contributing their data it is important that uploads are performed at regular intervals in order to keep the reporting up to date. It is the responsibility of individual centres to upload their own data and we are unable to provide this service. However, if problems are encountered during this process we are very happy to assist in resolving these. Dendrite has also been helpful in assisting their customers in this process.

A plot of number of index procedures (excluding carotids) per unit, printed in early August, is shown below (Figure 1).

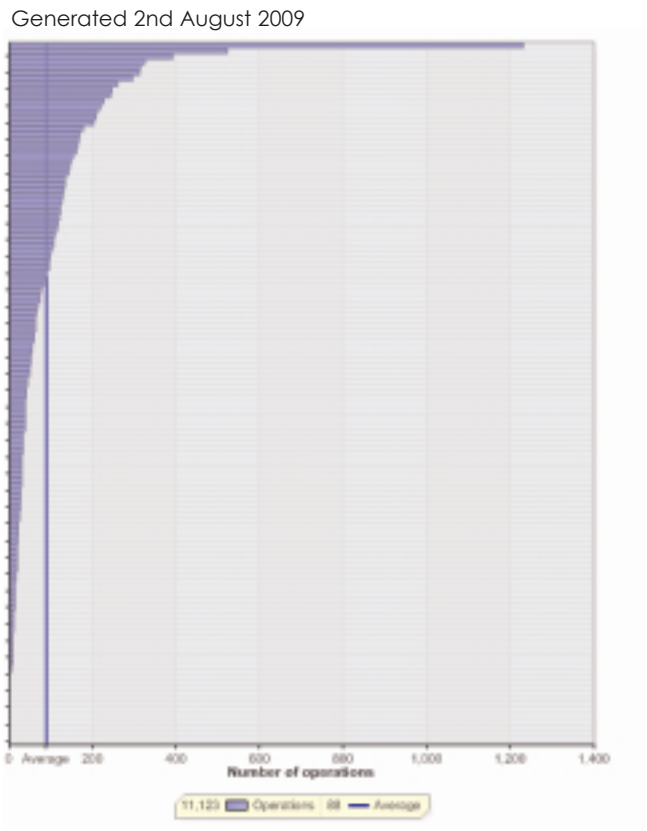

Figure 1. A plot of index procedures per vascular unit.

There is also now online reporting available to all vascular surgeons with a log in and password. If you still require a log in please contact Sara Baker. The reporting includes information on case numbers with various filters, mortality, and mortality funnel plots, and an example of one of these for non-ruptured aneurysms is shown below (Figure 2). We welcome your feedback on any further reporting functions users would like to see on the online system.

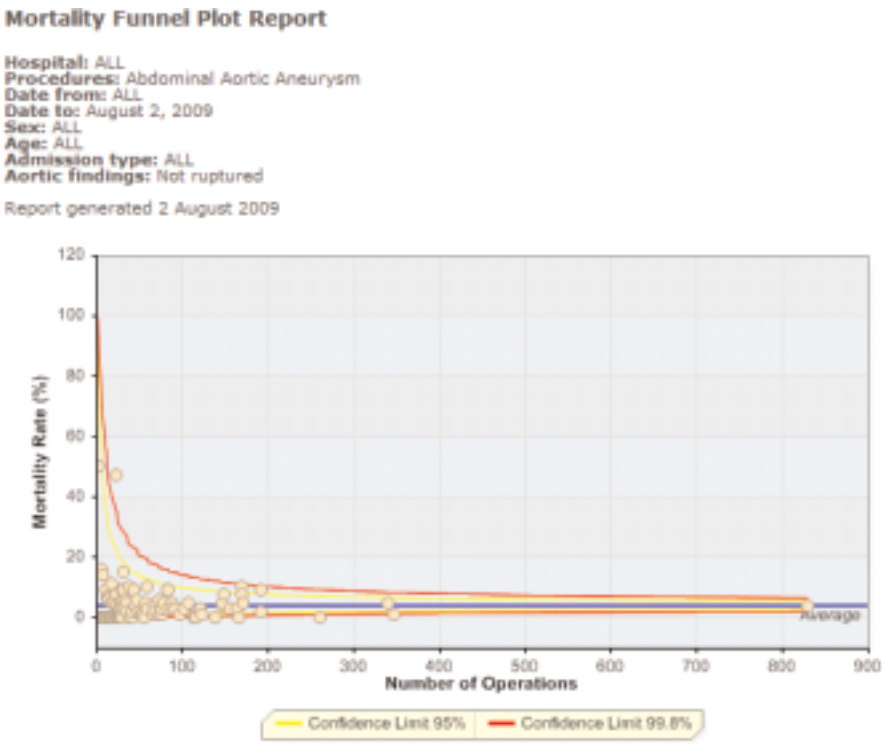

Figure 2. Mortality funnel plot report for non-ruptured aneurysms.

A written report is planned for later this year and will include data up to 31st December 2008. Some centres did not manage to upload their data before the deadline for this report but they should not be concerned about this as they will still be included in the online reporting.

We have also commissioned a HES data comparison, which I hope will be available by the time of the AGM. Unfortunately at present this will not include a comparison with Hospital Administrative Data in Wales and Scotland.

Now that we have a robust system for data collection and analysis, further work is planned on risk modelling and risk adjusted reporting.

BSIR and VASGBI

The additional datasets for recording details of EVAR and anaesthetic data have been agreed with the BSIR and the VASGBI and will be added to the database at the same time as the changes are made to the database for the aneurysm screening programme. Discussions are also being held with the BSIR regarding possible inclusion of TEVAR questions.

NHS Abdominal Aortic Aneurysm Screening Programme (NAAASP)

At the time of writing this report we are currently undergoing contract negotiations with the Gloucestershire Hospitals NHS Foundation Trust (who host the national Programme) to provide the

outcomes module IT solution for the NAAASP. The NVD will be used to collect data on patients referred for possible treatment from the screening programme. This will necessitate recording data not only on the patients who undergo aneurysm surgery and EVAR but also on those who do not receive treatment. Data from the Office of National Statistics on patients who die with a diagnosis of AAA will also be uploaded onto the NVD. It is important that Members are aware that there will be a flow of data from the NVD into the screening IT module of the NAAASP and data relating to aneurysm treatment and mortality will be available to the screening programme.

National Carotid Intervention Audit

This is a collaborative project between the Royal College of Physicians and the VSGBI, funded by the Healthcare Commission (now the Healthcare Quality Improvement Partnership).

The report of the first round of this audit was published in August 2008 and is available on the NVD https://www.nvdonline.org.uk and VSGBI websites. The main finding was that there are long delays between patients having symptoms and undergoing carotid surgery. This has provided us with a unique opportunity to emphasise the important role of carotid surgery in the management of stroke and TIA, and to argue the need for funding for service improvement in vascular surgery.

Round 2 of this audit includes all patients operated on between 1st January 2008 and 30th September 2009, including subsequent follow-up data. The report on the second round is due to be published in March 2010 and will include HES data in addition to locally collected data. Further information can be obtained at ceaaudit@rcplondon.ac.uk.

Expert Working Group on Coding, Vascular Chapter

The Society continues to have input into Chapter Q, the vascular chapter of the OPCS codes, along with vascular codes relating to endovascular procedures. Regular meetings are held with the NHS Information Centre. If you have any issues relating to vascular coding or if you feel there is a need for new codes relating to vascular intervention please contact us and we can feed this into our working group.

This is my final report as Chairman of the Audit and Research Committee and I hope my successor, David Mitchell, enjoys the role as much as I have. David has already been helping us on the Committee and has an audit of acute kidney injury following AAA surgery planned. I have been well supported by the members of the Committee and I would like to acknowledge all their hard work. I would also like to thank the Council Members, Jeanette and Neelam, and the RCP team for their support. Finally, the NVD would not function at all without the hard work of Sara Baker and I am very grateful to her for all her endeavours.

If you have any feedback on the NVD or any other issues please contact David Mitchell (David.C.Mitchell@nbt.nhs.uk), or Sara Baker (sara.baker@rbch.nhs.uk; tel: 01202704601).

Training & Education Committee Report

Chairman: Cliff Shearman

The activities of the Training and Education Committee during the last year have focused around the process of applying for specialty status. At the beginning of the year the Department of Health placed a moratorium on new specialty applications which left us in a state of limbo. The curriculum is as developed as it can be and we have started to combine ours with that developed by radiology, which will add considerable strength. Although gaining adequate endovascular training is still difficult for our trainees, the General Surgery SAC chaired by Peter Lamont has been supportive of vascular training and trainees can now spend up to four years in 'sub-specialty' training. The moratorium on new specialty status is about to be lifted and we are starting a round of meetings with the groups we need to persuade that the specialty status is essential for vascular surgery to train the next generation of specialists. If successful then the real work of developing the structure of the training programmes and assessment methods can begin in earnest.

The issues with specialty status have tended to take the focus off our relationship with interventional radiology. Radiology is going through a very similar debate about the role of radiology in general *versus* sub-specialty interests. Interventional radiology has decided to pursue sub-specialty recognition. However, a strong relationship with radiology and the aspirations of the two groups are quite compatible. We have started regular quarterly meetings with The Royal College of Radiologists, and the British Society of Interventional Radiology has a representative on our Training and Education Committee. This will allow us to develop more shared training opportunities and ensure that we are aware of each other's plans.

The seven post-CCT Fellowships we were awarded have had variable success. The very narrow time frame during which trainees are eligible to apply and the restriction to training in England limited the number of applicants. This has affected all specialties but despite strong representation to the Department of Health, there has been no relaxation of these rules. However, we have had two rounds of applications and interviews and we are about to interview for the third time, so it is hoped we will fill five or six of the posts by the end of the year. Although a relatively small impact on training opportunities it is at least a start and has

developed some good training posts. At the time of writing it is unknown whether the Department of Health will fund these posts for a further year.

Despite the perceived difficulties we have identified nearly 30 units that are now offering some form of endovascular training to their local trainees as part of their pre-CCT training programme. This is fantastic news and sets the scene well for our specialty application. We have also just heard that Cook has generously agreed to support three Vascular Society Endovascular Fellowships which again will help build a portfolio of training opportunities. These posts will be available to all Members of The Vascular Society to apply for.

Our Vascular Tutor, Waquar Yusuf, has done a lot of work in his term of office to re-vitalise the courses we offer in conjunction with the Raven Education Department of The Royal College of Surgeons. The EVAR planning workshop has been particularly successful but the ultrasound course about to be launched in conjunction with The Society for Vascular Technology promises to be very exciting. Waquar demits office this year and I would like to thank him very much for all his efforts and I hope at the time of the AGM to be able to announce his successor.

Finally, this is my last report as Chairman of the Training and Education Committee. I have enjoyed my term of office but have found it frustrating in that so much of what we need and want to do in vascular training is dependent on us achieving specialty status. Unless we can achieve this it will be difficult, if not impossible, to offer a modern training programme fit for purpose. If we achieve specialty status then vascular training is set to take off. Professor Jonathan Beard takes over from me at the AGM. He has a strong background in surgical education and will be in an ideal position to develop the training programme of our new specialty and I wish him well in his role.

Professional Standards Committee Report

Chairman: Peter Lamont

This year has so far been a quiet one on the professional standards front. A couple of Trust Medical Directors requested external case note reviews to supplement their own internal enquiries regarding under-performing vascular consultants. The issue of whether or not to refer to the GMC came out of one of these enquiries. The PSC debated this issue and concluded that it would be much more appropriate for a Trust Medical Director to make any GMC referral, not least because they would be the first person the GMC would turn to under the circumstances. The Society would therefore confine its role to advising the Trust Medical Director and would only approach the GMC where it appeared patient safety was at risk and the Medical Director did not refer. Under such circumstances the GMC has clearly advised the Society that we must follow our duty as doctors to protect the patient. Thankfully this has not turned out to be necessary to date.

The question of outliers on the National Vascular Database is likely to come into sharper focus in the future. Although not confirmed as yet by the GMC, it seems very likely that all surgeons will need proof of participation in a national audit system as part of the revalidation process when it is introduced. The NVD is the obvious system for vascular surgeons to use for this purpose. Many Members will have received requests from their Trust earlier this year to submit outcome data on AAA repair to a national newspaper under the Freedom of Information Act. As public bodies, hospital Trusts are obliged to provide the data if they hold it on record. As The Vascular Society is not a public body, it is not legally obliged to release data from the NVD under the Act but it has offered to assist the journalist involved in interpretation of the results. A very similar request was made of cardiac surgery units before they adopted their current system of open publication of surgical results and there would seem advantages for our Society to follow suit.

I now come to the end of my term as Chairman of the PSC and would like to record my thanks, not only for all the support from my fellow Members of the Committee, but particularly to all those who welcomed me into their Trusts under what must have been, for them at least, the most trying of circumstances. I wish my very capable successor, Michael Gough, all the very best in this challenging but rewarding role.

Circulation Foundation Report

Chairman: Andrew May

I am delighted to be reporting to you towards the end of my first year as Chairman. I took over from Sir Peter Bell after the last AGM in November 2008 and wish to pay tribute to both his service as Chairman and to his vision, which together with Tony Chant started our charity some years ago.

Despite the recession we have had an encouraging year with a number of key events and initiatives and I would like to thank Rebecca Wilkinson, our Fundraising Manager, for all the hard work she has put into these. We have modernised our website to make it more user friendly, particularly for patients and the public, and it now has a direct donation facility as well as comprehensive patient information.

We held a parliamentary reception at Westminster in November hosted by Dr Brian Iddon MP and arranged by BIBA Medical to encourage the promotion and funding of the NHS Aortic Aneurysm Screening Programme. It was a great success, resulting in an early day motion signed by more than 70 MPs.

In February we held a fundraising dinner at The Vascular Society Diabetic Foot Meeting in Durham. This was organised by Tim Lees and Gerry Stansby and was a multidisciplinary meeting attended by diabetologists, radiologists and nurses.

We had 10 runners in the London Marathon raising around £10,000 and we are most grateful to them. We would to thank Mr Saroj Das, Vascular Consultant at Hillingdon Hospital, as he overcame considerable personal injury whilst running the marathon and managed to raise an incredible £2,793! We have been inundated with requests to run for the Foundation in the 2010 London Marathon. If you would like to run the London Marathon for the Foundation, please come to the CF stand at the AGM.

We had a very successful Annual Dinner at St Thomas' Hospital in May, attended by over 100 people, which was great fun and raised £10,000. We would like to thank Mr Ian Franklin and the LAVVU Team at Charing Cross Hospital for their continuing support, and VNUS Medical Technologies for their sponsorship of this event.

Website: www.circulationfoundation.org.uk

We would also like to thank Mr Andrew McIrvine and his crew in the NHS regatta who raised £2,100 and Mr Shane MacSweeney who climbed Mt Blanc over the summer and raised £1,320 in sponsorship.

We have awarded £73,000 in research funds again this year, and look to increase this amount next year.

We are in the process of developing our business plan and fundraising strategy which will provide direction and focus to the Foundation for the next 5 years. This work has been undertaken by Rebecca Wilkinson who has had a very successful first year as our Fundraising Manager and has exciting plans for the future.

The Circulation Foundation is your charity, we want to know what you feel we should be doing, and in return we ask you to support us. Many of you give to us on a regular basis and we are extremely grateful for this. If all 400 members of The Vascular Society gave £10 per month we would raise £48,000 per year which would mean that we could increase the grant making facility and support more research. Please consider this and come and visit our stand at the AGM in November.

The Circulation Foundation would like to thank the following Members of The Vascular Society for their support during the year July 2008-June 2009

Mr Munther Aldoori, Mr Roger Baird, Mr Ben Banerjee, Professor Jonathan Beard, Ms Rachel Bell, Mr David Berridge, Mr Paul Blair, Mr Bruce Braithwaite, Mr James Brown, Mr Tom Carrell, Mr Rod Chalmers, Mr Richard Corbett, Ms Lorraine Corfield, Mr Saroj Das, Professor Alun Davies, Mr Ray Dawson, Mrs Linda de Cossart, Mr Richard Downing, Mr Jonothan Earnshaw, Professor Gerry Fowkes, Mr Ian Franklin, Mr Andrew Garnham, Mr David Gerrard, Mr Chris Gibbons, Professor Michael Gough, Mr Gareth Griffiths, Professor George Hamilton, Mr Simon Hardy, Professor Shervanthi Homer-Vanniasinkam, Professor Michael Horrocks, Mr Michael Jenkins, Mr Nigel Jones, Mr Tim Lees, Mr Shane MacSweeney, Mr Adrian Marston, Mr Andrew May, Mr Andrew McIrvine, Mr David Mitchell, Professor Ross Naylor, Mr Simon Parvin, Mr David Reilly, Miss Sophie Renton, Mr Paul Renwick, Dr John Rose, Professor Julian Scott, Professor Cliff Shearman, Mr Malcolm Simms, Mr Jonathan Smout, Professor Gerry Stansby, Mr Peter Taylor, Mr Peter J Taylor, Mr Martin Thomas, Mr John Thompson, Mr Kevin Varty, Miss Lucy Wales, Mr David Williams, Mr Leith Williams, Mr John Wolfe, Mr Kenneth Woodburn, Mr Michael Wyatt

And all those who attended the Spring Meeting Dinner and Annual Dinner

Contact details

Fundraising and Events Manager
Ms Rebecca Wilkinson
Circulation Foundation, 35-43 Lincoln's Inn Fields, London, WC2A 3PE
Tel: 0207 304 4779
Fax: 0207 430 9235
E-mail: info@circulationfoundation.org.uk
Website: www.circulationfoundation.org.uk

Vascular Tutor's Report

Waquar Yusuf

As I write my final report, I cannot help avoid the feeling that more could have been done. However, on reflection I have to accept that my major targets have been achieved through the support of colleagues and the hard work of the members of the Education Department.

All the stages of the curriculum are now linked to and covered by the 'specialty skills course' and the 'advanced vascular skills course'. Both the pilots proved very successful in their new format this year. By running the two courses in tandem, it was possible to use the cadavers efficiently, enabling us to reduce the cost significantly. The excellent feedback from the participants is a testimony to the commitment and teaching skills of the Faculty, course content, better preservation of cadavers and the improved facilities in the new workshop.

The 'EVAR planning course' and the 'amputations course' were much improved in their second year. The lessons from the pilot courses were useful in fine tuning and improving them. Once again, both were over subscribed and we received excellent feedback from the participants.

The work on the ambitious project of training in vascular ultrasound is progressing. The SVT convenors are preparing the course materials and programme. We have received offers from nearly twenty centres for the pilot and many vascular trainees have expressed an interest in the course. This will be a unique course that will not only be based on two days of teaching alone, but will also provide practical training over several months followed by a formal assessment of competency and certification. The course timetable will be finalised soon and registration will then be open.

Renal access surgery is becoming an increasingly important part of vascular specialists' workload. There is a training need for vascular trainees in this area. A two-day course has been planned for next year. I am grateful to the leaders in renal access surgery for their input into the development of this programme.

The new mock operating theatre at the College is a good facility for team training to promote safety and help with the introduction of new procedures. Team training for the endovascular repair of ruptured aneurysms is one of the topics being considered. There will

also be a need for a revision course for revalidation and recertification. Work is being undertaken to address this possibility.

The Education Department at The Royal College of Surgeons has gone through radical changes in response to an external review. New course developments have therefore been particularly affected and we have lost some momentum. I am optimistic that once the reorganisation has been completed we will be able to move forwards with the ultrasound and renal access course.

I would like to thank the Society for providing me the opportunity to serve. I am particularly grateful to all the members of the Education Department and surgical resources who have provided excellent support. I look forward to handing the baton to my successor who will no doubt inject new energy, and bring new ideas to improve the existing courses and develop new ones.

I would like to acknowledge the contribution of Members of The Vascular Society and BSIR, and experts from other specialties and disciplines, some of whom are listed below.

J Angel
A Bakaran
D Baker
N Barker
R Bell
B Braithwaite
J Brennan
M Brooks
S Butterfield
D Chalmers
J Clasper
M Jane Cole
M Collins
R Corbett
T Cresswell
M Davies
R Edwards
A England
I Francis
A Garnham
C Gibbons
R Grimer
H Hafez
N Haldipour
S Hardy
A Jain
K Jones
D Kessel
R Lonsdale
S MacSweeney
V Mahadaven
A May
R McWilliams
K Murray
A Naylor
M Nicholson
S O'Neill
H Rashid
I Robertson
R Salter
A Shapolini
C Sinnatamby
P Taylor
W Tennant
J Thompson
S Travers
U Trivedi
R Vallabhaneni
I van Herzeele
K Varty
R Vohra
S Ward
A Watkinson
L Wijesinghe
J Wolfe

Society of Vascular Nurses

The Society takes an active part in the promotion of vascular nursing at a national level, with Committee members being actively involved in the AAA Screening Advisory Committee and working with NICE on the production of guidelines relevant to vascular disease.

The Society provides a national network to promote the needs of vascular patients and encourage nurses to gain the knowledge and skills to fulfil their complex needs. The Circulation Foundation provides the James Purdie prize, which is awarded to the best research presentation at the annual conference. For those who prefer not to speak at a conference, there is an opportunity to enter the poster competition, for which there is a prize donated by the SVN. The SVN also awards up to four bursaries of £500 each year which are used by Members to undertake various educational opportunities, or research.

Last year for the first time, the SVN announced a lifetime achievement award for services to vascular nursing. The recipient of the first award was Shelagh Murray, Vascular Nurse Consultant at St George's Hospital. Shelagh is a past President and founder Member of the SVN, and she has been a huge influence for many vascular nurses over the years.

The Society produces a quarterly newsletter, which is sent to all Members. Our website is currently undergoing an update to make it more interactive and to allow renewal of membership online. There will also be an ongoing forum for Members to post their questions and seek advice from other vascular nurses.

Sue Ward, President

SVN Committee Contacts

President and Membership
Sue Ward
The Royal Sussex County Hospital,
Tel: 01273 696955 bleep 8213
Email: susan.ward@bsuh.nhs.uk

Vice President / Professional Development and Research
Wendy Hayes
Worcester Royal Hospital
Tel: 01905 763333 ext 39301
Email: wendy.hayes@worcsacute.wmids.nhs.uk

Treasurer
Jayne Burns
Kent and Sussex Hospital
Tel: 01892 632581
Email: jayne.burns@nhs.net

Secretary
Nikki Fenwick
Sheffield Vascular Unit
Northern General Hospital
Tel: 01142 434343 bleep 773
Email: nikki.fenwick@sth.nhs.uk

Conference Organiser / Website Facilitator
Emma Bond
Clwyd Hospital
Tel: 01745 583910 bleep 6694

Website: www.svn.org.uk

The Society for Vascular Technology (SVT) of Great Britain and Ireland

2009 has been a very busy year for our Society.

The SVT formed a working relationship with The Society of Radiographers (SoR) to establish an SVT indemnity scheme for members.

We have been heavily committed to working with the Modernising Scientific Careers (MSC) project, attending a series of meetings on the new career model and the curricula for future training of vascular scientists, and we provided feedback to the proposed DoH consultation on MSC.

We are working with the DoH to produce a Good Practice Guide for Vascular Science.

We held our first joint meeting with the Venous Forum in April. This was well received by attendees, and we intend to hold a second meeting next year.

The SVT took part in a BBC News Bulletin regarding the practice of the company, Lifeline Screening.

Work has begun on the pilot scheme 'Training for Vascular Surgeons' in basic vascular ultrasound.

The Circulation Foundation Grant has been renewed and increased to £7500 for this year.

The SVT has attended meetings, and has been an active member in the work of The Federation of Healthcare Scientists, Skills for Health Project, National Stroke Review Committee, The NHS Aneurysm Screening Programme and The Institute of Physiological Sciences this year.

In its 18th year the Society continues to grow and expand our involvement in national projects. This work has raised our professional profile within the DoH, and the healthcare science community, which will benefit our members and profession in the years to come.

We look forward to the AGM in Liverpool this year.

Elaine Young, President

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Abigail Thrush, St Barts & London Hospitals

Website: www.svtgbi.org.uk
Email: svt@vascularsociety.org.uk

The Venous Forum of the Royal Society of Medicine

The Spring meeting of the Venous Forum encompassed the British Association of Sclerotherapists and The Society for Vascular Technology. Lectures, symposia, and hands-on practical demonstrations were delivered to nearly 300 attendees over the two days.

I would like to thank Phillip Coleridge-Smith, President of the BAS, and Ms Elaine Young, President of The Society for Vascular Technology, for helping to construct the program and contributing to an excellent and very successful meeting.

Dr Mark Meissner delivered the inaugural Phlebology RSM Press Lecture entitled 'Outcome and Evidence in Venous Disease'. The winner of the Venous Forum Prize (£250) was Anna Ikponmwosa, and the runner-up, Amanda Shepherd (£150).

Your President, Professor Alun Davies, has been extremely successful in attracting five major sponsors, Angiodynamics, Biolitec, Medi, Olympus, and VNUS, allowing the Venous Forum to proceed with publishing of the VEIN project and to award a travel fellowship of £1,000 to Chung Lim and a pump priming grant of £10,000 to Amanda Shepherd.

Publication of the VEIN project and the accompanying summary booklet was achieved in time for the Spring meeting. This is now available in pdf format on the Venous Forum website, which now has a more direct link: http://www.rsm.ac.uk/venousforum.

The Venous Forum continues in a healthy financial status, and wishes to continue the mutually beneficial relationship with The Vascular Society of Great Britain and Ireland.

I hope you enjoy the Venous Forum meeting at The Vascular Society in Liverpool, and I look forward to welcoming you to the RSM on the 29/30th April 2010. We anticipate another successful meeting with a combination of invited free papers, symposia, audience interaction sessions and hands-on demonstrations.

David Berridge, Honorary Secretary

The Royal Society of Medicine

Principal Officers

President
Professor Alun Davies
Tel: 0208 846 7320
Email: a.h.davies@imperial.ac.uk

Secretary
Mr David Berridge
Tel: 0113 3925131
Email: david.berridge@leedsth.nhs.uk

Treasurer
Mr Frank Smith
Tel: 0117 923 0000
Email: Frank.c.t.smith@bristol.ac.uk

Editor, Phlebology
Professor Alun Davies
Tel: 0208 846 7320
Email: a.h.davies@i.c.ac.uk

Academic Administrator
Ms Becky Harmer
Tel: 0207 290 2985
Email: venous@rsm.ac.uk

The Joint Vascular Research Group

A big thank you to those of you who have supported The Joint Vascular Research Group (JVRG) over the last year. This is a collaborative network of vascular surgeons who share an enthusiasm for clinical research. Membership is by centre and we encourage the participation of surgeons, radiologists, nurses and technologists. If you are involved in clinical research and wish to join the group, you and your centre would be most welcome. Please contact Lesley Wilson and she will be able to send further details.

Since our last meeting, Chris Gibbons has completed the JVRG Chronic Mesenteric Ischaemia paper and is in the process of submitting to the European Journal of Vascular and Endovascular Surgery. In addition, the JVRG books continue to sell well and are available from Nikki Bramhill of tfm publishing (nikki@tfmpublishing.com). Titles include "The Evidence for Vascular Surgery", 2nd edition, "Rare Vascular Disorders" and "Pathways of Care in Vascular Surgery". A further book on the topic of vascular and endovascular complications is in genesis and will be available for the 2010 AGM in Brighton.

Once more, I would like to thank our industry partners, Nuros and Sanofi Avensis, for their continued support and I look forward to our next meeting at the 2009 Vascular Society AGM in Liverpool. I would be happy to talk to any interested potential new members.

Mike Wyatt, Chairman

Contact details

Chairman

Mike Wyatt

Email: mike.wyatt@nuth.nhs.uk

Group co-ordinator

Lesley Wilson

Email: lesley.wilson@nuth.nhs.uk

Address for correspondence:

Northern Vascular Centre

Freeman Hospital

Newcastle upon Tyne, NE7 7DN

Tel: 0191 244 8457

Fax: 0191 223 1225

Website: www.jvrg.org.uk

Rouleaux Club

The Rouleaux Club continues to provide an important voice for vascular trainees in the UK and Ireland. 2009 has been another busy year. The Club's constitution underwent a timely overhaul and charity status was established in February, thanks largely to the work of ex-president Martin Claridge and Treasurer Simon Hobbs.

An annual survey of our 145 members demonstrated overwhelming support for the decision by The Vascular Society to apply for specialty status. We are working with the Society to try to address the issues of training in vascular and endovascular surgery, made all the more pressing by the introduction of EWTD. The announcement by the SAC that training in general surgery will last two years, followed by four years in vascular surgery is a step in the right direction.

We have recognised the importance of vascular intervention and the shared interests with our fellow trainees in vascular interventional radiology. Junior BSIR trainees with a dedicated interest in vascular intervention are now eligible to be Members of the Rouleaux Club.

The annual summer meeting at the Walton Hotel, Warwickshire, was well attended, with trainees both from vascular surgery and interventional vascular radiology. Speakers encompassed a broad range of vascular specialists. The meeting was generously supported by Medtronic and VNUS.

Committee

President
Rob Hinchliffe
Email: robhinchliffe@gmail.com

Vice President
Jeremy Crane
Email: j.crane@imperial.ac.uk

Secretary
Femi Oshin
foshinuk@yahoo.co.uk

Treasurer
Simon Hobbs
Email: simon@hobbsy.fsworld.co.uk

VS Council Representative
Rob Hinchliffe
Email: robhinchliffe@gmail.com

ASIT Representative
Robert Brightwell
Email: r.brightwell04@imperial.ac.uk

BSET Representative
Rob Hinchliffe
Email: robhinchliffe@gmail.com

Website: www.rouleauxclub.com

Exhibitors

18-20 November 2009
BT Convention Centre, Liverpool

Alphabetical list of confirmed exhibitors as at 12th October 2009; number = 49

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Convatec **Stand 57**
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Web: www.medtronic.co.uk

Medtronic CardioVascular offers a wide range of innovative products in the field of endovascular repair of the abdominal and thoracic aorta.

The new Endurant stent graft system incorporates 12 years of experience of treating AAA, bringing to market a highly flexible graft allowing physicians to treat more challenging anatomy.

Utilising the hydrophilic coated Xcelerant delivery system is an evolution in stent graft technology. This combined with the Talent AAA and Valiant TAA devices provides physicians with a wide portfolio of products to treat aortic disease.

Medtronic CardioVascular also offers a range of peripheral vascular stents for iliac, renal and SFA interventions.

Mount International Ultrasound Services Ltd **Stand 25**
Units 1-3, The Glenmore Centre
Marconi Drive
Waterwells Business Park
Gloucester
GL2 2AP
Tel: 01452 729380
Fax: 01452 729488
E-mail don.bland@mius.org.uk
Email: sales@mius.org.uk
Web: www.mius.org.uk

MIUS completes 12 years of successive growth with orders for 2009 reaching more than £4.5 million due mostly to the increased uptake on MIUS service contracts and our latest service (Probe fix).

We provide services to almost 300 NHS hospitals and private clinics, and supplied over 1,500 ultrasound systems through purchase or system rental.

Our services:

- Service contracts. Competitive service contracts. The large and growing number of hospitals using MIUS are making savings of hundreds of thousands of pounds every year. Hammersmith alone estimates a saving of over £580,000 over the past 4 years.
- Probe repairs. Cable tear, strain relief grommet, lens replacements, cracked cases, etc. Repairs from only £375.
- New and pre-owned ultrasound systems and transducers are available from stock.
- Rental - short to long term.

NHS Abdominal Aortic Aneurysm Screening Programme and Northgate Information Solutions (Public Services) - IT partners to NAAASP **Stand 45**
5th Floor
Victoria Warehouse
The Docks
Gloucester
GL1 2EL
Tel: 01452 318844
Web: http://aaa.screening.nhs.uk/
Web: http://www.northgate-ispublicservices.com/

The NHS Abdominal Aortic Aneurysm Screening Programme (NAAASP) is being introduced gradually across England with complete coverage by 2013.

The NHS AAA Screening Programme is being coordinated and led nationally by the Programme team based at the national office in Gloucester.

A national IT solution is being developed in conjunction with Northgate IS in order to support local programmes with the call and recall of men along with the monitoring of their surgical outcomes.

NHS Evidence **Stand 74A**

Professor Tom Quinn
Clinical Lead, NHS Evidence - vascular
Professor of Clinical Practice
Division of Health and Social Care
Faculty of Health and Medical Sciences
23DK04, Duke of Kent Building
University of Surrey
Guildford
GU2 7XH
Tel: +44 (0)1483 684553
Email: t.quinn@surrey.ac.uk

NHS Evidence - vascular is a specialist online resource giving quick and easy access to the latest evidence-based information about vascular diseases. Part of NHS Evidence, we provide high quality evidence to healthcare professionals working in the NHS to improve the quality of patient care. NHS Evidence, www.evidence.nhs.uk, launched in April 2009, is the major evidence-based information resource for the NHS, and part of the National Institute for Health and Clinical Excellence. NHS Evidence - vascular online at http://www.library.nhs.uk/vascular.

Nuros Ltd **Stand 62**

6 Abbey Lane Court
Evesham
WR11 4BY
Tel/Fax: 01386 429421
Email: c.services@nuros.co.uk
Web: www.nuros.co.uk

Nuros Ltd specialises in supplying products for vascular surgery and in providing a welcome alternative through a unique combination of product quality and advanced specifications, comprehensive range, sensible pricing and outstanding service and support.

The Nuros range includes knitted and woven polyester grafts, heparin-bonded ePTFE grafts, shunts, patches, vascular catheters, vascular accessories, hand-held Dopplers and the exciting E-vita endovascular range.

Visit the Nuros stand to see the newly introduced E-XL self-expanding aortic stent system combining strong radial force with outstanding flexibility, and the E-vita thoracic stent-graft with convenient 'squeeze to release' delivery system and controlled proximal stent release.

Olympus Medical **Stand 49**

KeyMed House
Stock Road
Southend-on-Sea
Essex
SS2 5QH
Tel: 01702 616333
Fax 01702 465677
E-mail info@olympus.co.uk
Web: www.olympus.co.uk

Olympus Medical will this year be promoting its new RFITT equipment for the treatment of venous insufficiency. Featuring the LabPrecision bipolar control unit and 6Fr ProCurve flexible catheter, it is the only device that provides true RF energy to the vein wall. The system is quick to set up, easy to use and during the procedure, impedance of the vein tissue is continuously monitored. With this and other exciting products, Olympus Medical is able to offer a complete endovenous solution.

Perimed UK Ltd **Stand 21**

Suite 14
Manchester House
113 Northgate Street
Bury St Edmunds
IP33 1HP
Web: www.perimed.co.uk

Are your patients suffering from pain in their legs or non-healing wounds? Suspecting PAD?

The Inter-Society Consensus for the Management of Peripheral Arterial Disease (TASC II) recommends that all stages of PAD be confirmed by non-invasive objective testing of:

- Peripheral pressure index (ABPI/TBPI)
- Transcutaneous oxygen ($tcpO_2$)
- Pulse volume recording (PVR)

PERIFLUX SYSTEM 5000 is the modular solution that uniquely combines three technologies for non-invasive assessment of PAD, amputation level and wound healing potential.

NEW: visit the Perimed stand for a video presentation on the use and interpretation of $tcpO_2$ measurements in PAD and wound healing.

Exclusive supplier of PARKS ultrasound Dopplers in the UK.

Philips Healthcare **Stand 31**

The Philips Centre,
Guildford Business Park,
Guildford, Surrey
GU2 8XH
Tel: 01483 792004
Fax: 01483 298831
Web: www/philips.com/healthcare

Philips' ultrasound systems include the latest addition, the CX50 portable system. Together with PureWave, premium imaging and Doppler performance are possible because of its digital broadband beamformer and XRES technology. The CX50's image quality makes it the ideal choice for critically ill patients, where space and equipment give limited access. It can be taken to patients by a specially-designed cart, hand-carried, or packed in its special travel case for easy transport to remote sites.

The iU22 ultrasound system with intelligent control and advanced ergonomic design meets the changing needs in healthcare. Latest enhancements include volumetric capabilities and new imaging solutions for technically difficult patients.

Pierson Surgical Ltd **Stand 64**
North Bradley House
Church Lane
North Bradley
Trowbridge, Wiltshire
BA14 OTA

Tel: +44 (0) 1225 766632
Mobile: +44 (0) 7785 295594
Fax: +44 (0) 7092 315510
Email: sales@piersonsurgical.com
Web: www.piersonsurgical.com

Pierson surgical product range:

- Surgical sutures. Full range of absorbable and non-absorbable sutures.
- Vivostat® system. An automated system for the on-site preparation and application of both patient-derived fibrin sealant for sealing tissue during operations and platelet-rich fibrin (PRF®), to accelerate wound healing. It produces an autologous sealant from 120ml of the patient's own blood in only 23 minutes. Vivostat® outperforms most sealants on the market today and has a delivery system that enables unparalleled control in the application during surgery.
- TRIVEX transilluminated phlebectomy system.
- The Rooke® heel float system. A triple-layer insulating lightweight boot designed to provide optimal insulation and protection to the lower limbs. Very effective at preventing pressure sores.
- LeGoo™ vessel occlusion gel. A water-soluble, low-viscosity gel which forms a gel plug at body temperature and conforms to any vascular geometry. LeGoo™ is dissolved by applying ice directly to the vessel.
- Tumescent infiltration pump.
- Surgical instruments. We have recently been awarded the contract to supply Landanger and Delacroix Chevalier instruments through the NHS Supply Chain Framework Agreement.
- Procedure packs for varicose veins.
- Portable ultrasound scanner.

Promed Ltd **Stand 54**
116a High Street
Somersham
Cambs
PE28 3EN
Tel: 01487 842842
Fax: 01487 843060
Email: sales@promedltd.com

Biolitec has launched ELVeS™ RADIAL, a new method of using laser energy, to close the vein with minimal or no tumescent anaesthesia. This will of course have a dramatic effect on the time taken to complete the procedure and we feel that a 20-minute procedure will become routine. This development is only available from Biolitec as it uses patented delivery technology and the exclusive 1470nm ELVeS™ PainLess wavelength.

Also on display will be AccuVein, the world's first hand-held vein viewer.

Please visit us on booth 54 to learn more about the ELVeS™ RADIAL, ELVeS™ PainLess and AccuVein.

Pulse Surgical Ltd **Stand 4**
32a Station Road
Chinnor
Oxon
OX39 4PZ
Tel: 01844 352 220
Email: office@pulsesurgical.co.uk
Web: www.pulsesurgical.co.uk

Pulse Surgical Ltd provides a diverse but complimentary mix of vascular products due to its complete independence. We can also offer unrivalled service and support to you and your staff through our highly skilled and experienced team.

Our range of products includes Scanlan fine surgical instruments, Omniflow biosynthetic grafts for distal and AV access applications, bioprosthetic carotid patches, vessel occluders and MediStim's state-of-the-art flow monitoring and validation system.

We also have a new, simple and effective surgical sealant for most types of bleeding control.

SDL Medical Ltd **Stand 29**
Station House
28 King Street
Newcastle, Staffs
ST5 1HX
Tel: 01782 717700
Email: info@sdlmedical.com
Web: www.sdlmedical.com

SDL Medical, the medical laser specialists, are the best value provider of lasers and procedure kits for EVLA. Our new UK made procedure kit will be launched at the conference. Its innovative design incorporates the lowest profile on the market for ease of insertion and withdrawal, enabling over 95% of patients to benefit from endovascular treatment. We are UK agents for Limmer Laser, a long established German laser manufacturer. See us on Stand 29 for the chance to win an iPod touch.

Sigmacon (UK) Ltd **Stand 5**
Heriots Wood
The Common
Stanmore, Middlesex
HA7 3HT
Tel: 020 8950 9501
Email: info@sigmacon.co.uk
Web: www.sigmacon.co.uk

Supplier of the LUMENIS™ HOLMIUM VERSAPULSE® PowerSuite ™ Lasers - VersaPulse® is the highest power holmium laser

Sigmacon (UK) Ltd has been serving the National Health Service and Private Health Care System for almost thirty years. We supply a wide range of products for the operating theatre and outpatient clinic.

Sigmacon's business philosophy is simple - premium products with premium service focused on its customer's needs, striving to provide solutions and develop constant improvements that foster long-lasting relationships.

- Training. We provide a wide range of training opportunities from individually tailored sessions to weekend courses which we hold around the country and abroad. We view continued training as an integral part of our business and a good way to build lasting customer relationships.
- Technical support. We have a team of highly trained engineers on site who are able to provide ongoing support and advice whenever you require it.
- Technology. We are the distributor for a wide range of surgical and aesthetic products and are always researching the very latest in technology. By constantly reassessing our product range we can ensure that our customers benefit from the very latest in technological advances and in turn provide the best treatment for their patients.

SJT Medical **Stand 32**
Spartan House
20 Carlisle Street
Sheffield
S4 7LJ
Tel/Fax: 0114 272 8273
Email: info@sjtmedical.com
Web: www.sjtmedical.com

SJT Medical is a specialist provider of surgical loupes, LED headlights, vascular Dopplers and operating microscopes. We also have a range of personal protective eye wear and theatre accessories. Our new LED headlight, the Feather Light, provides 39,000 lux of illumination and weighs only 4g, eliminating the need for bulky fibre optic lights. Our Ultra-Light flip ups and Through The Lens loupes, use very high quality optics thereby offering high resolution magnification and a wide field of vision at competitive prices.

AT SJT Medical we understand the importance of increased vision, clarity and comfort at an affordable price.

STD Pharmaceutical Products Ltd **Stand 68**
Plough Lane
Hereford
HR4 0EL
Tel: 01432 373555
Fax: 01432 371314
E-mail: enquiries@stdpharm.co.uk
Web: www.stdpharm.co.uk

STD Pharmaceutical is a family run business which started out in 1967. We have products to support sclerotherapy and iontophoresis.

We make Fibro-Vein which is the only licensed sclerosant in the UK; it is effective on all sizes of veins from truncal veins to telangiectasia. Other products include micro-needles, syringes, bandages etc. plus books and videos.

We also promote tap water iontophoresis, a simple but very effective treatment for patients suffering from hyperhidrosis of the hands and/or feet and axillae. The treatment is effective for over 85% of sufferers and being non-invasive is an ideal first-line treatment. There are machines for hospitals/clinics as well as smaller units for home use.

For more information please visit our web site.

Uniplex Ltd **Stand 1**
11 Furnace Hill
Sheffield
S3 7AF
Tel: 0870 7777316
Fax: 0114 272 7288
Email: sales@beepo.co.uk for all enquiries
Web: www.beepo.co.uk

Uniplex UK Ltd is a surgical instrument maker. In addition, the company distributes Xenon light sources and headlight-mounted video systems and the Gelita range of haemostats. GelitaSpon® is a gelatine-based sponge which is prepared in numerous ways to satisfy the most demanding of need, and will make significant cost savings without compromising quality. GelitaCel® is cotton-based oxidised resorbable cellulose which offers better handling characteristics, faster resorbtion and lower costs than most existing haemostats. It will be worth calling in to booths 1 & 2 for a demonstration which should make you eager to trial GelitaSpon® and GelitaCel®, as well as the chance of winning an i-Pod Shuffle in an easy to enter draw.

Vascutek Ltd **Stand 70**
MAJOR SPONSOR
Newmains Ave
Inchinnan
Renfrewshire
PA4 9RR
Scotland
Tel: +44 141 812 5555
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Web: www.vascutek.com

VASCUTEK, a TERUMO Company is an established world leader in the development of vascular grafts.

BluGlide™ is a new feature of the Anaconda™ AAA stent graft system. The low-friction sheath featuring hydrophilic coating technology significantly smoothes the passage of the delivery system through the arteries.

The integral, graduated kink resistant braided sheath provides controlled delivery with excellent trackability and manoeuvrability in varying patient anatomies.

Innovative, patented magnet wire technology aids rapid cannulation of the contralateral limb.

Vascutek maintains communication with doctors worldwide to deliver innovative products.

For more information please contact us.

VNUS Medical Technologies - a Covidien Company **Stand 34**

154 Fareham Road
Gosport
Hampshire
PO13 0AS
Mobile: 0788 520 1444
Tel: 07525 323 559
Fax: 0800 258 5996
USA: +1408 426 8180
E-mail: Darren.herbert@covidien.com
Web: www.vnus.co.uk

VNUS® Medical Technologies is the world leader in endovenous ablation treatment for venous reflux disease. The VNUS Closure® Procedure has now been performed in Europe for over 10 years, and since then over 500,000 patients worldwide have been treated with VNUS Closure® catheters. Our latest generation VNUS ClosureFAST™ catheter uses segmental ablation, and can treat a 45cm vein length in 3-5 minutes with temperature-controlled RF energy delivery. This catheter has been evaluated in a six-centre RCT versus endovenous laser. The results were in our favour with significantly lower postoperative pain, significantly less postoperative bruising, and fewer postoperative adverse events.

Wisepress **Stand 73A**
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W. L. Gore & Associates **Stand 60**
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Livingston
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Tel: +44 (0)1506 678024
Fax: +44 (0)1506 460492
Web: www.goremedical.com

The W. L. Gore & Associates Medical Products Division has provided creative therapeutic solutions to complex medical problems for more than three decades. During that time, more than 25 million innovative Gore Medical Devices have been implanted, saving and improving the quality of lives worldwide. The extensive Gore Medical family of products includes vascular grafts, endovascular and interventional devices, surgical meshes for hernia repair and sutures for use in vascular, cardiac and general surgery.

The company's technical agility makes it a leader in diverse consumer, industrial, electronic, medical and surgical markets. At Gore, innovation is fostered by a unique corporate culture that encourages problem solving and inventiveness - relying on teamwork and direct communication rather than chains of command. The culture is a key factor in the creation of Gore's innovative and reliable products. It's also a reason Gore has ranked repeatedly among the "Best Companies to Work For".

We take our reputation for product leadership seriously, continually delivering new products and better solutions to the marketplaces of the world.

York Medical Technologies Ltd **Stand 38**
Unit 12 Brookfield Business Park
York Road
Shiptonthorpe
YORK
YO43 3PU
Tel: +44 (0)1430 803113
Fax: +44 (0)1430 803234
Email: sales@yorkmedicaltechnologies.com
Web: www.yorkmedicaltechnologies.com

York Medical Technologies Ltd (YMT) is the UK distributor for top surgical instrument manufacturers such as Stille, Medicon, Heinz Waldrich, Dufner and Thompson.

YMT also supplies British pattern instruments from B&H, Dixons, Murrays and others.

A wide range of associated disposable items, including Stille arthroscopy cannulae, Kirschner wires and skin staplers are available along with the award-winning range of theatre fluid management products from Colby.

Zonare Medical Systems UK Ltd **Stand 63**
Suite A8
Westacott Business Centre
Westacott Way
Littlewick Green
Maidenhead
SL6 3RT
Tel: 08448 711 811
Fax: 08448 711 810
Email: info@zonare.co.uk
Web: www.zonare.co.uk

ZONARE Medical Systems, Inc. designs, develops, and manufactures premium compact performance ultrasound solutions, which combine revolutionary technology with an innovative physical design.

Zone Sonography technology™, ZONARE's unique patented approach to ultrasound imaging, is focused on bringing the highest performance to all clinical settings, leading to advanced diagnostic capabilities, more cost-effective operation and increased value to providers.

This technology enables ZONARE to deliver advanced software features such as Auto Optimisation™ and ZST™, which compensates for differing speed of sound in different body masses, IQ Scan™, which allows full retrospective imaging and compound tissue harmonics ensuring that ZONARE keeps the user at the leading edge of ultrasound technology.

For more information, please visit our web site at www.zonare.com.

Zoobiotic Ltd **Stand 53**
Dunraven Business Park
Coychurch Road
Bridgend
CF31 3BG
Tel: 0845 2301810
Fax: 01656 668047
Web: www.zoobiotic.com

ZooBiotic Ltd is based in Bridgend, South Wales and manufactures and markets larvae products for the treatment of sloughy and necrotic wounds.

All products are produced in accordance with current European 'Good Manufacturing Practice' (GMP) requirements in our state-of-the-art aseptic facility.

BioFOAM® Dressings, BioFOAM® Maintenance dressings and 'Free Range' LarvE® are Zoobiotic Ltd's core products.

BioFOAM® dressings and BioFOAM® Maintenance dressings consist of larvae that are enclosed in net pouches which contain pieces of hydrophilic polyurethane foam. These dressings can be left on a wound for up to 5 days. Each dressing is supplied in a plastic oyster as well as a paper/polythene bag which acts as a microbial barrier and is permeable to air.

The 'free range' LarvE® are applied directly to the wound and seek out areas of slough or necrotic tissue. They are concealed in a net dressing or similar. 'Free range' LarvE® can be left on a wound for up to 3 days. LarvE are supplied in a sterile container with a lid that is permeable to air and acts as a microbial barrier.

Other Exhibitors

ACST
Department of Cardiological Sciences
St George's Hospital Medical School
Cranmer Terrace
London, SW17 0RE
Tel: 0208 725 3746
Fax: 0208 725 3782
Email: ehayter@sghms.ac.uk

Circulation Foundation
The Royal College of Surgeons
35-43 Lincoln's Inn Fields
London, WC2A 3PE
Tel: 0207 304 4779
Fax: 0207 430 9235
E-mail: info@circulationfoundation.org.uk
Web: www.circulationfoundation.org.uk

IMPROVE Trial Coordinating Centre
Vascular Surgery Research Group
Room 4N12, 4th Floor North Wing
Imperial College London and Charing Cross Hospital
Fulham Palace Road
London, W6 8RP
Office: 020 8383 3651
Fax: 020 8846 7318
E-mail: j.powell@imperial.ac.uk/p.ulug@imperial.ac.uk

The Vascular Society
The Royal College of Surgeons
35-43 Lincoln's Inn Fields
London, WC2A 3PE
Tel: 0207 973 0306
Fax: 0207 430 9235
Email: office@vascularsociety.org.uk
Web: www.vascularsociety.org.uk

UKCEA Audit
Dora Kamugasha, Project Co-ordinator
UKCEA Audit, Clinical Effectiveness
and Evaluation Unit
Royal College of Physicians
11 St Andrews Place, Regent's Park
London, NW1 4LE
Tel: 0207 935 1174 ext 335/378
E-mail: Dora.Kamugasha@rcplondon.ac.uk

Vascular News
Biba Publishing
44 Burlington Road
Fulham
London, SW6 4NX
Tel: 0207 736 8788
Fax: 0207 736 8283
E-mail: info@bibamedical.com
Web: www.vascularnews.com

Acknowledgement

The Society would like to thank the following Major Sponsors for their support of this meeting and throughout the year:

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Future annual meetings

24-26 November 2010	Hilton Brighton Metropole, Brighton
23-25 November 2011	Edinburgh International Conference Centre

The Vascular Society
The Royal College of Surgeons
35-43 Lincoln's Inn Fields
London
WC2A 3PE

Tel: 0207 973 0306
Fax: 0207 430 9235
E-mail: office@vascularsociety.org.uk
Website: www.vascularsociety.org.uk