Yearbook 2007

The Vascular Society of Great Britain & Ireland

Society

Programme

Posters

Abstracts

AGM

Affiliations

Membership

Exhibitors

The Office

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Published by tfm Publishing Ltd on behalf of The Vascular Society.
tfm Publishing Limited, Castle Hill Barns, Harley, Shrewsbury, Shropshire, SY5 6LX, UK.

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Design and layout: Nikki Bramhill
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The Council

Front row, left to right:
Mr T Lees, Ms J Robey, Mr M J Gough, Professor G Hamilton, Mr J J Earnshaw, Mr D C Berridge, Professor C Shearman

Back row, left to right:
Mr L Williams, Professor J Michaels, Professor A R Naylor, Mr K Varty, Mr D C Mitchell, Mr M Lewis, Mr P Madhavan, Mr G Gilling-Smith, Mr R Vohra, Mr R Chalmers, Mr W Yusuf

Message from the President

Professor George Hamilton

Over this last year vascular surgeons and their Society have travelled far towards becoming a separate vascular specialty. The drivers for this have been well rehearsed, but perhaps the most remarkable change within 2006 and 2007 has been the rising groundswell of opinion supporting more rapid change to a separate specialty embracing endovascular surgery; this has been from the generality of vascular surgeons rather than those in 'ivory towers' and from vascular trainees in particular. As regards training, this year the Working Party of the Royal College of Radiologists, the three Royal Colleges of Surgery, the BSIR and The Vascular Society, has been successful in agreeing a modular curriculum constituted of a 'sampler' two years followed by run-through training resulting in the vascular specialist of the future. The curriculum was developed through the commitment and hard work of David Kessel and Tony Watkinson from the BSIR and Cliff Shearman from The Vascular Society. This new curriculum will have been reviewed by PMETB and the outcome available for consideration and discussion by members of the Society at the Annual General Meeting but I must remind you that the first product of this new training programme will not be until 2015 at the earliest.

Meanwhile the Rouleaux Club in sequential annual audits from 2003 has demonstrated an increasing and now overwhelming demand for endovascular training for current vascular trainees. In this year the Society has begun to address this pressing problem by identifying a significant number of centres which are ready to deliver vascular and endovascular training for both radiology and vascular trainees on exchanges. Foremost among others the Vascular Unit at the Freeman Hospital has already introduced collaborative training in endovascular surgery with at least two active consultant vascular specialists now in post who in turn are keen trainers. I extend the congratulations and thanks of The Vascular Society to the members of this unit for showing how endovascular training can be delivered at the present time and within existing facilities and programmes.

The Vascular Society's commitment to the Endovascular Forum as an important interdisciplinary meeting remains strong; indeed I feel that perhaps this should be a yearly rather than a biennial meeting to facilitate interaction between vascular interventionalist and

surgeon. As you will see from the scientific programme there has been a significant move towards endovascular techniques, with two scientific sessions focused on thoracic and abdominal endovascular treatments. In addition, there are two symposia with an endovascular theme: the first, "Complexities of EVAR", with a guest lecture from Dr Roy Greenberg on "Endovascular Aortic Treatment from Valve to Bifurcation", and the second, "Arteriovenous Malformations". There is much to interest the endovascular enthusiast at this year's AGM!

There has also been progress this year on the Abdominal Aortic Aneurysm Screening Programme with the new Programme Director, Dr Robert Sheriff, actively engaged in delivering this programme with the Society, but concrete proposals are still awaited. Intimately linked with the implementation of this programme will be a drive to centralisation of vascular services, a difficult and divisive initiative, which as a result of recently published volume to outcome data, is increasingly favoured by the Department of Health. Your Council has argued that implementing such a change in the short or medium term is possible in only a very few cities and instead has been successful in championing the concept of vascular networks as a more realistic move in this direction. Like John Wolfe before me I would urge you without delay to explore locally the development of networks of vascular specialists providing training and a full vascular service to populations of 800,000 to 1,000,000 patients.

The Circulation Foundation has now established itself in its new form and location, and is now moving to a higher level and intensity of fund-raising. I would like to thank and commend all members of Council who really do represent you very assiduously. They are an extraordinary group and their insights and support have proved invaluable over this last year. In particular I join the chorus of admiration expressed in previous presidents' messages for the skill, humour and control, tempered with charm, of our Chief Executive, Jeanette Robey, who has made our Society the most efficient, least gaffe prone and friendly of all. Also, I thank Audley Farrell who left in October, for all his good-natured hard work over these last six years and on behalf of the Society wish him well in his future endeavours. It has been a delight to work with such a dynamic Executive and Council.

Finally I look forward to welcoming you to the Annual General Meeting in Manchester which I know will prove to be educational, stimulating and enjoyable. There are many major issues for us to consider throughout this AGM and the contribution of all members of the Society, perhaps this year more than most, is important. Please engage!

Members of Council 2006-2007

President	Professor G Hamilton
Vice-President	Mr M J Gough
Hon Secretary	Mr J J Earnshaw
Hon Treasurer	Mr D C Berridge
Ordinary members	Mr R Chalmers Mr G Gilling-Smith Mr M Lewis Mr P Madhavan Professor J Michaels Mr D C Mitchell Professor A R Naylor Mr K Varty Mr R Vohra
Training & Education Committee Chairman:	Professor C Shearman
Audit & Research Committee Chairman:	Mr T Lees
Affiliate member	Mr L Williams
Vascular Tutor	Mr W Yusuf
Observers	Ms J Gibson, The Society of Vascular Nurses Mr P Brannigan, The Society for Vascular Technology Ms R Davies, British Lymphology Society

Committees 2006-2007

Audit and Research Committee

Mr T Lees (Chairman)
Mr J J Earnshaw
Mr P Madhavan
Mr R Vohra
Dr D Prytherch
Dr L O'Grady
Mr C Gibbons
Mr D C Berridge
Professor J Michaels
Mr K Varty
Mrs S Baker
Mr V Smyth
Dr D Wilson Nunn
Mr P Holt

Training and Education Committee

Professor C Shearman (Chairman)
Mr G Gilling-Smith
Mr R Chalmers
Mr L Williams
Dr J Patel
Professor G Hamilton
Mr M Lewis
Mr D C Mitchell
Professor A R Naylor
Mr W Yusuf
Mr M J Gough

Professional Standards Committee

Mr P M Lamont (Chairman)
Mr J Clarke
Mr P Taylor
Mr M J Gough
Mr T Lees

Circulation Foundation Committee

Professor Sir P Bell (Chairman)
Professor M Horrocks
Mr D C Berridge
Professor K Burnand
Mr J Thompson
Professor J Belch
Ms J Burns, Society of Vascular Nurses
Professor G Hamilton
Mr J Wolfe
Mr A May
Mr T Lees
Mr R Baird
Professor T Watkinson
Mrs C Flatman,
Society for Vascular Technology

Membership of Vascular Advisory Committee

All Members of Council

Vascular Advisors:

Mr M Aldoori, Yorkshire
Mr J Clarke, East Anglia
Mr C Gibbons, Wales
Mr A Guy, Mersey
Mr S Hardy, North Western
Mr T Loosemoore, South West Thames
Mr G Morris, Wessex
Mr M Salter, North East Thames
Mr J Thompson, South Western
Mr M Tyrrell, South East Thames
Mr B Braithwaite, East Midlands
Mr A Garnham, West Midlands
Mr G Griffiths, Scotland (East)
Miss L Hands, Oxford
Mr R Holdsworth, Scotland (West)
Mr D Mehigan, Eire
Miss S Renton, North West Thames
Mr S Singh, South Yorkshire and North Derbyshire
Mr M G Wyatt, Northern

Vascular Members of the SAC in General Surgery:

Mr B Gwynn
Professor C Shearman
Professor D J A Scott
Mr P M Lamont
Mr S Silverman
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		
2003	Scottish Exhibition and Conference Centre, Glasgow	Professor KG Burnand	Mr PM Lamont	
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		
2007	Manchester Central Convention Complex	Professor G Hamilton	Mr JJ Earnshaw	

Presidents

Professor G Hamilton
President 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**

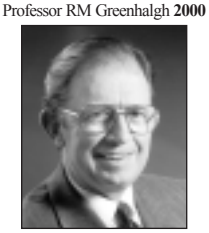

Mr R Baird **2001**


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.

DVD Prize Two prizes will be available for the best DVD and best Educational/Training DVD. Both winners will receive a prize of £500. A condition of acceptance of DVDs will be the Society's right of use in future educational course material, under the supervision of the Vascular Tutor.

- 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, and the DVD 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.

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

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

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)

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

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

John Kinmonth Memorial Lectureship

Founded in l983 utilising a gift made in his lifetime by Professor John Bernard Kinmonth FRCS (Council l977-82), 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 Dr J 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"*

Programme

28-30 November 2007
Manchester Central Convention Complex, Manchester

WEDNESDAY 28th NOVEMBER

0900-1200
Venous Forum
EXCHANGE AUDITORIUM

Chairmen: Mr Jonothan Earnshaw and Professor Marianne De Maeseneer

0900 **Opening remarks**

0905 **Lessons learned from 2000 years of treating varicose veins**
Mr Philip Coleridge-Smith, London

0930 **Barriers in the groin: too late to save standard varicose vein surgery?**
Professor Andre van Rij, Dunedin, New Zealand

0945 **New treatments for varicose veins: a truthful analysis**
Mr Nicholas Hickey, Worcester

1000 **Cost effective analysis of treatment for varicose veins**
Professor Jonathan Michaels, Sheffield

1015 **Coffee**

Chairmen: Mr Jonothan Earnshaw and Professor Andre van Rij

1045 **DVT prophylaxis: a NICE report**
Professor Colin Baigent, Oxford

1100 **Anticoagulation for DVT: the evidence**
Professor Gordon Lowe, Glasgow

1115 **DVT: a surgical condition**
Mr Bruce Braithwaite, Nottingham

1130 **Adjunctive treatments for acute DVT**
Professor Marianne De Maeseneer, Belgium

1145 **A new direction for Venous Forum: the VEnous INtervention Project**
Mr Tim Lees, Newcastle-upon-Tyne

0900-1200
Masterclass on 'scary moments'
CHARTER SUITE 1

The unexpected high plaque during carotid endarterectomy
Professor Ross Naylor, Leicester

Coagulopathy during ruptured aortic aneurysm repair
Dr Alastair Nimmo, Edinburgh

Acute bleeding from aorto-enteric fistulae
Mr Waquar Yusuf, Brighton

Operating on the HIV positive patient
Mr Raj Nair, Sheffield

Acute aortic dissection causing limb ischaemia
Dr John Reidy, London

Vascular trauma at the root of the neck
Professor John Robbs, South Africa

Injuries of the femoral artery in young children
Mr Malcolm Simms, Birmingham

Venous bleeding at the neck during open aneurysm repair
Mr David Mitchell, Bristol

0900-1200
Society of Academic and Research Surgery
EXCHANGE BREAKOUT ROOM 4/5

Chairmen: Professor Kevin Burnand and Mr Daryll Baker

0900-0910 **Circulating blood leucocyte telomere DNA content predicts vascular wall telomere DNA content in humans with and without vascular disease**
Wilson WRW, Herbert KE, Williams B, Thompson MM
University Hospitals Nottingham and Leicester, and St George's Hospital, London
page 32

0910-0920 **A comparison of aneurysmal and atheromatous aortic wall using a whole transcriptome analysis reveals differential expression of a number of novel genes**
Chinien G, Burnand KG, Waltham M, Smith A
Academic Department of Surgery, King's College, London
page 33

1110-1120 **Topical wound oxygen (TWO_2) versus conventional compression dressings (CCD) in the management of refractory non-healing venous ulcers (RVU); a parallel observational pivotal study in CEAP category six patients**
Tawfick W, Sultan S
Western Vascular Institute, Galway, Republic of Ireland

page 42

1120-1130 **Intraluminal thrombus has a selective influence on matrix metalloproteinases (MMPs) and their inhibitors (TIMPs) in the wall of abdominal aortic aneurysms (AAAs)**
Abdul Rahman MNA, Gulati S, Mekako M, McCollum PT, Chetter IC
Academic Vascular Surgery Unit, Hull Royal Infirmary, Hull

page 43

1130-1200
State of the art lecture: Angiogenesis and arteriogenesis
Lecturer: Professor Tom Schmitz-Rixen, Germany

0900-1645
Society of Vascular Nurses Annual Meeting
CHARTER SUITE 3

1200-1300
Lunch and viewing of trade exhibition
EXCHANGE HALL

THE VASCULAR SOCIETY MEETING

1300-1315
Society President's opening remarks and presentation of new Honorary Members
Professor Roy Greenberg, Ohio, USA; Professor Michael Jacobs, Maastricht, Netherlands; Professor John Robbs, Durban, South Africa; and Professor Tom Schmitz-Rixen, Frankfurt, Germany
THE EXCHANGE AUDITORIUM

1315-1415
SYMPOSIUM: The complexities of EVAR

Chairmen: Professor George Hamilton and Professor Matt Thompson

Funding issues in the UK
Mr Tim Lees, Newcastle-upon-Tyne

Juxta-renal aneurysms
Dr Richard McWilliams, Liverpool

EVAR for TAAA
Mr Michael Jenkins, London

Is there a place for open repair for TAAA?
Professor Michael Jacobs, The Netherlands

1415-1445
LECTURE: Endovascular aortic treatment from valve to bifurcation
Lecturer: Dr Roy Greenberg, Cleveland Clinic, USA

1445-1515
Tea/Trade Exhibition
EXCHANGE HALL

1515-1645
Scientific session 1: BJS Prize
THE EXCHANGE AUDITORIUM

Chairmen: Mr Jonothan Earnshaw and Mr Daryll Baker

1515-1530 **Cerebral emboli predict cognitive decline in the common dementias**
Perry E, Sekar V, Wren J, Purandare N, Burns A, McCollum CN
Academic Surgery Unit and Division of Psychiatry, University of Manchester, Manchester
page 44

1530-1545 **A single dose of reconstituted high density lipoprotein (rHDL) reduces expression of tissue-factor in human carotid atherosclerotic plaques**
Nasr HH, Loftus IM, Saiqa S, Jones A, Torsney E, Thompson MM, Cockerill GW
St. George's Hospital, University of London, London
page 46

1545-1600 **TGF3 and LTBP4 are associated with altered AAA growth: a candidate gene study**
Thompson AR, Cooper JA, Druce S, Ashton H, Hafez H, Humphries SE
Cardiovascular Genetics Department, University College London, London and the Vascular Department, Royal West Sussex NHS Trust, Chichester
page 47

1600-1615 **Rosiglitazone retards the development of aortic aneurysms in Apo E-deficient mice**
Jones AL, Nasr H, Tervosey E, Loftus I, Cockerill G, Thompson M
St George's Hospital, University of London, London
page 48

1615-1630 **The effects of cilostazol on the attenuation of inflammatory response in patients with peripheral arterial disease**
O'Donnell ME[1], Badger SA[1], Makar RR[1], McEneny J[2], Young IS[2], Lau LL[1], Lee B[1], Hannon RJ[1], Soong CV[1]
(1) Department of Vascular and Endovascular Surgery, Belfast City Hospital and (2) Department of Medicine, Queen's University, Belfast
page 49

1630-1645 **Does cryopreservation impair tensile strength of arterial tissues?**
Lomas RJ[1], Dodd D[2], Pegg DE[3], Rooney P[1], Clarkson A[1], Bennett K[1]
(1) NHS Blood and Transplant, Liverpool, (2) Sheffield Vascular Institute, Northern General Hospital, Sheffield and (3) Medical Cryobiology Unit, University of York, York
page 50

1645-1815
Scientific session 2

Chairmen: Mr Rajiv Vohra and Professor Shervanthi Homer-Vanniasinkam
R Paper eligible for Richard Wood Prize

1645-1655 **Patients with abdominal aortic aneurysms show changes in collagen content and type in their connective tissue**
Bevis PM, Tarlton JF, Windhaber RAJ, Mitchell DC
Southmead Hospital and University of Bristol, Bristol
page 51

1655-1705 **Vascular endothelial growth factor is over-expressed at the site of abdominal aortic aneurysm rupture and promotes the formation of angiotensin-II-induced aneurysms in apolipoprotein E-deficient mice**
Choke E, Cockerill GW, Dawson J, Howe F, Laing K, Jones A, Loftus IM, Thompson MM
St George's Hospital, University of London, London
page 52

1705-1715 **Quantitative bilateral photoplethysmography for peripheral arterial disease detection: a prospective assessment[R]**
Allen J, Overbeck K, Murray A, Stansby G
Regional Medical Physics Department and Northern Vascular Centre, Freeman Hospital, Newcastle-upon-Tyne
page 53

1715-1725 **Skeletal muscle myosin heavy chain expression in claudicants; effect of a supervised exercise programme**
Beckitt TA, Smith FCT, Baird RN, Lamont PM
Bristol Royal Infirmary, Bristol
page 54

1725-1735 **The impact of a diabetic foot protection team (DFPT) on outcomes for patients with diabetic vascular disease[R]**
Bowen G, Barton H, Haggan G, Brooke J, Sweet J, Baxter S, Shearman CP
Southampton University Hospitals NHS Trust, Southampton
page 56

1735-1745 **Inherent functional differences between saphenous vein smooth muscle cells cultured from non-diabetic and Type 2 diabetic patients[R]**
Madi HA, Turner NA, O'Regan DJ, Porter KE
Institute for Cardiovascular Research, University of Leeds, Leeds
page 57

1745-1755 **Development of a vascular bypass graft with polyhedral oligomeric silsequioxane nanocomposite (POSS PCU)[R]**
de Mel A, Sarkar S, Alobaid N, Darbyshire A, Ramesh B, Seifalian AM, Hamilton G
Academic Division of Surgical and Interventional Sciences, Biomaterials and Tissue Engineering Centre (BTEC), Royal Free and University College Medical School, University College London, London
page 58

1755-1805 **The proposed 18-week target - is there time for investigations?[R]**
Bourke P, Bicknell CD, Maxwell S, Mayet J, Wolfe JHN, Gibbs RGJ, Cheshire NJW, Jenkins MP
Regional Vascular Unit, St Mary's Hospital, London

page 59

1805-1815 **Litigation claims in vascular surgery in the United Kingdom**
Markides GA, Subar D, Al-Khaffaf H
Burnley General Hospital, Burnley

page 60

1815-1830
Presentation of Circulation Foundation Research Grants

1830-1915
Rendezvous Drink
Central Hall Foyer

THURSDAY 29th NOVEMBER

0700-0800
Breakfast Symposium: The Peripheral Arterial Disease (PAD) Symposium: Advances and limitations in patient care, sponsored by sanofi aventis and Bristol-Myers Squibb
CHARTER SUITE 3

Chairman: Professor Cliff Shearman

The REACH Registry - optimising risk reduction
Dr Jonathan Morrell, Hastings

PAD guidelines and their impact on patient care
Professor John Dormandy, London

PAD in the community
Professor Gerard Stansby, Newcastle-upon-Tyne

0900-1630
Society for Vascular Technology Annual Meeting
CHARTER SUITE 3

0830-1000
Scientific session 3
THE EXCHANGE AUDITORIUM

Chairmen: Mr Rod Chalmers and Mr John Brennan

0830-0840 **Medium to long-term results of thoracic endografting**
Qasabian R, Davis M, Bell RE, Waltham M, Carrell TWG, Sabharwal T, Sandhu C, Salter R, Reidy JF, Taylor PR
Departments of Vascular Surgery and Radiology, Guy's and St Thomas' NHS Trust, London
page 61

0840-0850 **Endovascular management of traumatic thoracic aortic injury (TAI)**
Bent C, Matson M, Renfrew I, Sobeh M, Walsh M, Brohi K, Kyriakides C
Barts and The London NHS Trust, London
page 62

0850-0900 **Wholly endovascular repair of thoraco-abdominal aneurysm: experience in a single UK centre**
Gilling-Smith GL, Scurr JR, Brennan JA, Fisher RK, Harris PL, Vallabhaneni SR, McWilliams RG
Regional Vascular Unit, Royal Liverpool University Hospital, Liverpool
page 63

0900-0910 **Hybrid procedures for thoraco-abdominal aneurysms and secondary expanding aortic dissections - intermediate results in three European vascular centres**
Eckstein HH
On behalf of the Regional Vascular Unit, St Mary's Hospital, London and the Departments of Vascular and Endovascular Surgery, University of Heidelberg, Heidelberg, Germany and Technical University of Munich, Munich, Germany
page 64

0910-0920 **Neurological complications of thoracic endovascular aneurysm repair (TEVAR): overstenting of the left subclavian artery (LSA) without revascularisation is unsafe**
Harris PL[1], Buth J[2], Hobo R[2], van Eps R[2], on behalf of the EUROSTAR participants
(1) University of Liverpool, Liverpool and (2) EUROSTAR data registry centre, Catharina Hospital, Eindhoven, The Netherlands
page 66

0920-0930 **Mid-term results of endovascular repair of isolated iliac artery aneurysms**
Bajwa A, Davis M, Qasabian R, Bell R, Carrell T, Taylor PR, Sandhu C, Salter R, Sabharwal T, Reidy JR
Regional Vascular and Endovascular Unit, Guy's and St Thomas' NHS Foundation Trust, St Thomas' Hospital, London
page 67

0930-0940 **The long-term impact of endovascular aneurysm repair on renal function**
Parkinson TJ, Davey P, Rose JD, Wyatt MG
Northern Vascular Centre, Freeman Hosiptal, Newcastle-upon-Tyne
page 68

0940-0950 **Pre-discharge duplex ultrasound scanning (DUSS) detects endoleaks not seen on completion angiography and identifies patients requiring early re-intervention**
Sandford RM, Bown MJ, Lopez-Espada C, Graham C, London NJ, Sayers RD
University of Leicester, Leicester

page 69

0950-1000 **Elective open and endovascular aortic aneurysm repair: a meta-analysis of 20,715 patients**
Lovegrove RE, Javid M, Magee TM, Galland RB
Royal Berkshire Hospital, Reading

page 70

1000-1100
SYMPOSIUM: Arteriovenous malformations

Chairmen: Professor George Hamilton and Professor Nick Cheshire

Clinical pathology and medical management
Professor John Harper, London

Investigation and interventional treatment
Dr Alex Barnacle, London

Surgical management
Mr Hiroshi Nishikawa, London

Management of vascular anomalies in adults
Dr Andy Platts, London

1100-1130
Coffee/Trade Exhibition
EXCHANGE HALL

1130-1230
Scientific session 4
THE EXCHANGE AUDITORIUM

Chairmen: Mr Tim Lees and Mr David Berridge
V Paper eligible for Venous Forum Prize

1130-1140 **Endovenous laser ablation (EVLA): is standard above-knee great saphenous vein (AK-GSV) ablation sufficient? A randomised controlled trial[V]**
Theivacumar SN, Dellagrammaticas D, Darwood RJ, Mavor AID, Gough MJ
Leeds Vascular Institute, The General Infirmary at Leeds, Leeds

page 71

1140-1150 **Endovenous laser therapy with concomitant or sequential phlebectomy: a randomised controlled trial[V]**
Mekako AI, Hatfield J, Abdul Rahman MNA, Gulati S, McCollum PT, Chetter IC
Academic Vascular Surgery Unit, Hull Royal Infirmary, Hull

page 72

1150-1200 **No advantage in performing flush saphenofemoral ligation: results of a randomised trial[V]**
Winterborn RJ, Foy C, Earnshaw JJ
Gloucestershire Royal Hospital, Gloucester
page 73

1200-1210 **Duplex ultrasound appearances at one year after endovenous laser ablation[V]**
Khan SM, Jass G, Tappenden J, Dodd PDF
Sheffield Vascular Institute, Northern General Hospital, Sheffield
page 74

1210-1220 **Endovenous laser ablation (EVLA) for short saphenous vein (SSV) incompetence[V]**
Nwaejike N, Srodon PD, Kyriakides C
Barts and the London NHS Trust, The London Independent Hospital, and the Queen Mary, School of Medicine and Dentistry, London
page 76

1220-1230 **Foam sclerotherapy improves venous function in limbs with chronic venous ulceration[V]**
Kulkarni SR, Bulbulia RA, Slim F, Emerson L, Minor J, Wakely C, Poskitt KR
Department of Vascular Surgery, Cheltenham General Hospital, Cheltenham
page 77

1230-1300
LECTURE: Mycotic and inflammatory arterial disease
Lecturer: Professor John Robbs, Durban, South Africa

1300-1400
Lunch and Trade Exhibition
EXCHANGE HALL

1400-1530
Scientific session 5: Clinical papers for the Sol Cohen (Founder's) Prize
THE EXCHANGE AUDITORIUM

Chairmen: Mr Michael Gough and Mr Peter Taylor

1400-1415 **Early result of a randomised controlled trial of treatment for intermittent claudication**
Lee HLD, Gulati S, Mehta T, Mekako AI, Rahman MNA, McCollum P, Chetter IC
Academic Vascular Surgery Unit, Hull Royal Infirmary, Hull
page 78

1415-1430 **The use of ACE inhibitors and angiotensin-II receptor antagonists is associated with a significant reduction in AAA growth rate, independent of arterial pressure**
Thompson AR, Cooper JA, Ashton H, Druce S, Humphries SE, Hafez H
Vascular Department, The Royal West Sussex NHS Trust and the Cardiovascular Genetics Department, University College London, London
page 79

1430-1445 **Buttock claudication and erectile dysfunction after internal iliac artery embolisation in patients prior to endovascular aortic aneurysm repair**
Rayt HS, Bown MJ, Lambert KV, Fishwick NG, McCarthy MJ, London NJM, Sayers RD
University of Leicester, Leicester

page 80

1445-1500 **An evaluation of radiation exposure in endovascular abdominal aortic aneurysm repairs**
Weerakkody RA, Walsh SR, Noorani A, Tang T, Sadat U, Gaunt ME
Cambridge Vascular Unit, Cambridge University Hospitals NHS Foundation Trust, Cambridge

page 81

1500-1515 **The effects of cilostazol in diabetic patients**
O'Donnell ME[1], Badger SA[1], Makar RR[1], Young IS[2], Lau LL[1], Lee B[1], Hannon RJ[1], Soong CV[1]
(1) Department of Vascular and Endovascular Surgery, Belfast City Hospital and (2) Department of Medicine, Queen's University, Belfast

page 82

1515-1530 **Can the UK guidelines for stroke be effective? Attitudes to the symptoms of a transient ischaemic attack (TIA) amongst the general public and doctors**
Jagadesham V, Gough MJ
Leeds Vascular Institute, The General Infirmary at Leeds, Leeds

page 83

1530-1600
Tea/Trade Exhibition
EXCHANGE HALL

1600-1700
SYMPOSIUM: Vascular training and service reconfiguration
THE EXCHANGE AUDITORIUM

Chairman: Professor George Hamilton

A curriculum for the future vascular specialist
Professor Cliff Shearman, Southampton

What about training for the current specialists?
Dr David Kessel, Leeds

Provision of vascular services - the future
Mr Jonothan Earnshaw, Gloucestershire

How to develop a network and make it work!
Mr Daryll Baker, London

1700-1800
Annual Business Meeting

1700-1800
Rouleaux Club AGM
CHARTER SUITE 3

1900 for 2000 Annual Dinner with entertainment
MANCHESTER UNITED FOOTBALL CLUB
Coaches depart outside Manchester Central Convention Complex from 1830-1900 hours for dinner, and from 1800-1815 hours for stadium tour

FRIDAY 30th NOVEMBER

0700-0800
Breakfast Symposium*: Complex problems in vascular access
CHARTER SUITE 3

Chairman: Mr David Mitchell, Bristol

Management of central venous stenosis and occlusion
Mr Sam Chakraverty, Dundee

Vascular steal
Mr Chris Gibbons, Swansea

Surgical options when veins are exhausted
Mr David Mitchell, Bristol

0815-0945
Scientific session 6
THE EXCHANGE AUDITORIUM

Chairmen: Professor Jonathan Michaels and Mr Waquar Yusuf

0815-0825 **Transcranial Doppler-directed intravenous glycoprotein IIb/IIIa receptor antagonist therapy to control transient cerebral micro-emboli**
van Dellen D, Tiivas CAS, Marshall C, Higman DJ, Imray CHE
Coventry and Warwickshire County Vascular Unit, University Hospital Coventry and Warwickshire, Walsgrave Hospital, Coventry

page 84

0825-0835 **Can SF8 replace SF36 as quality of life analysis in patients with lower limb ischaemia?**
Gulati S, Coughlin PA, Rahman MNA, Mekako A, Hatfield J, Akomolafe B, Renwick P, McCollum PT, Chetter IC
Academic Vascular Surgery Unit, Hull Royal Infirmary, Hull

page 86

0835-0845 **Subintimal angioplasty (SIA) vs bypass surgery (BS) for critical lower limb ischaemia in patients with TASC C and D lesions: a five-year prospective observational comparative study**
Hynes N, Sultan S
Western Vascular Institute, Galway, Republic of Ireland

page 87

*The Society is grateful to Edwards Lifesciences for their support of this Symposium

0845-0855 **Fast-track open aortic surgery: reduced postoperative stay with a goal-directed pathway**
Murphy MA, Richards T, Atkinson C, Perkins J, Hands LJ
John Radcliffe Hospital, Oxford
page 88

0855-0905 **Does aneurysm rupture risk decrease in patients who are anatomically suitable for endovascular repair?**
EVAR 2 Trial Participants
Imperial College, London
page 89

0905-0915 **Recurrence and neovascularisation two years after varicose vein treatment: a comparison of surgery and endovenous laser ablation (EVLA)**
Theivacumar NS, Darwood RJ, Mavor AID, Gough MJ
Leeds Vascular Institute, The General Infirmary at Leeds, Leeds
page 90

0915-0925 **A randomised placebo-controlled double-blind trial to evaluate ezetimibe combination therapy on abdominal aortic aneurysm wall proteolysis and inflammation**
Dawson J, Choke E, Cockerill G, Loftus I, Derodra J, McFarland R, Loosemore T, Thompson M
St George's Vascular Institute, St George's Hospital, London
page 91

0925-0935 **Surgical versus endovascular reconstruction for chronic mesenteric ischaemia**
Davies RSM, Wall ML, Silverman SH, Vohra RK, Bradbury AW, Adam DJ
University Department of Vascular Surgery, Heart of England NHS Foundation Trust, Birmingham and the Department of Vascular Surgery, University Hospital Birmingham NHS Foundation Trust, Birmingham
page 92

0935-0945 **Driving advice given by vascular surgeons: a survey of Vascular Society Members**
Gohil R, Russell DA, Johnson BF
Academic Vascular Surgery Unit, Hull Royal Infirmary, Hull
page 93

0945-1045
Scientific session 7
THE EXCHANGE AUDITORIUM

Chairmen: Mr Geoff Gilling-Smith and Mr Michael Wyatt

0945-0955 **The value of graft surveillance in infra-inguinal bypasses performed with small diameter veins**
Mofidi R, Sanjay P, Flett M, Nagy J, Griffiths GD, Stonebridge PA
East of Scotland Vascular Network, Ninewells Hospital, Dundee
page 94

0955-1005 **Abdominal aortic aneurysm screening - why wait?**
Al-Allak A, Thomas JE, Davies S, Hedges AR
Bro-Morgannwg NHS Trust, Bridgend
page 95

1005-1015 **The role of pre-operative angiography in the morphological assessment of ruptured abdominal aortic aneurysm**
Badger SA, O'Donnell ME, Arya N, Loan W, Hannon RJ, Lau LL, Lee B, Soong CV
Vascular and Endovascular Surgery Department, Belfast City Hospital, Belfast
page 96

1015-1025 **Endovascular vs. open repair of acute abdominal aortic aneurysms - a meta-analysis**
Sadat U, Walsh SR, Boyle J, Hayes PD
Addenbrooke's Hospital, Cambridge
page 97

1025-1035 **EVAR for emergency AAA: not an easier option!**
Richards T, Goode S, Kuhan G, Chandrashaker S, Tennant W, MacSweeney S, Braithwaite B
Queen's Medical Centre, Nottingham
page 98

1035-1100
Coffee/Trade Exhibition
EXCHANGE HALL

1100-1200
EVIDENCE UPDATES
THE EXCHANGE AUDITORIUM

Chairmen: Mr Michael Lewis and Mr Prakash Madhavan

Carotid
Professor Ross Naylor, Leicester

Aortic
Mr Michael Wyatt, Newcastle-upon-Tyne

Update on lower limb interventions
Professor Jim Reekers, The Netherlands

BASIL Trial update
Professor Andrew Bradbury, Birmingham

1200-1240
SYMPOSIUM: VASCULAR ACCESS

Chairmen: Professor George Hamilton, President, The Vascular Society
Dr David Kessel, Vice-President, BSIR
Professor Peter Mathieson, President, The Renal Association

The patient pathway
Dr Richard Fluck, Derby

Planning access and non-maturation
Mr David Mitchell, Bristol
Ms Nicola Milburn, London

The management of complications of vascular access
Mr Sam Chakraverty, Dundee

1240-1245
Inauguration of the new President - Mr Michael Gough

1245-1330
THE KINMONTH LECTURE

Chairman: Mr John Black, Member, RCS(Eng) Council

Research in vascular diseases: achievements and unsolved problems
Professor Kevin Burnand, London

1330-1400
Lunch and Trade Exhibition
EXCHANGE HALL

1400-1440
THE HUNTERIAN LECTURE

Chairman: Mr John Black, Member, RCS(Eng) Council

Control of vascular smooth muscle cell phenotype in myointimal hyperplasia and prevention of intermediate graft failure
Mr Michael Murphy, Manchester

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.

Breakfast Session

The Peripheral Arterial Disease (PAD) Symposium 2007
Advances and Limitations in Patient Care

A breakfast symposium chaired by Professor Cliff Shearman

Thursday 29 November, 2007
7.00am - 8.00am, Charter Suite 3
Manchester Central Convention Complex, Manchester

We would like to invite you to a breakfast symposium on the Thursday of the Vascular Society Annual Scientific Meeting. The symposium will consider topical issues affecting the medical management of vascular patients, including the following: an update of the REACH Registry and its implication in clinical practice; patient management in line with PAD guidelines; and how PAD is being treated in the community, taking into account the public health impact. Speakers, who are recognised as experts in their field, will provide a stimulating session which promises to inform and influence our vascular practice.

The REACH Registry - optimising risk reduction **Dr Jonathan Morrell** GP, Hastings

- REACH update - what is the key data for PAD?
- What effect does it have on everyday practice?
- What are the implications for the UK?

PAD guidelines and their impact on patient care **Professor John Dormandy** Professor of Vascular Surgery, London

- What guidelines should we know about?
- How should we utilise them in everyday practice?
- How do PAD guidelines impact on patient management?

PAD in the community **Professor Gerard Stansby** Vascular Surgeon, Newcastle-upon-Tyne

- What are the public health implications of PAD?
- How can community-based PAD programmes aid awareness?
- How can treatment and intervention improve patients' QOL?

Speakers will address their topics in succinct 10 or 15-minute presentations, followed by audience discussion. This promises to provide lively debate, to inform vascular surgeons and nurses on pertinent issues for everyday practice in vascular disease.

Breakfast will be available at the Charter Suite 3, Manchester Central Convention Complex, from 6.45am.

I look forward to seeing you at what promises to be a stimulating and informative event.

Cliff Shearman
Consultant in Vascular Surgery
Southampton University Hospitals

The RCP has allocated this symposium 1 CPD credit

This symposium is sponsored by sanofi-aventis and Bristol-Myers Squibb PLA 07/1389

Posters

28-30 November 2007
Manchester Central Convention Complex, Manchester

Posters will be displayed in the foyer of the conference centre during the meeting.

Poster number

1 Atturu G, Brouilette S, Bown M, Sayers R
University of Leicester, Leicester
Leucocyte telomere length is reduced in patients with abdominal aortic aneurysm

2 Delft D, Lotfi N, Sarkar S, Seifalian A, Hamilton G
Royal Free, University College London, London
Compliant nanocomposite external sheath for vein grafts prevents vein overdistension and anastomotic compliance mismatch

3 Hart CA, Khan K, Tsui JCS, Aslam R, Abraham D, Baker DM
Royal Free & University College Medical School, London
Morphometric analysis of ischaemia-induced changes in human skeletal muscle

4 Abdul Rahman MNA, Gulati S, Mekako M, McCollum PT, Chetter IC
Academic Vascular Surgery Unit, Hull Royal Infirmary, Hull
Does peak wall stress correlate better with abdominal aortic aneurysm expansion than aortic diameter?

7 Tsui JCS, Winter D, D'Souza R, Platts A, Baker DM, Hamilton G
Royal Free & University College Medical School, London
Identification of pelvic vein incompetence by magnetic resonance venography

8 Weale AR, Bevis P, Neary WD, Boyes S, Lear PA, Mitchell DC
Southmead Hospital, Bristol
Vascular access in octogenarians - is it worth pursuing radiocephalic fistulas?

9 Goode S, Richards T, MacSweeney S, Braithwaite BD, Kahn S
Nottingham University Hospitals, Nottingham
Patients with wide aortic necks are more likely to die after emergency endovascular repair

11 Richards JMJ, Chalmers RTA
The Vascular Surgical Service, Royal Infirmary of Edinburgh, Edinburgh
Combined antiplatelet therapy does not increase bleeding complications associated with carotid endarterectomy

12 Thavarajan D, Gedela V, Powell S, Brennan J, McWilliams R, Gould D
Royal Liverpool University Hospital, Liverpool
Mechanical thrombectomy in lower limb ischaemia: a suitable alternative to chemical thrombolysis

13 Davis M, Bajwa A, Qasabian R, Sandhu C, Salter R, Sabharwal T, Reidy JF, Waltham M, Carrell TWG, Bell RE, Taylor PR
Guy's and St. Thomas' NHS Foundation Trust, London
Is secondary intervention after endoluminal repair of abdominal aortic aneurysms as high as predicted by the EVAR trials?

14 Hussan A, Sultan S
Western Vascular Institute, Galway, Republic of Ireland
Scalenus anterior resection assessment by disability of arm shoulder and hand (DASH) scoring in the management of thoracic outlet syndrome (TOS). A prospective study

15 Holmes WJM, Tinning C, Yeung B, Leiberman DP, Teenan RP, Orr DJ
Glasgow Royal Infirmary, Glasgow
Cohort isolation of patients with MRSA plus screening on admission reduces MRSA infection in a vascular unit

16 Bicknell CD, Cheshire NJW, Hamady M, Bourke P, Riga CV, Wolfe JHN, Gibbs RGJ, Jenkins MP
Regional Vascular Unit, St Mary's Hospital, and Division of Surgery, Oncology, Reproductive Biology and Anaesthetics, Imperial College, London
Juxtarenal and thoraco-abdominal aneurysms - successful treatment with fenestrated stent grafts

18 Shaikh S, Macaulay E, Macleod MJ, Brittenden J
Aberdeen Royal Infirmary & University of Aberdeen, Aberdeen
Can the ABCD2 score adequately triage patients presenting with transient ischaemic attack warranting carotid endarterectomy

19 Nicol DJ, DeNunzio M, Pollock G, Bungay P, Hilliam R, Lingam K, Donnelly R
University of Nottingham & Derby Hospitals NHS Foundation Trust
Effects of disease severity and clinical characteristics on collateral vessel formation in PAD

20 Tiwari A, Chan H, Varcoe R, Allen R, Swinnen J
Department of Vascular Surgery, Westmead Hospital, Westmead, Australia
Endovascular stenting of problematic autogenous arteriovenous fistulas

Abstracts

28-30 November 2007
Manchester Central Convention Complex, Manchester

Circulating blood leucocyte telomere DNA content predicts vascular wall telomere DNA content in humans with and without vascular disease

Wilson WRW, Herbert KE, Williams B, Thompson MM
University Hospitals Nottingham and Leicester, and St George's Hospital, London

Objective

Telomere length is an index of cell age and replicative capacity. Reduced telomere length in circulating leucocytes in humans is associated with premature vascular disease and by implication, accelerated vascular ageing. A link between telomere length in circulating leucocytes and the vessel wall has never been established. We thus investigated the relationship between vascular wall and circulating leukocyte telomere length in humans with and without overt vascular disease.

Method

Two subject groups were compared: 41 patients with asymptomatic AAA, undergoing elective open repair, and 22 age-matched people with morphologically normal aortas harvested at the time of cadaveric organ donation. Telomere content was compared by quantitative PCR and expressed as the telomere:genomic DNA ratio from aortic wall biopsies and blood leucocytes.

Results

The telomere:genomic DNA content was significantly reduced in wall biopsies of AAA versus normal aorta (AAA; 1.77 +/- 0.17, versus normal aorta; 2.40 +/- 0.15, p=0.001) and in the circulating leucocytes of AAA versus normal aorta (AAA; 0.82 +/- 0.06, versus normal aorta; 1.27 +/- 0.21, p=0.0003) and also after age- and gender-adjustment. There was a strong correlation between leucocyte and vascular wall telomere content in both diseased and healthy cohorts (AAA; r=0.443, p=0.050, normal aorta; r=0.676, p=0.016). Taken together the correlation across all vessel and blood leucocyte pairs was highly significant (r=0.619, p=0.0002).

Conclusion

The findings demonstrate that leucocyte DNA content is predictive of vascular telomere content and is an accurate surrogate for human vascular age. The significant correlation between vessel and leucocyte levels supports a systemic process.

A comparison of aneurysmal and atheromatous aortic wall using a whole transcriptome analysis reveals differential expression of a number of novel genes

Chinien G, Burnand KG, Waltham M, Smith A

Academic Department of Surgery, King's College, London

Objective

The objective of this study was to produce a gene expression profile of human aneurysmal and atheromatous aortic wall.

Method

cDNA was prepared from full thickness aortic wall obtained during open abdominal aortic aneurysm repair and bypass for atheromatous aortic disease (n=5, each). The cDNA was hybridized to a HU133 plus 2.0 micro-array that interrogates the whole human genome. Data were analysed using GeneSpring software. A significance threshold was set at $p<0.03$ and only genes that were consistently expressed with a two-fold difference were considered.

Results

Two hundred and sixty-eight genes were differentially expressed (fold change with p value). These included genes in the following categories: i) proteolysis - folate hydrolase (2.8, p=0.001), ADAM-9 (2.1, p=0.004), ubiquitin-specific peptidase-31 (2.4, p=0.009); ii) inflammation - interferon-γ receptor-1* (2.1, p=0.0001), immunoglobulin γ-1 (2.6, p=0.002), prostaglandin E synthase* (2.2, p=0.004); iii) angiogenesis - alanyl aminopeptidase (3.0, p=0.017), angiopoietin-2 (2.2 , p=0.018), plexin-1 (2.1, p=0.02); iv) apoptosis - LIMS-1 (2.2, p<0.0001), Apo E (3.0, p=0.016), effector cell peptidase receptor 1 (3.7, p=0.01). (* Increased expression in AAA wall.)

Conclusion

This micro-array study reveals novel genes that are differentially expressed in abdominal aortic aneurysm wall. It also shows that MMPs are equally expressed in aneurysmal and atheromatous aortic wall.

NT-pro B-natriuretic peptide is an independent predictor of postoperative troponin-I release in patients undergoing major vascular surgery

Rajagopalan S, Croal BL, Bachoo P, Hillis GH, Cuthbertson BH, Brittenden J
Aberdeen Royal Infirmary, Aberdeen

Objective

Postoperative myocardial ischaemia remains the leading cause of morbidity and mortality in patients undergoing major vascular surgery. Pre-operative levels of B-type natriuretic peptide (BNP) released from myocardium has been shown to be an independent predictor of cardiac events after major non-cardiac surgery. We aimed to determine if the derivative N-Terminal-proBNP (longer t1/2) can predict postoperative myocardial injury in vascular patients.

Method

One hundred and twenty-two patients undergoing elective surgery for subcritical limb ischaemia or abdominal aortic aneurysm repair were recruited. Patients in atrial fibrillation or chronic renal failure were excluded. Plasma NT-proBNP was measured pre-operatively and daily samples for troponin-I assayed until the fifth postoperative day.

Results

Twenty-four (20%) patients documented a postoperative myocardial injury (troponin >0.1ng/ml). The median NT-proBNP of 'troponin positive' patients was significantly higher than those who were 'troponin negative' (380pg/ml [inter-quartile range 223-967] vs. 209pg/ml [109-363], p=0.003). A cut-off value of 284pg/ml was derived with a sensitivity=71% and specificity=64% (AUC 70%). The pre-operative NT-proBNP levels above this threshold remained an independent prognostic indicator of myocardial injury (odds ratio: 6.73, 95% Confidence Interval 1.58-28.7, p=0.01) after adjustment for cardiac risk factors, hsCRP and interleukin-6 levels.

Conclusion

Elevated pre-operative plasma NT-proBNP levels independently predict postoperative rise in troponin-I which is associated with adverse outcome in the short and long term regardless of the presence of symptoms or an acute coronary syndrome.

Cigarette smoking is associated with impaired endothelial function in human saphenous vein

Sharif MA[1], Bayraktutan U[1], Young IS[2], Soong CV[2]

(1) Belfast City Hospital and (2) Queen's University of Belfast, Belfast

Objective

The aim of this *ex vivo* study was to assess the effect of smoking, hypertension and diabetes mellitus on endothelial function in human saphenous vein, a commonly used conduit for coronary and peripheral arterial bypass surgery.

Method

A segment of long saphenous vein harvested during infra-inguinal bypass surgery was divided into 3-5mm rings. Rings were mounted in an organ bath for isometric tension studies. Vein rings were pre-contracted to submaximal contraction with phenylephrine, followed by endothelium-dependent relaxation with acetylcholine. Comparison of contraction-response curves was evaluated by two-way analysis of variance for repeated measures (two-way ANOVA).

Results

Long saphenous vein segments were collected from 26 patients, including five females, with a mean age of 66.4 years (48-92). Current smokers had impaired endothelium-dependent relaxation compared to ex and non-smokers (10.2%, n=13 vs. 32.9%, n=13, $p<0.01$). However, ex-smokers and non-smokers did not have a significant difference in relaxant responses to acetylcholine (29.1%, n=8 vs. 24.6%, n=5, p=ns). Similarly, diabetic and non-diabetic patients did not show a significant difference in endothelium-dependent relaxation (23.1%, n=10 vs. 15.6%, n=16, p=ns). The relaxant responses in hypertensive and normotensive patients were not different (20.4%, n=12 vs. 22.5%, n=14, p=ns).

Conclusion

The current smokers show a significant reduction in the endothelial function of saphenous vein as compared to ex and non-smokers. However, there was no difference in endothelial relaxation in ex versus non-smokers. Thus, this study highlights the significance of impaired endothelial function as one of the mechanisms by which smoking can compromise the patency of vein graft.

The biomechanical and physical properties of connective tissue in patients with abdominal aortic aneurysm

Bevis PM, Tarlton JF, Windhaber RAJ, Mitchell DC

Southmead Hospital and University of Bristol, Bristol

Objective

To investigate a suggested link between abdominal aortic aneurysm (AAA) formation and systemic connective tissue changes by studying the physical and biomechanical properties of the skin and rectus sheath of patients with AAA and controls without.

Method

Site-matched samples of skin and rectus sheath were obtained from patients undergoing elective open AAA repair and from controls undergoing elective laparotomies for non-inflammatory colorectal disease. Samples were prepared using a cutting jig before being tested on an Instron 6022 mechanical test frame. Thickness of skin and rectus sheath was measured using video microscopy.

Results

There was no difference in the maximum load to break, maximum stress, maximum displacement to break or Young's modulus between the skin or rectus sheath of aneurysm patients and controls ($p>0.05$ t-test). There was no difference in the thickness of skin from aneurysm patients (2.87mm) or controls (2.58mm) ($p>0.05$ t-test). The rectus sheath of aneurysm patients (3.00mm) was significantly thicker than that of controls (1.83mm) ($p=0.0399$ t-test).

Conclusion

To our knowledge this technique has not been applied before to the connective tissue of either group of patients. For a small sample group there is no difference in biomechanical characteristics of the connective tissue between patients with AAA and other patients undergoing laparotomy, despite the rectus sheath being thicker in aneurysm patients. This leads us to believe any connective tissue difference is likely to be represented in altered collagen type or markers of collagen metabolism.

Elevated plasma MMP-9 is associated with increased 30-day mortality in ruptured abdominal aortic aneurysms

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Objective

The role of matrix metalloproteinases (MMPs) in aneurysm development and rupture is well described. However, a clear role for plasma MMPs in disease prediction has proved elusive. The plasma concentrations of various MMPs have been reported to predict the natural history of small AAAs. The elevation of specific MMPs within the vessel wall of ruptured AAA is observed but a change in plasma MMP levels at the time of rupture has not been described. The aim of this study was to determine if circulating levels of MMPs and their endogenous tissue inhibitors (TIMPs) reflect the clinical state of an AAA, namely stable versus ruptured.

Method

Concentrations of MMP-1, MMP-2, MMP-3, MMP-9, and their endogenous tissue inhibitor TIMP-1 were quantified using ELISA in plasma samples taken pre-operatively from non-ruptured (n=52) and ruptured AAA (n=16). Statistical analysis used the Mann-Whitney U test ($p<0.05$).

Results

MMP-1 and MMP-9 were elevated in the plasma of ruptured AAA versus non-ruptured AAA (MMP-1; rupture, 20.2ng/ml [16.1-28.7] vs. non-rupture, 8.9ng/ml [5.6-15.7], $p<0.0001$: MMP-9; rupture, 59.1ng/ml [20.8-123.7] vs. non-rupture, 17.5ng/ml [10.3-34.2], $p=0.006$). Death at, or within 30 days of surgery for ruptured AAA was associated with a four-fold elevation in pre-operative MMP-9 compared with those surviving for greater than 30 days (mortality ≤30 days [n=5], 131.9ng/ml [75.5-191.8] vs. mortality >30 days [n=11], 32.2ng/ml [5.9-129.5], $p=0.017$).

Conclusion

In conclusion, these findings further support the role of MMPs in AAA pathogenesis. Elevated plasma MMP-9 is associated with aneurysm rupture and 30-day mortality. Inhibition or suppression of MMP-9 may offer the very real possibility of improving survival from rupture.

Membrane Type-1 matrix metalloproteinase: a key player in carotid plaque instability and symptomatic carotid atherosclerotic disease

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Objective

To evaluate the role of Membrane Type-1 matrix metalloproteinase (MT1-MMP), a membrane-bound enzyme capable of degrading the extracellular matrix of the fibrous cap, as a mediator of carotid plaque instability.

Method

Tissue samples from patients undergoing carotid endarterectomy (20 symptomatic, 8 asymptomatic, Gray-Weale classification range 1-4) were immunostained for MT1-MMP. Percentage immunopositivity for MT1-MMP in five regions of interest within each plaque was assessed using image analysis software (AnalySIS). MT1-MMP mRNA expression was evaluated by reverse transcription quantitative polymerase chain reaction (RT-QPCR). Age, sex, degree of stenosis and statin usage were used as adjustment variables.

Results

MT1-MMP staining was scant on intact fibrous caps but was strong at the site of fibrous cap rupture. The crude staining was 23.4% for ruptured caps versus 2.24% for intact fibrous caps, p=0.0028, and remained similar after adjustment; plaques with higher Gray-Weale scores had an increased presence of ruptured plaques, Chi square p=0.0001. Higher levels of MT1-MMP mRNA were found in symptomatic versus asymptomatic plaques, unit difference 3.15 (95% CI 0.41 to 5.88), p=0.027, and adjusted results were very similar; there was no correlation with Gray-Weale score.

Conclusion

MT1-MMP is expressed at the site of fibrous cap rupture and at increased levels within symptomatic carotid plaques. This suggests that MT1-MMP has a critical role in carotid plaque instability and the genesis of carotid symptoms.

Characterisation of fractalkine/CX3CL1 and fractalkine receptor (CX3CR1) expression in abdominal aortic aneurysm disease

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Objective

Chronic inflammation and vascular smooth muscle cell (vSMC) apoptosis is an emerging concept in the development of AAA disease. Recent studies have demonstrated NK-cells from AAA patients display increased cytotoxicity to vSMC. The chemokine, fractalkine (CX3CL1), is expressed on vSMC and promotes adhesion and extravasation of leucocytes through interactions with the receptor CX3CR1. This study aims to analyse expression of CX3CL1 and CX3CR1 in AAA disease.

Method

Immunohistochemistry (IHC) was used to define expression of CX3CR1 in AAA tissue (n=31). Multi-parametric flow cytometry (FC) was used to determine CX3CR1 expression on haematopoietic cells (CD45+), T-cells (CD3+) and NK-cells (CD56+) obtained from peripheral blood (PB) of AAA patients (n=19). Percentage median values were calculated with IQR.

Results

IHC demonstrated CX3CR1+ cells in 20 out of 31 AAA tissues with staining located primarily in either the media and adventitia. FC revealed that 24.6% (22.3-26.8) of CD45+ cells were CX3CR1+; 8.04% (4.4-17.6) of the CD45+ cells were CD56+/CX3CR1+; 68.6% (40.6-86.8) of all CD56+ NK-cells expressed CX3CR1. Only 10.6% (6.6-38.3) of CD3+ cells expressed CX3CR1. In contrast CD3+ cells formed the highest percentage of CX3CR1+ cells in AAA tissue (20.9%, 14.2-27.4).

Conclusion

The findings suggest a role for the CX3CL1-CX3CR1 interaction in the recruitment of inflammatory cells seen in AAA tissue. Analysis of PB mononuclear cells from patients with AAA demonstrated a high level of CD56+/CX3CR1+ NK-cells. The CX3CL1-CX3CR1 interaction could contribute to the increased NK-cell cytotoxicity to vSMC.

Prevalence and correlation of hyperhomocysteinemia to amputation-free survival (AFS), major adverse events (MAE) and mortality after intervention for critical lower limb ischaemia (CLI) in patients with peripheral vascular disease

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Objective

The relationship between hyperhomocysteinemia and patency after PVD interventions has previously been inconclusive and controversial. We aim to assess the prevalence and correlation of hyperhomocysteinemia to clinical and technical outcome of revascularisation procedures for CLI. Composite primary endpoints include primary and secondary patency rates, AFS, MAE and all-cause mortality.

Method

Between 2002 and 2006, 953 revascularisation procedures were performed for CLI. Fasting plasma homocysteine was measured in 229 patients. The incidence of hyperhomocysteinemia was 30%. Mild hyperhomocysteinaemia (13-20μmol/L) was found in 88%. Patients with normal and hyperhomocysteinemia were comparable.

Results

Primary patency rate for hyperhomocysteinemia patients was less than half that of normal homocysteine patients (34.78% vs 73.88%, $p<0.0001$). There was a similar finding with respect to assisted primary patency rate, though this was not statistically significant (25% vs 42%, $p=0.08$). There was no significant difference between groups with regards to secondary patency rate. However, mean AFS was significantly shorter for patients with hyperhomocysteinemia (31 months vs 34 months, $p=0.008$). Overall, 26% of the normal homocysteine group progressed to vessel occlusion compared to 65% of the hyperhomocysteinemia group ($p<0.0001$). There was no significant difference between groups with respect to four-year cumulative all-cause mortality ($x^2=0.946$). In addition, we found hyperfibrinogenemia to be an independent significant variable associated with reduced primary patency rate and progression to vessel occlusion.

Conclusion

We believe that hyperhomocysteinemia is an independent risk factor for the progression of PVD and is an adverse prognostic factor for CLI patients undergoing peripheral arterial revascularisation.

Increased SDF-1alpha and CXCR4 but not SDF-1beta expression in human critical limb ischaemia

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Objective

SDF-1 plays a critical role in many physiological processes, including stem cell homing and angiogenesis. SDF-1 has two spliced variants: SDF-1alpha and SDF-1beta. We have previously shown that SDF-1beta has more potent angiogenic properties compared to SDF-1alpha. The objective of this study is to determine the pathophysiological expressions of the SDF-1 variants and its cognate receptor, CXCR4, in human critical limb ischaemia (CLI).

Method

Skeletal muscle biopsies were obtained from the lower limbs of 12 patients with CLI and 12 patients without limb ischaemia (controls), with ethical committee approval. Immunohistochemistry localised the expressions of SDF-1 variants and CXCR4. Double immunofluorescence labelling was used to colocalise cell-specific antigens by confocal microscopy. SDF-1 variants and CXCR4 protein expressions were evaluated by Western blotting. Statistical analyses used the Mann-Whitney U test.

Results

In CLI, SDF-1alpha is extensively expressed by skeletal muscle fibres but there was minimal expression of SDF-1beta. CXCR4 is extensively expressed and is colocalised to microvessels. A significant 2.6-fold increased protein expression ($p<0.05$) of SDF-1alpha was noted in the CLI group. There was no significant difference in the protein expressions of SDF-1beta in both groups. CXCR4 expressions showed a 3.5-fold increase of protein expression in the CLI group.

Conclusion

SDF-1alpha expression is localised to muscle fibres only and is raised in CLI. However, there was minimal expression of SDF-1beta, either in muscle fibres or microvessels. The lack of SDF-1beta may partly explain the inadequate angiogenic response in CLI.

Topical wound oxygen (TWO_2) versus conventional compression dressings (CCD) in the management of refractory non-healing venous ulcers (RVU); a parallel observational pivotal study in CEAP category six patients

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Objective

TWO_2 proposes an opportunity in the management of RVU. The aim of this study is to prove the safety and efficacy of TWO_2.

Method

The primary endpoint is the proportion of ulcers healed, percentage of reduction in ulcer size, time to full healing and bacterial elimination at the end of therapy. Secondary endpoints are pain reduction and recurrence rates. In the TWO_2 group, the limb was placed in a TWO_2 chamber for 180 minutes bi-daily. The compression group was managed using Profore dressings.

Results

Forty-six chronic RVU of more than two years' duration were managed using TWO_2 and 36 with CCD. Both groups were comparable. All patients were classified as C6. At three months, 80% of TWO_2-managed ulcers (n=37) were completely healed, compared to 25% (n=9) of CCD ($p<0.0001$). Mean time to 70% reduction in surface area was 22 days in the TWO_2 group as opposed to 125 days in the CCD group ($p<0.0001$). Mean time to full healing or skin grafting was 62 days in TWO_2 patients and 187 days in CCD ($p<0.0001$). Seventeen ulcers were MRSA-positive, nine of which became MRSA-negative after TWO_2 treatment. This is compared to 18 MRSA ulcers managed by CCD, all of which remained positive after treatment ($p=0.033$). The pain score threshold in the TWO_2-managed patients improved from eight to three by 13 days. After three months' follow-up, three of the nine healed CCD ulcers showed signs of recurrence compared to none of the 37 TWO_2 healed ulcers.

Conclusion

TWO_2 is a valuable tool, safe and effective in managing chronic RVU.

Intraluminal thrombus has a selective influence on matrix metalloproteinases (MMPs) and their inhibitors (TIMPs) in the wall of abdominal aortic aneurysms (AAAs)

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Objective

The influence of intraluminal thrombus on the proteolytic environment within the wall of an abdominal aortic aneurysm is unknown. We aimed to assess the influence of intraluminal thrombus on the expression and activity of MMPs and TIMPs within the adjacent AAA wall.

Method

Thirty-five patients, 26 men, median age 73 (range 66-82) years undergoing elective repair of AAAs were studied. A full thickness AAA wall specimen was taken from each patient and the exact position was noted. All samples were snapped frozen and analysed for MMP-2, -8 and -9 and TIMP-1 and -2 using ELISA. Statistical analysis was performed using SPSS v14. Thrombus thickness at specimen sites was measured on the pre-operative CT scan.

Results

Active concentration of MMP-9 and TIMP-1 were significantly positively correlated with thrombus thickness with a Pearson correlation coefficient, r, of 0.45 and 0.42, respectively. MMP-2 (active and total) and TIMP-2 showed a positive correlation although not statistically significant. MMP-8 (active and total) showed a non-significant negative correlation with thrombus thickness.

Conclusion

Intraluminal thrombus thickness has a significant positive correlation with active MMP-9 (elastase) and TIMP-1, and a negative correlation with MMP-8 (collagenase). This may have some implication for AAA expansion and rupture.

Cerebral emboli predict cognitive decline in the common dementias

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Objective

Alzheimer's Disease (AD) and vascular dementia (VaD) affect 700,000 people in the UK, costing the NHS over £17 billion/year. Spontaneous cerebral emboli (SCE) are frequent in both AD and VaD. We investigated whether SCE in patients with early AD or VaD were associated with disease progression over two years.

Method

One hundred and forty-four patients with dementia (84 AD - NINCDS/ADRDA criteria; 60 VaD - NINDS/AIREN criteria) underwent transcranial Doppler monitoring over two one-hour periods on different days initially and at six-monthly intervals to 18 months; SCE were defined using international consensus criteria. Progression of dementia over two years was measured by: i) Alzheimer's Disease Assessment Scale - cognitive subscale (ADAS-Cog); ii) Interview for Deterioration in Daily living activities in Dementia (IDDD); and iii) NeuroPsychiatric Inventory (NPI). These scores were adjusted for potential confounders, such as severity of dementia, age, carotid stenosis >50% and lipid profile.

Results

SCE were detected in 63 (44%) patients with dementia (43% AD, 45% VaD). Mean (95% CI) adjusted ADAS-Cog scores deteriorated by 4.4 (-1.9, 10.8) in SCE-ve patients but by 14.3 (7.8, 20.8) when SCE+ve, a difference of 9.8 (3.5, 16.2, $p=0.003$). Functional decline (IDDD scores) and deterioration in NPI scores were also greater in SCE+ve patients by a difference of 35.5 (14.5, 56.5, $p=0.001$) and 14.7 (7.3, 22.0, $p<0.001$), respectively.

Conclusion

SCE predict long-term cognitive, functional and neuropsychiatric decline in patients with dementia. SCE may be a potentially preventable or treatable cause of dementia.

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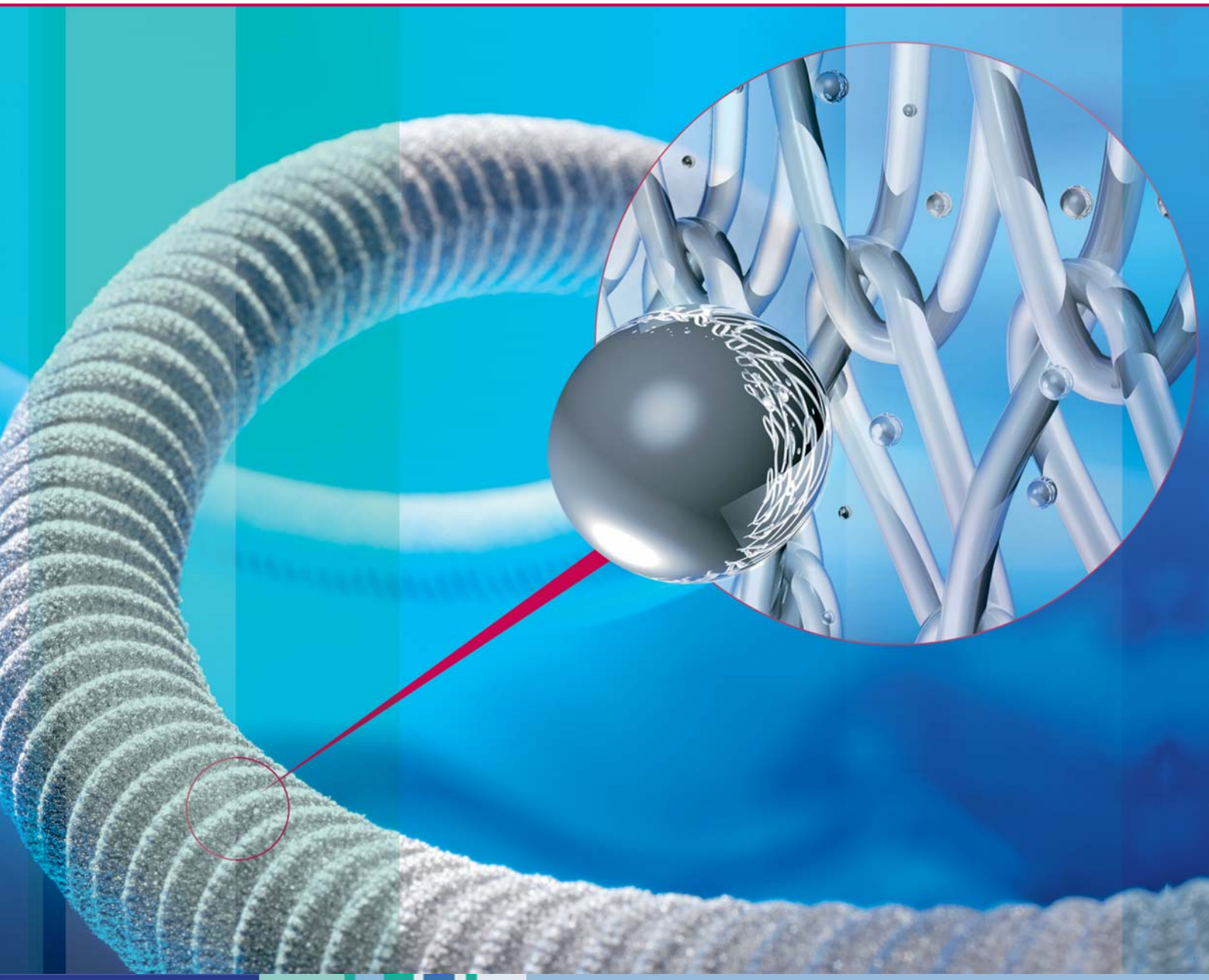

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XX-VSA-09-07

A single dose of reconstituted high density lipoprotein (rHDL) reduces expression of tissue-factor in human carotid atherosclerotic plaques

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Objective

The unstable carotid plaque is responsible for the high early risk of stroke after TIA. It is also accountable for the relatively high peri-operative carotid endarterectomy (CEA) risk of stroke/death in patients with unstable neurological symptoms. Acute plaque stabilisation is therefore an attractive therapeutic target. We hypothesise that rHDL may influence plaque stabilisation at a transcriptional level.

Method

Forty patients undergoing CEA were stratified to three groups: early symptomatics (n=12, stroke/TIA <1month before CEA); late symptomatics (n=14, stroke/TIA >1 month before CEA); and asymptomatics (n=12). Expression of thrombomodulatory genes, tissue-factor (TF), thrombomodulin (TM), tissue-type-plasminogen activator (tPA), and plasminogen activator inhibitor-1 (PAI-1), were measured using QRT-RT-PCR. Nine patients with early symptomatic carotid disease, undergoing CEA, were then randomised to infusion of rHDL 80mg/kg (n=4) or a similar volume of saline (n=5). Plaque specimens were collected 24 hours later and thrombomodulatory gene expression was measured.

Results

A significant difference in thrombomodulatory genes was observed in the three patient groups. TF (early symptomatic 18.42 [12.0-49.8] vs late symptomatic 0.76 [0.29-1.75] vs asymptomatic 0.94 [0.9-2.48], p=0.013), TM (21.83 [14.3-54.4] vs 3.24 [0.63-10.69] vs 1.51 [0.72-3.32], p=0.024), tPA (61.40 [41.6-98.7] vs 3.23 [1.53-7.0] vs 2.80 [1.25-6.67], p=0.025), PAI-1 (172 [103-415] vs 8.0 [4.0-56.5] vs 4.92 [1.2-15.3], p=0.047). In the rHDL group, a single dose of rHDL reduced the expression of TF (0.71 [0.65-0.75] vs 0.98 [0.81-1.14], p=0.05). No significant difference was observed in other thrombomodulatory factors between the two groups.

Conclusion

Plaque stabilisation occurs within one month of a clinical event. This may be facilitated, at the transcriptional level, following rHDL infusion.

TGF3 and LTBP4 are associated with altered AAA growth: a candidate gene study

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Objective

To look for associations between isoforms of TGFβ and latent TGFβ binding protein (LTBP) and the rate of AAA growth.

Method

AAA patients were recruited from three screening programmes. DNA was extracted, risk factors recorded and serial AAA sizes were collected for each patient. Tagging SNPs were identified for TGFβ1, TGFβ3, LTBP3 and LTBP4 using Haploview with a minimum R2 of 0.8. Twenty-five tagging SNPs and a functional SNP in LTBP1 (-256G>C) were genotyped using Taqman. Growth rates were calculated using a quadratic model adjusting for baseline diameter and rate of curvature.

Results

Four hundred and eighty-seven patients (475 male, mean age 73, median AP diameter 50mm, average follow-up four years and nine months) were recruited to the study. Individual analysis of seven tagging SNPs in TGFβ3 and eight tagging SNPs in LTBP4 revealed significant associations between a single SNP in TGFβ3 (-614G>A) and five SNPs in LTBP4 (-4234A>G, 30-88C>G, 10384G>A, 21011A>T, 25859C>T), and, slowed AAA growth. Following multivariate model analysis, TGFβ -614G>A and LTBP4 21011A>T remained significant, independent of risk factors (p=0.04 and p=0.003), accounting for 3.4% of between subject variation. Further analysis confirmed a single haplotype in TGFβ3 associated with slowed AAA growth (p=0.05) and demonstrated carriers of the common LTBP4 haplotype have significantly higher growth rates than those with no copies (p=0.003).

Conclusion

TGFβ is a strong candidate for the modulation of AAA growth. LTBP is an important regulator of TGFβ activity in the extra-cellular matrix. These data suggest regions of the TGFβ3 and LTBP4 genes influence the rate of AAA growth.

Rosiglitazone retards the development of aortic aneurysms in Apo E-deficient mice

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Objective

This study aimed to investigate the effects of treatment with the PPAR-gamma agonist, Rosiglitazone, on aneurysm development in an experimental model. Using the angiotensin-II-induced hypercholesterolaemic mouse model, the hypothesis that Rosiglitazone would ameliorate aneurysm development and/or rupture was investigated.

Method

Twenty-eight 12-month-old Apo E-deficient mice were randomised to three groups. All animals had an osmotic pump inserted subcutaneously on the flank; the positive control group and treatment group released Angiotensin-II (Ang-II) (1μg/min/kg), the sham operated group released saline. The treatment group received Rosiglitazone (10mg/kg/day) in their drinking water one week before insertion of the pumps and continuously during the following 28-day period.

Results

In comparison to the positive control group, treatment with Rosiglitazone inhibited the occurrence of fatal aortic rupture (5/10 vs 0/10) and reduced maximal dilatation of the aorta (5.6 ± 0.26 vs 2.6 ± 0.4mm^2). Rosiglitazone inhibited the angiotensin-II-induced expression of AT1a receptor, but did not affect the increased expression of MMP-2 or MMP-9 genes. The amount of collagen deposited in the suprarenal region of the abdominal aorta was qualitatively increased in animals treated with Rosiglitazone.

Conclusion

Rosiglitazone reduced the incidence of development of aneurysms and aortic rupture in this murine model. Amelioration of aortic dilatation was concomitant with reduced AT1a expression and increased collagen deposition. This agent has considerable potential for use in clinical practice.

The effects of cilostazol on the attenuation of inflammatory response in patients with peripheral arterial disease

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Objective

Cilostazol, a phosphodiesterase-3 inhibitor, improves walking distance in patients with peripheral arterial disease (PAD), through increased cyclic AMP levels. The study aims were to assess the effects of cilostazol on the inflammatory response post-exercise in such patients.

Method

Patients with PAD were prospectively recruited to a randomised double-blinded, placebo-controlled trial. Baseline clinical data were recorded following medical optimisation. Initial and absolute walking distances were measured on a validated treadmill protocol. Inflammatory response measurements were performed before and 30-minutes post-exercise by serum lipid hydroperoxide, interleukin-6 and -10, highly-selective C-reactive protein (hsCRP) and plasma ascorbate analysis. All tests were at baseline, six weeks and six months.

Results

One hundred and six PAD patients (72 males) were recruited from August 2004 to August 2006 (overall median age: 66.5, range 37-86). Twenty-six patients were diabetic. Treatment limbs were otherwise matched for demographic and medical comorbidities. Patients who received cilostazol, compared to placebo, demonstrated a mean percentage improvement from baseline in initial claudication distance (38.9% vs. 22.7%, p=ns at six weeks and 67.0% vs. 51.6%, p=ns at six months) and absolute walking distance (77.2% vs. 26.6%, p=0.002 at six weeks and 161.7% vs. 79%, p=0.004 at six months). There was a significant reduction in baseline lipid hydroperoxide levels in the cilostazol group compared to a corresponding increase in the placebo group before and after exercise at both time-points: six weeks: pre-exercise -11.8% vs. +5.8% and post-exercise -12.3% vs. +13.9%; six months: pre-exercise -15.5% vs. +12.0% and post-exercise -9.2% vs. +1.9% ($p<0.01$). However, there was no difference between groups for interleukins-6 and -10, ascorbate or hsCRP levels.

Conclusion

Cilostazol attenuates exercise-induced ischaemia-reperfusion effects in PAD patients before and after walking.

Does cryopreservation impair tensile strength of arterial tissues?

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Objective

To evaluate the effects of cryopreservation on the tensile strength of large-calibre arteries. Arterial allografts are widely used outside the UK, in primary arterial and vascular graft infections. These tissues have not been widely available in the UK to date. There is a concern that cryopreservation reduces the tensile strength of the tissues leading to suture pull-out or aneurysmal degradation.

Method

The tensile stress, strain, and suture pullout resistance of cryopreserved adult human superficial femoral arteries (SFA), thoracic aorta (TA) and porcine aorta (PA) were compared with fresh controls.

Results

SFA: no significant differences were found (p=<0.05) between the tensile properties or suture pullout resistance of cryopreserved and fresh SFA (3 replicates each, n=11). Mean stress at failure of cryopreserved SFA ranged from 81-83gf.mm and mean strain from 33.6-67.2%. Significant donor variation was found in strain. Suture pullout resistance ranged from 355gf-494gf. TA: no significant differences were found (p=<0.05) between the tensile properties of cryopreserved and fresh TA (1 replicate, n=6). Mean stress at failure of cryopreserved TA was 149gf.mm and mean strain 77%. PA: no significant differences were found (p=<0.05) between the tensile properties of cryopreserved and fresh PA (4 replicates, n=5). Mean stress at failure of cryopreserved PA ranged from 115-168gf.mm, and mean strain from 67-81%.

Conclusion

Contemporary cryopreservation and rewarming protocols do not cause a reduction in tensile strength in porcine aorta, human aortic or human superficial femoral arteries.

Patients with abdominal aortic aneurysms show changes in collagen content and type in their connective tissue

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Objective

To see if the changes in collagen content and type seen in the wall of abdominal aortic aneurysms (AAA) are also represented in the skin and rectus sheath as part of a systemic connective tissue disorder.

Method

Samples of skin and rectus sheath were obtained at the time of surgery from patients undergoing elective open AAA repair and controls undergoing laparotomy for non-inflammatory colorectal disease. Collagen content was measured by hydroxyproline analysis. Collagen I:III ratio was analysed by using interrupted reduction and polyacrylamide gel electrophoresis in the presence of sodium dodecyl sulphate.

Results

There was a significantly reduced amount of total collagen content in the skin of aneurysm patients compared to controls ($p=0.0015$, t-test) but no difference was seen in the collagen I:III ratio ($p=0.75$, t-test). There was no difference in the total collagen content of the rectus sheath between groups ($p=0.54$, t-test). AAA patients had a significantly higher collagen I:III ratio than control patients ($p=0.044$, t-test).

Conclusion

The increased collagen I:III ratio in the rectus sheath represents a systemic reduction in type III collagen in aneurysm patients consistent with changes seen in some familial aneurysms. Combined with the reduction in skin collagen, this further supports the idea of aneurysmal disease as being part of a systemic connective tissue disorder.

Vascular endothelial growth factor is over-expressed at the site of abdominal aortic aneurysm rupture and promotes the formation of angiotensin-II-induced aneurysms in apolipoprotein E-deficient mice

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Objective

An abdominal aortic aneurysm (AAA) rupture site is associated with increased angiogenesis but the significance of this is unknown. This study identified candidate pro-angiogenic genes in a human AAA rupture site and investigated the functional significance of VEGF in an angiotensin-II (Ang-II) mouse aneurysm model.

Method

Micro-array analysis and QRT-PCR validation studies were used to identify differentially expressed (>2.5-fold, $p<0.005$) pro-angiogenic genes at human aneurysm rupture sites (n=10) using paired anterior sac as internal controls. To investigate the role of VEGF, apo E-/- mice were assigned to either: i) saline infusion (placebo control); ii) ang-II infusion (which induced aneurysm formation); iii) ang-II infusion plus 14 days 100mcg VEGF; or iv) ang-II infusion plus 21 days 100mcg VEGF. Aortic diameter and cross-sectional area were determined by MRI at 21 and 28 days.

Results

Four pro-angiogenic genes (PROK2, IL8, ANGPTL4, VEGF) were over-expressed at human aneurysm rupture sites. All mice in Ang-II+14dVEGF and Ang-II+21dVEGF groups developed aneurysms by day 21 compared to only 40% in the Ang-II infusion group. VEGF treatment increased diameter and cross-sectional area of aneurysms at day 21 ($p<0.002$) and this effect was maintained at day 28 ($p<0.0005$). Decreasing VEGF treatment from 21 to 14 days did not attenuate aneurysm formation. VEGF upregulated aortic wall MMP-2 gene expression ($p<0.0009$).

Conclusion

VEGF gene was over-expressed at human AAA rupture sites and VEGF promoted formation of ang-II-induced aneurysms. Whether anti-VEGF therapy reduces risks of aneurysm expansion or rupture merits further investigations.

Quantitative bilateral photoplethysmography for peripheral arterial disease detection: a prospective assessment

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Objective

To prospectively assess the diagnostic accuracy of a novel bilateral photoplethysmography (PPG) toe pulse measurement technique for the diagnosis of lower limb peripheral arterial disease (PAD).

Method

Bilateral PPG toe pulse measurements were compared with ankle to brachial pressure index (ABPI) reference measurements. The setting was a controlled environment within a tertiary vascular surgical unit. Innovative pulse wave analysis techniques (device winner of national NHS HSC Award for Innovative Technology) extracted shape and timing characteristics from the great toe sites and also their right-to-left side differences. These were compared with our previously obtained normative ranges and the diagnostic performance of detecting significant PAD (i.e. ABPI<0.9), assessed using accuracy and the Kappa statistic (agreement between techniques beyond chance).

Results

One hundred and eleven subjects were studied (range 40 to 90 years), with 63 normal and 48 PAD by ABPI. Subjects within the two ABPI groups were matched in age, sex, height and heart rate. Substantial agreement between pulse and ABPI classifications were obtained for the degree that pulse shape fell beyond the normal range of normalized shapes (accuracy 91%, Kappa 0.80) and also pulse transit time differences between the right and left toes (accuracy 86%, Kappa 0.70).

Conclusion

This technique could offer significant benefits for the diagnosis of PAD in settings such as primary care where non-invasive, quick, affordable and 'de-skilled' diagnostic techniques are desirable. Improved diagnosis and screening for PAD has the potential to allow identification and cardiovascular risk factor management for this group.

Skeletal muscle myosin heavy chain expression in claudicants; effect of a supervised exercise programme

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Objective

There is growing evidence that supervised exercise for claudication exerts effects on local calf muscle metabolism. The relative expression of the differing myosin heavy chains (MHCs) within skeletal muscle is a key determinant of muscle metabolism. Compared to MHC II, MHC I is better able to generate ATP, switching less rapidly to anaerobic metabolism during prolonged physical activity. This study sought evidence of a shift in MHC protein expression within gastrocnemius muscle as a result of supervised exercise for claudication.

Method

Thirty-seven claudicants were recruited. Subjects undertook a three-month supervised exercise programme. Controls were patients awaiting angioplasty for claudication. Both groups underwent paired gastrocnemius needle biopsies. Relative MHC expression was determined by SDS gel electrophoresis.

Results

Following exercise training, maximum walking distance (MWD) increased by 109% ($p<0.01$). At recruitment the relative MHC expression was MHC I 34.3% (±6.8), MHC IIa 42.0 % (±7.1) and MHC IIx 23.7% (±4.9). Following supervised exercise training there was a significant increase in MHC I expression +11.1% (±3.9, $p<0.05$), not witnessed in the control group. The largest shifts in MHC expression occurred in subjects with the greatest increases in MWD.

Conclusion

Improved walking distance after supervised exercise training for claudication is associated with an increase in MHC type I expression. This increased MHC 1 expression may contribute to improved skeletal muscle oxidative capacity and is worthy of further investigation as a means to increase walking distance in patients unable to participate in supervised exercise programmes.

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The impact of a diabetic foot protection team (DFPT) on outcomes for patients with diabetic vascular disease

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Objective

Over 40% of patients with peripheral arterial disease (PAD) have diabetes and this group have a worse prognosis; the majority of lower limb amputations in the UK being performed for diabetic vascular disease. We set out to identify methods to reduce the amputation rate for patients with diabetes.

Method

A prospective database was established for patients with diabetic foot complications. For six months a mapping exercise was undertaken to identify areas of poor practice. A protocol was then introduced and implemented by a diabetic foot protection team (DFPT) working across primary and secondary care. The results of the first three years of this project are presented.

Results

Minor amputations increased by 42%, but there was an overall 60% reduction in major amputations carried out over three years. There was a 7% yearly increase in patients treated, hospital admissions increased form 118 to 174 patients per year and revascularisation rates increased. However, despite this, median length of hospital stay reduced from 47 to 19 days, saving 5662 bed days (equating to £1.3 million savings). The DFPT also identified HRG coding inaccuracies amounting to a potential £750,000 loss to the service. Investment in the service was £52,000 per year.

Conclusion

We have demonstrated that a DFPT will reduce major amputation rates and hospitalisation in patients with diabetes. It is highly cost effective, reducing length of stay by 60%. A national approach to the problem of diabetic vascular disease could make a major impact on amputation rates in the UK.

Inherent functional differences between saphenous vein smooth muscle cells cultured from non-diabetic and Type 2 diabetic patients

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Objective

Compared with their non-diabetic counterparts, individuals with Type 2 diabetes mellitus (T2DM) are at increased risk of coronary artery disease and saphenous vein (SV) graft stenosis following coronary artery bypass grafting (CABG). The primary cause of graft failure is intimal hyperplasia, characterised by smooth muscle cell (SMC) proliferation and migration. We hypothesised that SV-SMC from T2DM patients are intrinsically more proliferative and migratory, thereby contributing to this difference.

Method

SV-SMC were explanted from six non-diabetic and six T2DM undergoing CABG. Cell proliferation was determined over seven days in response to 10% foetal calf serum (FCS), or insulin (100nM) combined with platelet-derived growth factor (PDGF, 10ng/ml). Migration was quantified with modified Boyden chambers. Western blotting was used to assess activation of ERK-1/2 and AKT signalling pathways. Data were analysed using unpaired ratio t-tests.

Results

SV-SMC from T2DM were morphologically distinct from non-diabetic patients and were less proliferative in 10% FCS ($p<0.01$). The proliferative rate of the two populations was similar in insulin+PDGF. In the presence of insulin, the migratory capacity of diabetic SV-SMC was significantly greater than those of non-diabetic patients ($p<0.05$). All the observed differences were independent of glucose concentration. No consistent differences in ERK and AKT signalling existed between the two populations.

Conclusion

This study has revealed a number of inherent functional differences between cultured SV-SMC from non-diabetic and T2DM patients that may account for the inferior patency of SV bypass grafts in T2DM patients. Determining the mechanisms underlying these effects may be of major clinical importance.

Development of a vascular bypass graft with polyhedral oligomeric silsequioxane nanocomposite (POSS PCU)

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Objective

It is desirable to have a compliant and spontaneously endothelialising small diameter bypass graft. Therefore, it was aimed to: i) use a nanocomposite-containing biomaterial, which has been shown to have ideal properties for vascular implants to develop a graft; and ii) surface modify the polymer with peptides/proteins, which have been recognised to adhere to endothelial progenitor cells (EPC) and thus aimed to promote endothelialisation of grafts.

Method

Bioactive peptides RGD/protein stem cell factor were incorporated and covalently attached to POSS PCU polymer and a coagulation technique was used to produce 3.5mm bypass grafts. Changes in diameter of graft segments were measured at physiological pulse pressure and flow, and diametrical compliance was calculated over a range of mean pressures. Both modified and unmodified graft segments were exposed to culture medium with peripheral blood mononuclear cells containing EPC, and EPC adhesion was tested. Also, the grafts were connected in a flow circuit and circulated with a similar EPC culture medium. Confirmation of cell markers was carried out using FACS analysis, RT-PCR and immunostaining.

Results

The grafts possess a porous interior and visco-elastic properties with a greater degree of compliance match compared to Dacron/ePTFE. Peptide/protein modification increased the number of EPC colonies and exposure to flow led to differentiation of cells. Cells expressed mRNA for the EPC markers CD34, CD31, CD133 and F1K-1/KDR. Endothelial cell-colony forming units were formed and were confirmed as endothelial-like cells by immunostaining.

Conclusion

A novel, compliant small diameter vascular bypass graft proved the potential to endothelialise *in situ*.

The proposed 18-week target - is there time for investigations?

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Objective

Major aortic cases require detailed cardiac, renal and respiratory assessments. In light of current NHS initiatives to reduce length of stay (LOS) and limit time from referral to treatment to 18 weeks, we examined the effect of a dedicated nurse specialist to co-ordinate the work-up period.

Method

With the appointment of a nurse specialist, clinic referrals were managed based on investigation results according to a pre-determined protocol. Dedicated diagnostic investigation slots and clinic appointments allowed timely management. We studied 44 patients before (group 1) and 193 consecutive patients after (group 2) employment of a nurse specialist. Data were collected prospectively. Data are presented as median values with inter-quartile range. Statistical analysis was performed using the Mann-Whitney U test.

Results

All patients in both groups completed a full set of investigations prior to surgery or stenting. The median LOS in group 1 was 12 days (IQR 9-16), compared with <1 day (IQR 0-2) for group 2 with a p value of <0.001. This reduction was largely due to the introduction of a co-ordinated day-case assessment, which was used in 56% of group 2 compared with 0% of group 1. At a cost of £500 per bed day this equates to a saving of £1113 per patient.

Conclusion

Co-ordination of investigations by a dedicated nurse specialist led to significant reductions in patient LOS. This should reduce costs, as well as exposure to hospital-acquired infections and will contribute to meeting the 18-week target.

Litigation claims in vascular surgery in the United Kingdom

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Objective

To establish the incidence, costs and causes of medical negligence claims in relation to vascular surgery in the UK's NHS.

Method

All claims related to vascular surgery reported to the NHS Litigation Authority from 1995 to April 2007 were included in the study. All data were subsequently reviewed, coded accordingly and analysed.

Results

Three hundred and ninety-five claims were analysed (mean: 53/year over the last five years) of which 303 have been settled. Of the latter, compensation was given in 160 (53%) cases, with total claims' compensation ranging from £21 to £654,819. The overall litigation costs were £169,111,65. Successful claims varied from intra-operative problems (50%) (of which 75% were related to varicose vein [VV] surgery and 13% to peripheral vascular disease [PVD]), to failure/delay of treatment (14%), failure/delay of diagnosis (11%), postoperative treatment (6%), inappropriate treatment (6%) and others (13%). VV surgery was the most common type of disease/procedure involved in the successful claims (48%, claim range £35-£485,000, total claim £6.2 million), in which intra-operative problems (66%) (60% nerve damage, 27% vessel damage), postoperative complications (18%) and inappropriate treatment (7%) were implicated. Other types of disease/procedures involved PVD (21%), abdominal aortic aneurysm disease (6%), infections/ulcers (5%), medical treatment (5%) and others (15%).

Conclusion

The number of claims related to vascular surgery has remained stable over the past five years. In general, 50% of claims are due to intra-operative complications, while problems related to VV form almost half of all successful claims.

Medium to long-term results of thoracic endografting

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Objective

The long-term durability of thoracic stent grafting is still unknown, especially given the thoracic aorta can be affected by a heterogeneous group of pathologies. This study examines mid-long-term follow-up for commercially available thoracic devices and aims to determine which variables may be predictive of outcome.

Method

Data were collected prospectively between July 1997 and July 2007 in a consecutive series of patients and analysed.

Results

Two hundred and thirteen patients (65% men) underwent thoracic stent grafting for a variety of aortic pathologies. Median age was 71 years and mean aneurysm size was 6.4cm. Thirty-day mortality was 4.3% (6/140) for elective and 9.6% (7/73) for urgent procedures. Paraplegia occurred in 4.2% (9/213) and was permanent in four (1.9%). Stroke occurred in 5.1% (11/213). Median follow-up was 30 (range 0-119) months. Adjuvant procedures were performed to optimise landing zone in 11.3%, to improve access using conduits in 3.3% (n=7), and for postoperative complications in 5.1% (n=11). Endoleaks were detected in 19.7% (42/213), and are on-going in 3.3% (7/213). Secondary interventions were performed in 14.6% (n=31), including six graft explantations (four in dissection patients) and repair of two Type A conversions of Type B dissection. Aneurysm-related death occurred late in 3.8% (8/213). At median 30-month follow-up, 82.6% (176/213) have had successful treatment of their thoracic aortic pathology.

Conclusion

These medium to long-term data show that thoracic endoluminal devices are durable. The heterogeneity of the aortic pathology is reflected in the fact that complex aneurysms and dissections have a worse outcome than localised pathology (penetrating ulcers and small aneurysms), and therefore ongoing surveillance is essential.

Endovascular management of traumatic thoracic aortic injury (TAI)

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Objective

Endovascular repair for TAI, which occurs predominantly in polytrauma patients, is a minimally invasive alternative to open surgery obviating the need for thoracotomy and cardiac bypass. This study assesses the feasibility of endovascular repair following blunt TAI at a single centre.

Method

Data from 15 consecutive patients (mean age, 44 years; range, 16-84 years; sex, 3 females, 12 males) with a blunt TAI treated by endovascular stent graft insertion between October 2001 and March 2007 were prospectively collected. Demographics, injury characteristics, technique and complications were recorded. Follow-up data included computed tomographic angiography and plain chest radiography at regular intervals.

Results

All patients underwent endovascular repair within a median of nine hours from hospital presentation (range, 4 to 81 hours). Two patients underwent carotico-carotid bypass immediately prior to stenting during a single anaesthetic. The type of stent graft included Talent LPS/Valiant (n=7), Excluder (n=6) and Relay (n=2). Successful exclusion of the TAI occurred in all patients. No procedure-related mortality, paraplegia and stroke were recorded. Complications included proximal migration of initial stent graft requiring surgical explantation in one patient and iliac artery avulsion requiring iliofemoral bypass in two patients. Median hospital stay was 12 days (range, 4-58 days). Mean follow-up was 28.9 months (range, 4-67 months).

Conclusion

In our study, endovascular repair of blunt TAI is a safe procedure and can be employed as an alternative to open surgery.

Wholly endovascular repair of thoraco-abdominal aneurysm: experience in a single UK centre

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Objective

To evaluate the feasibility and safety of a purely endovascular approach to the repair of thoraco-abdominal aortic aneurysm (TAAA).

Method

Six patients (4 male, 2 female) with a median age of 71 years (range 41-76) underwent wholly endovascular repair of TAAA (diameter 56-85mm) employing individually customised endografts incorporating branches to 23 target vessels (renal 11, superior mesenteric 6, coeliac 6). The procedures were performed under general anaesthesia with spinal drainage. Patients have been followed by serial imaging (CT and duplex) for a median of 13 months (range 5-40). All data were prospectively entered onto a dedicated database.

Results

All grafts were deployed as intended with preservation of all target vessels. There were no postoperative deaths, strokes or paraplegia. One patient suffered a silent myocardial infarction. In two patients a persistent para-ostial endoleak was successfully treated during the same admission by further balloon dilatation of the stent within the target vessel ostium. Pre-discharge imaging confirmed exclusion of the aneurysm in all cases. One patient has required late secondary intervention to abolish endoleak due to sidebranch disconnection. In another patient late occlusion of the solitary renal artery has resulted in dependence on dialysis. There have been no late deaths and all aneurysms remain excluded.

Conclusion

Both open surgical and hybrid endovascular/surgical treatments of TAAA are associated with significant morbidity and mortality. A purely endovascular approach is feasible and relatively safe, but long-term follow-up is required to establish the durability of this technique.

Hybrid procedures for thoraco-abdominal aneurysms and secondary expanding aortic dissections - intermediate results in three European vascular centres

Eckstein HH

On behalf of the Regional Vascular Unit, St Mary's Hospital, London and the Departments of Vascular and Endovascular Surgery, University of Heidelberg, Heidelberg, Germany and Technical University of Munich, Munich, Germany

Objective

To evaluate the combined approach of visceral/renal debranching and endovascular exclusion (hybrid procedure) of thoraco-abdominal aneurysms and secondary chronic aortic dissections.

Method

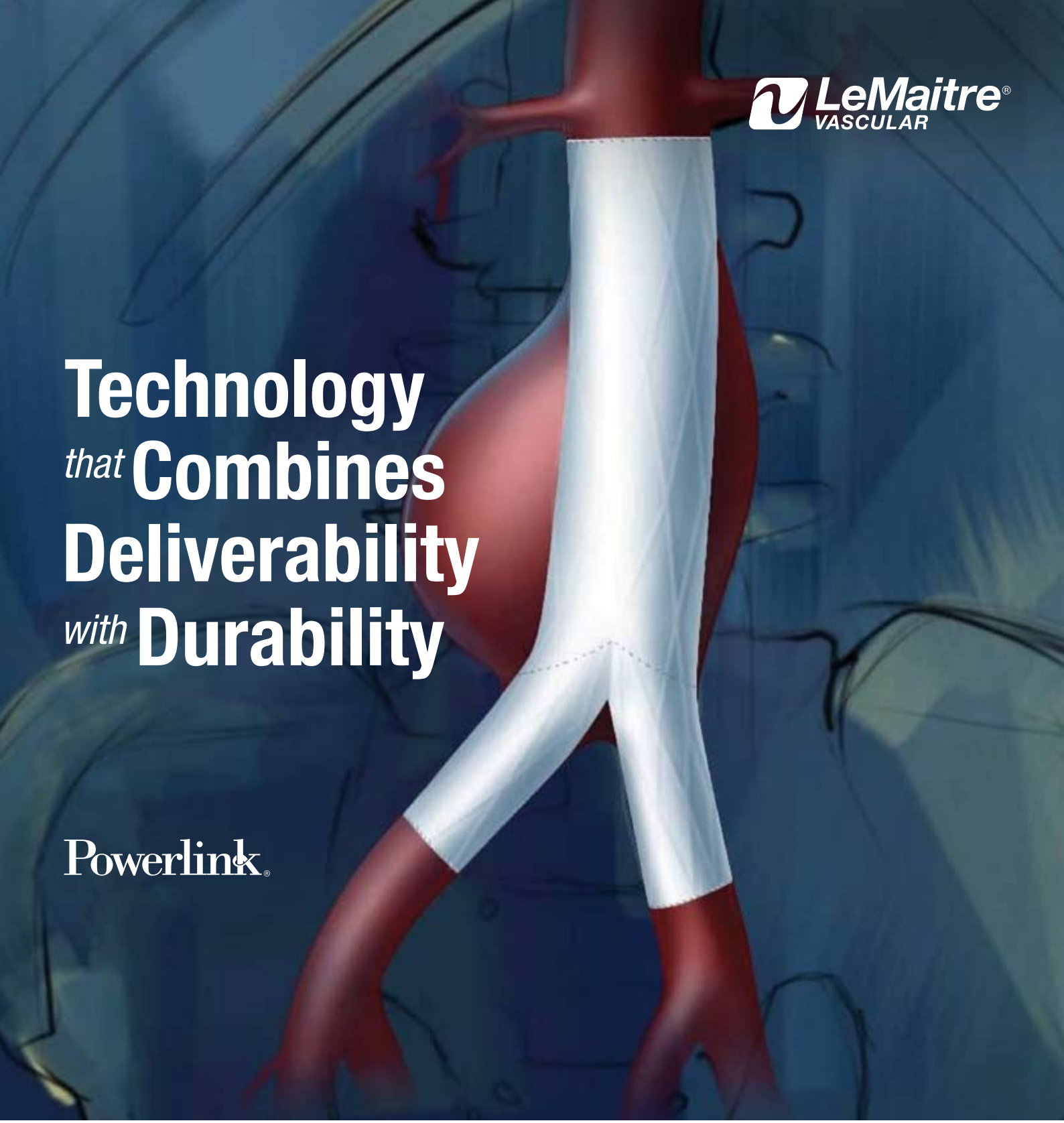
Consecutive data of three major European vascular units were collected between 2002 and 2007 including a series of 89 symptomatic and elective high risk patients. Eighty-seven patients had Types I-III degenerative thoraco-abdominal aortic aneurysms. Twenty-four of these patients had a chronic expanding dissection, three had a mycotic aneurysm and eight had Marfan's syndrome.

Results

All stent grafts involved the entire thoracic and abdominal aorta with arch vessel revascularisation in 11 and coverage of the left subclavian artery in 18. The distal landing zone was in the infrarenal aorta in 75% and in the iliac arteries in 25%. The 30-day mortality rate was 12/89 (13%). Seven (8%) of the patients were permanently paraparetic or paraplegic, three patients (3%) required long-term dialysis, and a segment of gut infarction requiring resection occurred in 2 (2%). Graft occlusion at 30 days occured in 19/297 (6%). Most patients had visceral revascularisation and stenting performed at the same time, but in 11 patients the stenting was performed at a later date. Two of these patients ruptured before the stenting procedure was undertaken.

Conclusion

Early results of visceral hybrid repair for high risk patients with complex thoraco-abdominal aneurysms indicate that this technique might be a valid alternative to open thoraco-abdominal aortic repair. Mid-term results with respect to survival, graft patency and endoleak rates will be presented.



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Neurological complications of thoracic endovascular aneurysm repair (TEVAR): overstenting of the left subclavian artery (LSA) without revascularisation is unsafe

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(1) University of Liverpool, Liverpool and (2) EUROSTAR data registry centre, Catharina Hospital, Eindhoven, The Netherlands

Objective

To determine the incidence of, and risk factors for, neurological complications associated with TEVAR.

Method

Data from 606 patients entered onto a multicentre international registry were analysed. Thoracic aortic pathologies included: true aneurysm (n=291), dissection (n=215), traumatic rupture (n=67), anastomotic aneurysm (n=24), infections and others (n=9). Three hundred and seventy-nine (62%) procedures were elective, 205 (34%) were urgent or emergencies and 20 (4%) were unclassified. Mean follow-up was 14.1 months (0-72). Study endpoints were peri-operative spinal cord ischaemia (SCI) or stroke. Univariate analysis and multivariate regression models were used to determine risk factors for these neurological sequelae.

Results

Fifteen patients (2.5%) developed SCI and 19 (3.1%) stroke. Two patients had both. Multivariate regression analysis showed that SCI was independently correlated with: i) left subclavian artery covering without revascularisation (p=0.027, Odds Ratio [OR]=3.9); ii) renal failure (p=0.02, OR=3.6); iii) concomitant open abdominal aorta surgery (p=0.037, OR=5.5); and iv) number of used stent grafts ≥3 (p=0.043, OR 3.5). Stent graft diameter confounded with the number of stent grafts and correlated also with SCI (p=0.009, OR=5.2). Risk factors for peri-operative stroke were: i) duration of the intervention (p=0.0045, OR=6.4); and ii) female gender (p=0.023, OR=3.3). In patients with an overstented superior mesenteric artery, the incidence of stroke without and with revascularisation was 26% and 0, respectively (NS).

Conclusion

Revascularisation of the LSA is indicated whenever this vessel is overstented during the course of TEVAR.

Mid-term results of endovascular repair of isolated iliac artery aneurysms

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Objective

The evidence for the natural history of isolated iliac artery aneurysms is poor, but repair is usually advised when the diameter reaches 3-4cm. Open surgery for iliac artery aneurysms is not without procedure-related morbidity and mortality. We report our experience of endovascular repair of isolated iliac artery aneurysms.

Method

There were 50 patients, with 56 isolated iliac artery aneurysms, treated from 1997-2007. Data were prospectively collected on a computerised database with CT follow-up at three months, and annually thereafter.

Results

The median age was 74 years with a mean follow-up of 2.6 years (range 3 months-8 years). Mean aneurysm diameter was 47mm (18-102mm). The aneurysms were localised to the common iliac artery in 49 patients and to the internal iliac artery in one patient. There were six patients with short proximal necks or bilateral aneurysms requiring a bifurcated aortic device. Technical success was achieved in 49/50 patients. One failure was due to difficulty with access and treated with open surgery. In-hospital mortality was 0/50, with five deaths during the follow-up period, none of which were aneurysm-related. One device occluded on day two postoperatively, and there were two late endoleaks which were treated endovascularly. One late device occlusion was treated with a femoro-femoral crossover graft. The overall intervention-free survival was 80% at 2.6 years.

Conclusion

Endovascular repair of isolated iliac artery aneurysms is safe and associated with good mid-term results. Long-term follow-up is essential.

The long-term impact of endovascular aneurysm repair on renal function

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Objective

This study assesses renal function up to ten years following endovascular aneurysm repair (EVAR) with both infrarenal (IR) and suprarenal (SR) devices.

Method

A prospectively maintained database was interrogated for consecutive EVAR patients between 1996 and 2001. Patients were grouped according to proximal fixation level. Renal function was recorded annually by serum creatinine (sCr μmol/L) and Cockroft-Gault-derived creatinine clearance (CrC ml/min). Changes in renal function were analysed using the 1-sample Wilcoxon Test within groups, and the Mann Whitney U test between groups.

Results

One hundred and eighty EVARs were performed during this period: 88 IR devices (M: F; 78: 10, median age 71 years), 92 SR devices (M: F; 83: 9, median age 75.5 years). Paired renal data were available for 130 patients (IR: 67; SR: 63) with a mean follow-up of 40.5 (range 0-120) months. Pre-operative renal function was similar between groups with median sCr and CrC values of 113μmol/L and 57ml/min (IR) and 108μmol/L and 58ml/min (SR), both p=NS. Seven years post-EVAR there was no significant deterioration in renal function within either the IR or SR group, with median sCr and CrC values of 117μmol/L and 56ml/min, and 138μmol/L and 41ml/min (all p=NS), respectively.

Conclusion

These results suggest long-term renal safety following EVAR, although longer follow-up with greater patient numbers is needed to fully assess the potential late changes following SR.

Pre-discharge duplex ultrasound scanning (DUSS) detects endoleaks not seen on completion angiography and identifies patients requiring early re-intervention

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Objective

Duplex ultrasound scanning (DUSS) has been shown to be effective in the detection of endoleak following endovascular abdominal aortic aneurysm repair (EVAR). The aim of this study was to evaluate the role of DUSS in the immediate postoperative period prior to hospital discharge.

Method

Patients undergoing EVAR at a single centre between July 1994 and July 2005 received pre-discharge DUSS and were then followed up. A retrospective review was performed using hospital case notes, vascular database records and imaging reports.

Results

Of the 333 patients who underwent EVAR during this period, 32 of these were found to have an endoleak on DUSS performed prior to hospital discharge (16 type 1, 12 type 2 and 4 type 3 endoleaks). Nineteen of these (59%) were not visualised on intra-operative completion angiography. Twenty-one leaks (66%) were either observed or had spontaneously sealed by the first postoperative clinic visit. Ten leaks required intervention: eight endovascular procedures and two conversions to open repair. There was one death due to rupture prior to intervention.

Conclusion

This study confirms that a significant number of early leaks are not demonstrated on intra-operative angiography and a proportion of these are likely to require secondary procedures to prevent aneurysm rupture and death. This therefore confirms the role of pre-discharge DUSS in the detection and treatment of early endograft failure.

Elective open and endovascular aortic aneurysm repair: a meta-analysis of 20,715 patients

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Objective

A number of studies have compared outcomes following elective open and endovascular (EVAR) approaches to abdominal aortic aneurysm (AAA) surgery with varying reported benefits of EVAR.

Method

A random-effects meta-analysis was conducted including all published studies comparing open and endovascular approaches to elective AAA repair. Study endpoints consisted of operative outcomes, postoperative complications, 30-day mortality and long-term patient survival. Endpoints were compared using the odds ratio (OR), weighted mean difference (WMD) or log hazard ratio (HR) as appropriate.

Results

Thirty-two studies (four randomised trials) comprising 20,715 patients (51.0% open; 49.0% EVAR) were included. EVAR was associated with reduced operating times (WMD-14.7 minutes; $p=0.02$) and a reduction in intra-procedure blood loss (WMD -1009ml; $p<0.001$). The duration of intensive care stay was reduced in the EVAR group (WMD -36 hours; $p<0.001$) and postoperative length of stay (WMD-5.4 days; $p<0.001$). Postoperative cardiac (OR 1.76, $p=0.002$) and respiratory (OR 4.01, $p<0.001$) complications were more common following open surgery as was 30-day mortality (OR 2.18, $p<0.001$). However, EVAR was associated with a trend towards an increased re-intervention rate (OR 1.96, $p=0.08$). EVAR was associated with improved long-term aneurysm-related mortality rates (HR 0.39 $p<0.001$) but did not affect long-term all-cause mortality (HR 0.94, $p=0.52$).

Conclusion

EVAR offers clear benefit in the reduction in postoperative adverse events and 30-day mortality. In the longer term there is a reduction in aneurysm-related mortality, but EVAR does not reduce all-cause mortality.

Endovenous laser ablation (EVLA): is standard above-knee great saphenous vein (AK-GSV) ablation sufficient? A randomised controlled trial

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Objective

AK-GSV EVLA is an alternative to saphenofemoral (SF) ligation and GSV stripping for primary varicose veins due to SF/GSV reflux. Concomitant phlebectomies or delayed sclerotherapy are performed for the varicosities. This RCT assesses whether extended GSV ablation increases spontaneous resolution of varicosities and reduces adjuvant therapy requirements.

Method

Sixty-eight limbs (65 patients) with varicosities due to combined above and below-knee GSV reflux were randomised to standard AK-EVLA (group A, n=23), extended EVLA (mid-calf to groin: group B, n=23) or AK-EVLA with concomitant BK-GSV foam sclerotherapy (group C, n=22). Outcome measures were the presence of residual varicosities at six weeks (requiring sclerotherapy), improvement in the Aberdeen Varicose Vein Severity Score (AVVSS) at 12 weeks, patient satisfaction (visual analogue scale) and complication rates.

Results

EVLA ablated the treated GSV in all limbs. Sclerotherapy requirements were: group A 14/23 (61%); group B 4/23 (17%); group C 8/22 (36%); x^2= 9.3 (2 df) p=0.01; pA-B=0.006; pB-C= 0.19; pA-C=0.14. AVVSS scores (median±IQR) improved in all groups (p<0.001): group A: 14.8 (9.3-22.6) to 6.4 (3.2-9.1), group B: 15.8 (10.2-24.5) to 2.5 (1.1-3.7), group C: 15.1 (9.0-23.1) to 4.1 (2.3-6.8). Improvements were greatest in groups B and C (pA-B=0.011, pA-C= 0.042). Patient satisfaction was highest in group B. BK-EVLA was not associated with saphenous nerve injury.

Conclusion

Extended EVLA for patients with combined AK and BK-GSV reflux appears safe, increases spontaneous resolution of varicosities and enhances symptom improvement. Similar benefits occurred after concomitant BK-GSV foam sclerotherapy and this technique may be useful when BK-GSV tortuosity precludes extended EVLA.

Endovenous laser therapy with concomitant or sequential phlebectomy: a randomised controlled trial

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Objective

Significant proportions of patients require secondary procedures such as sclerotherapy or phlebectomy following endovenous laser therapy (EVLT) for varicose veins. We compared EVLT plus concomitant phlebectomy (EVLTAP) with EVLT only.

Method

EVLT patients were randomised to undergo concomitant phlebectomy (n=18), or no phlebectomy (n=18), and followed up for 12 weeks. Procedure duration, pain scores, return to work/normal activities, patient satisfaction, quality of life (QoL) outcomes, venous clinical severity scores (VCSS), and need for secondary intervention were compared. Results are median (inter-quartile range); p value.

Results

EVLTAP took longer than EVLT only: 67 (51-78) minutes versus 46 (38-56) minutes; p=0.003. Pain scores, time to work/normal activities, and patient satisfaction were similar. EVLTAP patients had lower Aberdeen Varicose Vein Scores at six weeks (7.12 [2.00-11.56] versus 14.74 [10.54-18.07]; p=0.001) and 12 weeks (2.06 [0.00-6.71] versus 9.60 [7.08-13.39]; p=0.009). There were no significant differences between groups in any SF-36 domain at any time point. VCSS was significantly better in the EVLTAP group at 12 weeks. Six patients (35%) in the EVLT only group required subsequent phlebectomies, while none required secondary procedures following EVLTAP.

Conclusion

EVLTAP results in better clinical and disease-specific QoL improvement than EVLT only, in the short term. Although the procedure duration is longer, it neither increases pain nor delays return to work, and it obviates the short-term need for secondary procedures.

No advantage in performing flush saphenofemoral ligation: results of a randomised trial

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Objective

The aim of this study was to assess the role of different techniques of saphenofemoral ligation in the reduction of neovascularisation and recurrence following surgery for primary varicose veins.

Method

One hundred and eighty-two patients (210 legs) with primary saphenofemoral junction incompetence were randomised to standard saphenofemoral ligation (transfixion with an absorbable suture) (SSL) or flush saphenofemoral ligation (oversewing with 4/0 polypropylene) (FSL). All legs underwent great saphenous vein stripping and multiple phlebectomies. Patients underwent assessment pre-operatively, and at six weeks, one year and two years postoperatively with clinical examination, duplex imaging and completion of the Aberdeen Varicose Vein Symptom Severity Score (AVVSSS).

Results

A total of 168 patients (199 legs) attended for assessment at six weeks, 154 patients (181 legs) at one year and 148 patients (172 legs) at two years. At two years, recurrent varicose veins were visible in 30 legs (33%) in the SSL group and 26 legs (32%) in the FSL group (p=0.90). Neovascularisation was present in 20 legs (22%) in the SSL group and 15 legs (19%) in the FSL group (p=0.57). Nine cases of neovascularisation in the SSL group and five in the FSL group directly resulted in clinical recurrence (p=0.37). There was no statistically significant difference in quality of life scores between the groups at any follow-up.

Conclusion

Flush ligation of the saphenofemoral junction does not significantly decrease the rate of neovascularisation or clinical recurrence compared with standard transfixion ligation.

Duplex ultrasound appearances at one year after endovenous laser ablation

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Objective

To evaluate the incidence, pattern and significance of venous reflux after endovenous laser ablation.

Method

Reflux or recanalisation after endovenous laser ablation (EVLA) might indicate potential for clinical varicose vein recurrence. Whilst early reports for EVLA have been favourable, longer-term outcome remains unknown. Duplex ultrasonography was performed 12 months after EVLA. The incidence, site and clinical sequelae of reflux/recanalisation were analysed. The energy delivered was compared between the groups, as this has been reported as a significant factor.

Results

One hundred and nine duplex scans were reviewed. In 47 there was no reflux/recanalisation. In 62 reflux/recanalisation was reported. Groin tributary reflux was found in nine cases, distal reflux in 23, and recanalisation of the treated vein was reported in 35. In five cases this was reported as total recanalisation, although in two of these the vein was competent. Further treatment of the 35 cases in which recanalisation was found was as follows: sclerotherapy = 7, repeat EVLA = 2, surgical saphenofemoral disconnection = 1. Mean energy delivery was similar between the groups with or without reflux/recanalisation (62.62J/cm; SD 12.5 vs 59.9J/cm; SD 13: Wilcoxon, p=0.22), or within the different reflux categories (ANOVA, p=0.18).

Conclusion

Reflux or recanalisation 12 months after EVLA were surprisingly common. However, clinically significant events were rare. Although commonly found on duplex (35/109), partial recanalisation does not appear to be of major clinical significance in the first year. Laser energy delivered was not found to be a factor in duplex evidence reflux or recurrence.

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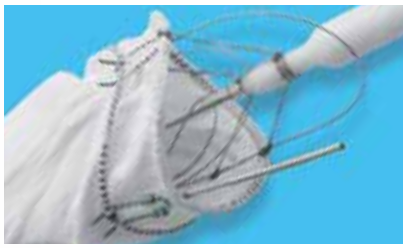

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Endovenous laser ablation (EVLA) for short saphenous vein (SSV) incompetence

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Objective

Open surgery for SSV incompetence can lead to incomplete surgery if the saphenopopliteal junction (SPJ) is not correctly identified. Other possible complications are sural nerve damage and wound infection. The objective is to present EVLA as a safe alternative to open surgery for SSV incompetence.

Method

Data prospectively collected on patients who had EVLA for varicose veins were obtained from our dedicated vascular registry. From April 2005 to June 2007 we performed EVLA on 204 limbs for varicose veins. Patients were offered an outpatient appointment at six weeks post-op. Subsequent follow-ups were by phone consultation with further outpatient appointments as indicated.

Results

Thirty-five (17%) patients (24 female) with a mean age 47 years (range 23-80 years) had EVLA for SSV incompetence. The mean length of vein treated was 18cm (range 5-33cm). The mean total energy given was 993J (range 45-55J/cm). Twenty-five procedures were done as day case and ten as inpatient. Fifteen were done under general anaesthetic and 20 under local anaesthetic. Obliteration of the SPJ was confirmed by ultrasound in all patients postoperatively. There were no intra-operative complications. Two patients developed superficial thrombophlebitis that resolved with non-steroidal anti-inflammatory therapy. One patient developed a haematoma that completely resolved in two weeks. There was no incidence of sural nerve injury or wound infection.

Conclusion

We believe that EVLA is a safe minimally invasive alternative for the surgical treatment of SSV incompetence.

Foam sclerotherapy improves venous function in limbs with chronic venous ulceration

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Objective

Superficial venous surgery has been shown to improve venous function in limbs with chronic venous ulceration. The aim of this study was to assess the haemodynamic effects of duplex-guided foam sclerotherapy in limbs with superficial venous reflux and chronic venous ulceration.

Method

Ulcerated limbs (CEAP 5 and 6) with superficial venous reflux were treated with foam sclerotherapy and compression bandaging. Venous duplex imaging was performed before and following completion of treatment. Venous function of limbs was assessed by measuring venous refill times (VRTs) before and following completion of treatment using digital photoplethysmography.

Results

Thirty-four limbs (CEAP 5: n=24, CEAP 6: n=10) were treated with foam sclerotherapy between July 2006 and June 2007. Complete occlusion of the treated veins occurred in 25/34 limbs (74%) after one treatment and in 30/34 (88%) limbs after second treatment. Following foam sclerotherapy, VRT increased in 29/34 limbs. Overall median (range) VRT increased from 11.5s (3-26) to 21s (8-48) after foam sclerotherapy ($p<0.001$, Wilcoxon signed rank test). Of the ten active ulcers at the time of sclerotherapy, seven healed (70%) at a median of three weeks.

Conclusion

Our early experience of foam sclerotherapy for chronic venous ulceration shows an improvement in venous function following treatment. Whilst longer-term follow-up is required to see whether this is maintained, sclerotherapy may be an acceptable alternative to surgery in this group of patients.

Early result of a randomised controlled trial of treatment for intermittent claudication

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Objective

To compare angioplasty (PTA), a supervised exercise programme (SEP) and PTA+SEP in the treatment of intermittent claudication (IC) due to femoropopliteal disease.

Method

Over a six-year period, 178 patients (108 men, median age 70 years) with femoropopliteal lesions suitable for angioplasty were randomised to: PTA, SEP or PTA+SEP. Patients were assessed prior to and at one and three months post-treatment. ISCVS outcome criteria (ankle pressures, treadmill walking distances) and quality of life (QoL) questionnaires (SF36 and VascuQoL) were analysed.

Results

All groups were well matched at baseline. Twenty-one patients withdrew. Intra-group analysis: all groups demonstrated significant clinical and QoL improvements (Friedman test, $p<0.05$). SEP (59 patients, 8 withdrew) - 62.7% of patients (n=32) improved following treatment (20 mild, 9 moderate, 3 marked), 27.4% (n=14) had no improvement and 9.8% (n=5) deteriorated. PTA (60 patients, 3 withdrew) - 66.6% of patients (n=38) improved following treatment (19 mild, 10 moderate, 9 marked), 22.8% (n=13) had no improvement and 10.5% (n=6) deteriorated. PTA+SEP (59 patients, 10 withdrew) - 81.6% of patients (n=40) improved following treatment (10 mild, 17 moderate, 13 marked), 14.2% (n=7) had no improvement and 4.0% (n=2) deteriorated. Inter-group analysis: PTA+SEP produced a much greater improvement in clinical outcome measures than PTA or SEP alone, but there was no significant QoL advantage (Kruskal Wallis test, $p>0.05$).

Conclusion

Supervised exercise should be the primary treatment for patients with claudication and where possible PTA should be supplemented by a SEP.

The use of ACE inhibitors and angiotensin-II receptor antagonists is associated with a significant reduction in AAA growth rate, independent of arterial pressure

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Objective

To correlate abdominal aortic aneurysm (AAA) growth rates and the use of antihypertensive medications in patients under ultrasound surveillance for AAA disease.

Method

Between 1985 and 2007, as part of a screening programme, prospective records of AAA diameter, blood pressure and a questionnaire containing a full drug history were recorded at each visit for patients under aneurysm surveillance. Drug histories were retrospectively entered into a comprehensive database. AAA growth rates were calculated (using a quadratic model adjusting for baseline diameter and rate of curvature) for subgroups defined by the period of time exposed to a class of antihypertensive therapy.

Results

To date, 487 patients with 3141 surveillance visits and 1787 new drug episodes have been analysed (475 male, mean age 73, median anteroposterior diameter 50mm, average follow-up four years and nine months). The growth rate of patients whilst taking antihypertensive therapy was 1.63mm per year compared to 2.42mm per year ($p<0.001$). All classes of antihypertensive therapy saw a reduction in growth rate except for α-adrenoceptor blockers. When adjusted for mean arterial pressure over time and other risk factors (smoking, hypercholesterolaemia, ischaemic heart disease, diabetes and family history), ACE inhibitors and angiotensin-II receptor anatagonists were independently associated with significant reductions in aneurysm growth rate (1.37mm per year [p=0.004], 0.43mm per year [p=0.001], respectively).

Conclusion

These results provide evidence that ACE inhibitors and angiotensin-II receptor antagonists slow AAA growth beyond what can be expected from their antihypertensive effects. If confirmed this could alter the use of antihypertensive medication in AAA patients.

Buttock claudication and erectile dysfunction after internal iliac artery embolisation in patients prior to endovascular aortic aneurysm repair

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Objective

Embolisation of the internal iliac artery (IIA) is used to extend the applicability of endovascular aneurysm repair (EVAR) in cases of challenging iliac anatomy. Pelvic ischaemia is a complication of the technique, but reports vary as to the rate and severity. This study reports our experience with IIA embolisation and compares the results to other published series.

Method

Our vascular unit database was used to identify patients who had undergone IIA coil embolisation prior to EVAR. Data were collected from hospital case notes and telephone interviews. Thirty-eight patients were identified, of which 29 were contactable by telephone. A literature search was performed for other studies of IIA embolisation.

Results

In our series, buttock claudication occurred in 55% (16 of 29 patients) overall; in 52% of unilateral and 63% of bilateral embolisations. New erectile dysfunction occurred in 46% (6 of 13 patients) overall; in 38% of unilateral and 60% of bilateral embolisations. The literature review identified 18 relevant studies, and the results were pooled with our own to give 634 patients in total. Buttock claudication occurred in 28% overall (178 of 634 patients); in 31% of unilateral and in 35% of bilateral embolisations (p=0.46, Fisher's exact test). New erectile dysfunction occurred in 17% overall (27 of 159 patients); in 17% of unilateral and in 24% of bilateral embolisations (p=0.33, Fisher's exact test).

Conclusion

Buttock claudication and erectile dysfunction are frequent complications of IIA embolisation and patients should be counselled accordingly.

An evaluation of radiation exposure in endovascular abdominal aortic aneurysm repairs

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Objective

Endovascular stent grafting has become a popular option for the repair of abdominal aortic aneurysms (AAA). However, radiation exposure associated with this procedure remains to be comprehensively evaluated. Our aim was to evaluate the average radiation exposure associated with a single procedure and subsequently to estimate the total radiation exposure resulting from the complete therapeutic course.

Method

Dose area product (DAP) was recorded for 100 endovascular abdominal aortic aneurysm repairs, carried out using the same model of mobile C-arm device. Corresponding entrance surface doses (ESD) and effective doses were derived from values of DAP, accounting for all variables involved.

Results

The mean DAP was 385.9Gycm^2 at 24.7 minutes screening time, corresponding to a mean ESD of 2.68Gy (which exceeds the threshold for skin damage of 2Gy) and a mean effective dose of 33.27mSv. Over the course of a year, each patient would have an estimated exposure in excess of 61.2mSV (an equivalent of 27 years of background radiation), accounting for the standard regime of pre- and postoperative screening CT scans.

Conclusion

Effective dose for a single procedure exceeds all annual recommended dose limits as recommended by the ICRP (International Commission on Radiological Protection) and represents a significant increase in cancer risk. Additionally, the risk for skin damage as determined by ESD is significant in many patients. These findings warrant a review of procedures involved in endovascular stent grafting for AAA with a view to minimising radiation exposure. This may be particularly pertinent for younger patients, who require longer periods of follow-up.

The effects of cilostazol in diabetic patients

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Objective

Cilostazol has been shown to improve walking distance in claudicants. The study aimed to assess the vascular and biochemical effects of cilostazol in diabetic patients with peripheral arterial disease (PAD).

Method

Diabetic PAD patients were prospectively recruited to a randomised double-blinded, placebo-controlled trial. Baseline clinical data were recorded following medical optimisation. Clinical assessment included measurement of ankle-brachial index (ABI), arterial compliance, peripheral trancutaneous oxygenation and treadmill walking distance. Neurological examination included the Toronto Clinical Neuropathy Scoring System (TCNS) and vibration thresholds (VT). Glucose homeostasis was assessed by fasting serum glucose, glycosylated haemoglobin and insulin levels along with lipid profiles. Quality of life (QoL) indices were recorded using multiple validated questionnaires. All tests were at baseline, six weeks and six months.

Results

Twenty-six patients (20 males) were recruited from August 2004 to August 2006 (overall median age: 66.5, range 37-79). Treatment limbs were demographically and medically matched. Patients who received cilostazol demonstrated a mean improvement in maximal walking distance at six weeks and six months, respectively (86.4% vs. 14.1%, p=0.05, and 143% vs. 23.2%, p=0.09). Arterial compliance and transcutaneous oxygenation improved at six months (p=0.035 and p=0.035). There was no significant difference in ABI, TCNS, VT assessments or alteration in glucose homeostasis between treatment groups. However, triglyceride levels were reduced in the treatment group at six weeks (p=0.048) and six months (0.034). QoL improved in the treatment limb (p=0.04) for the study duration.

Conclusion

Maximal walking distance is significantly improved by cilostazol with beneficial effects in arterial compliance, peripheral oxygenation, lipid homeostasis and quality of life.

Can the UK guidelines for stroke be effective? Attitudes to the symptoms of a transient ischaemic attack (TIA) amongst the general public and doctors

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Objective

UK Guidelines state that TIA patients require early investigation, and, where appropriate, carotid endarterectomy within two weeks to reduce the high early stroke risk. Compliance depends upon early patient presentation and rapid referral by physicians. This study assesses public attitudes to TIA symptoms and medical awareness of appropriate management.

Method

A questionnaire determined public attitudes (n=188) to TIA symptoms with three possible actions: A - medical advice only if recurrent; B - see GP as soon as possible; C - attend A&E the same day. General Practitioners (n=40) and hospital doctors (n=95) completed a questionnaire assessing their management of possible TIA symptoms.

Results

The public frequently selected option A for amaurosis (41%) and upper limb (UL) monoparesis (51%), sensory loss (68%), or paraesthesia (98%). Medical advice would be sought most often for slurred speech alone (A: 11%; B: 72%; C: 17%) or combined with (UL) monoparesis (A: 1%; B 55%; C 44%). Most physicians confirmed that these symptoms could represent 'carotid TIA' but many considered diverse symptoms (syncope, confusion, amnesia) as relevant. Medical trainees chose appropriate management more often than surgical trainees. Whilst most GPs would prescribe antiplatelet therapy, 25-40% would not refer first-time TIA patients, depending upon the presenting symptom.

Conclusion

A large proportion of the population does not recognise the importance of TIA symptoms and the need for rapid assessment to achieve maximal stroke prevention. This is compounded by deficiencies in the medical management of TIA. The guidelines for stroke will remain ineffective without public awareness campaigns and physician education.

Transcranial Doppler-directed intravenous glycoprotein IIb/IIIa receptor antagonist therapy to control transient cerebral micro-emboli

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Objective

Patients with transient focal neurological deficits, critical carotid stenoses and transcranial Doppler (TCD) ultrasound-detected micro-embolic signals (MES) have a significant risk of stroke. There is evidence that a high embolic load post-carotid surgery may result in strokes. We assessed the effect of tirofiban, a highly selective glycoprotein IIb/IIIa (GPIIb/IIIa) inhibitor, in suppressing MES in patients with symptomatic transient ischaemic attacks (TIAs) and postoperative carotid endarterectomy (CEA).

Method

Thirty-three patients with ongoing MES (13 symptomatic pre-operative, 19 postoperative, 1 both) were treated with tirofiban between August 2002 and March 2007. All patients had >70% carotid stenosis and underwent TCD monitoring during and after tirofiban therapy.

Results

With treatment, the MES rate decreased from a median (range) of 22 (4-260) pre-operatively and 81 (44-216) postoperatively to a median of 0 (0-9) ($p<0.0001$; Mann Whitney test) in both groups. This occurred rapidly (pre-operative: median 30 minutes; postoperative: median 45 minutes) and was well tolerated in all patients. There were no serious adverse effects with one haematoma requiring evacuation.

Conclusion

Cerebral micro-emboli appear to result from platelet aggregation on unstable carotid plaques or recently endarterectomised tissue. The aggregates are well controlled by GPIIb/IIIa antagonists which appear to offer a novel effective method of controlling MES with safe, symptomatic relief in pre- and postoperative patients undergoing carotid endarterectomy. Further study would be required to compare the relative efficacy of GPIIb/IIIa inhibitors and the established drug Dextran 40.

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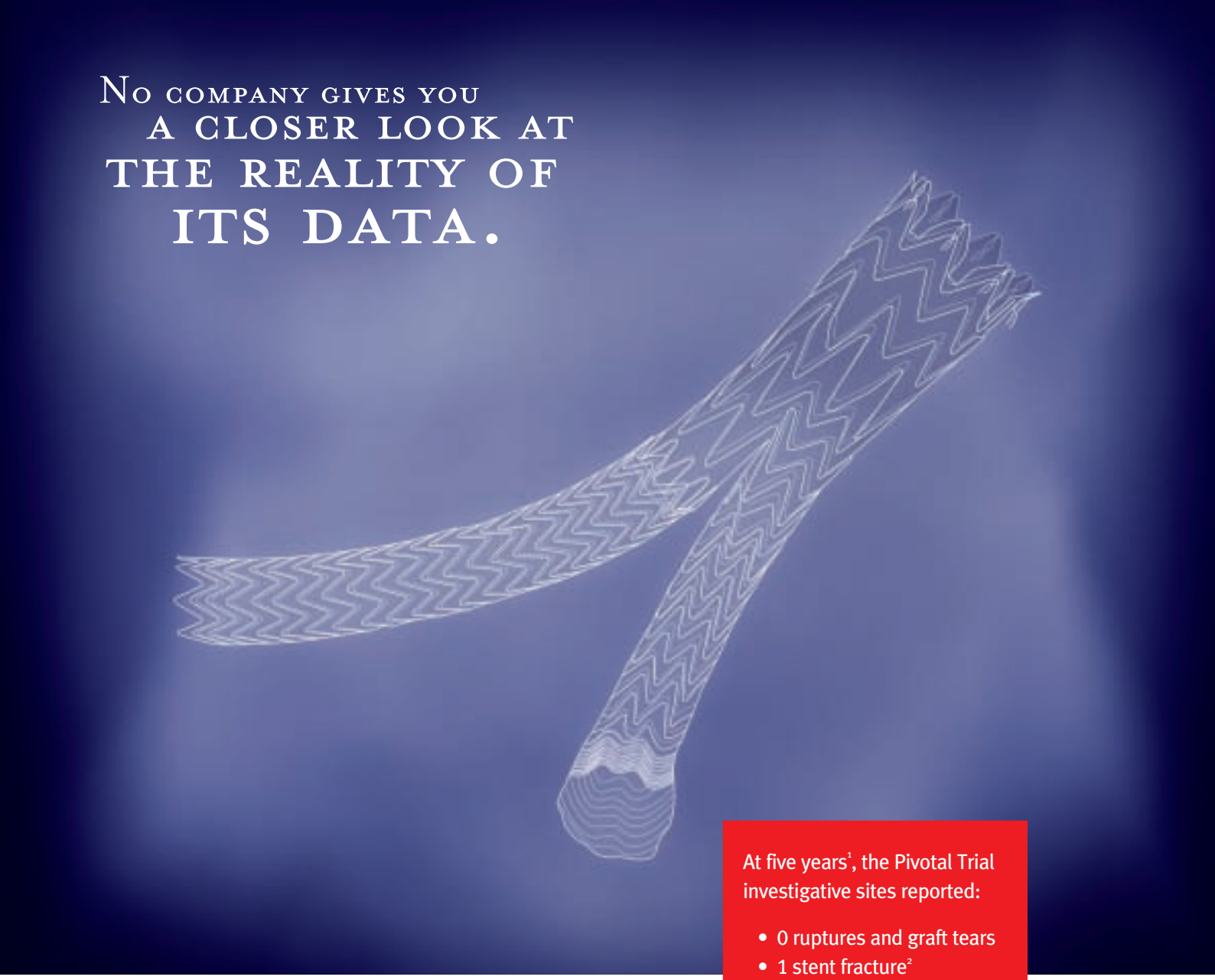

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1. Data through October 3, 2005 (n = 235).
2. One fracture was discovered by Gore during explant analysis; it was not reported by the Investigator.
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Can SF8 replace SF36 as quality of life analysis in patients with lower limb ischaemia?

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Objective

Generic quality of life (QoL) is a crucial outcome measure in patients with lower limb ischaemia (LLI) with the Short Form 36 (SF36) accepted as the gold standard instrument. We aimed to assess whether the new, shorter, simplified Short Form 8 (SF8) is sufficiently responsive to replace SF36 in LLI.

Method

One hundred and ninety-three patients, 135 men, median age 66 years (range 44-84 years) with LLI completed the SF36 and SF8. Patients were graded according to ISCVS standards, i.e. 30 mild, 52 moderate, 73 severe claudicants; 16 rest pain and 21 tissue loss. Both instruments assess the same eight QoL domains. Validity: convergent-divergent and construct validity were assessed for both QoL instruments. Reliability: test-retest reliability was assessed in a subgroup of 60 patients. Responsiveness: between grades of LLI was also analysed with non-parametric statistical tests.

Results

Validity: a) convergent-divergent validity. There was greater correlation between like domains of the SF36 and SF8 (0.594-0.792, $p=0.000$) than the non-like domains, suggesting good convergent-divergent validity; b) construct validity. The SF36 and SF8 demonstrated similar construct validity. Reliability: both QoL instruments were significantly reliable ($rs>0.7$). Responsiveness: increasing LLI resulted in a statistically significant deterioration in all eight domains of both the SF8 and SF36 ($p<0.05$, Kruskal-Wallis ANOVA).

Conclusion

The SF8 is a valid and reliable generic QoL instrument in patients with LLI. It demonstrates similar responsiveness as the SF36 in these patients and as it is simpler and quicker to complete, we suggest it to replace the SF36 as the gold standard generic QoL analysis in LLI.

Subintimal angioplasty (SIA) vs bypass surgery (BS) for critical lower limb ischaemia in patients with TASC C and D lesions: a five-year prospective observational comparative study

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Objective

Appropriate revascularisation results in high patency and significantly reduces amputation rates. Our primary aim is to evaluate SIA and BS in maintaining amputation-free survival. Secondary endpoints are to investigate whether SIA reduces the risk of major adverse events (MAE) and enhances quality time without symptoms of disease or toxicity of treatment (Q-TWiST) in a cost-effective manner.

Method

From 2002-2007, 1276 patients were referred with peripheral vascular disease. We performed a prospective parallel group comparison of 334 primary procedures (SIA=206, BS=128) in 309 patients (nSIA=190, nBS=119) with CLI. Mean age (SIA 73+/-13yrs vs. BS 70+/-14yrs, p=0.127) and comorbidity severity scores (p>0.05) were similar between groups. However, 55% were females in the SIA group vs. 35% in BS, p=0.0005.

Results

Five-year amputation-free survival rates were similar: SIA (72.9%) vs BS (71.2%), p=0.9765. Five-year primary patency was: SIA 72.8% vs BS 65.3%, p=0.7001. Five-year assisted primary patency was improved with SIA, 82.8% vs BS 68.2%, p=0.1061. Five-year secondary patency rates were SIA 85.9% vs 72.1%, p=0.2624. Mean number of procedures (+/- SD) for SIA was 1.19+/-0.50 and for BS was 1.10+/- 0.41, p=0.078. Risk of MAE (p<0.002) and length of hospital stay (LOS) (LOS SIA 14+/-16 days vs. LOS BS 24+/-23 days, p<0.0001) were significantly reduced with SIA. Q-TWiST was significantly improved (p<0.001) and cost per Quality Adjusted Life Years (QALY) (p<0.05) was reduced with SIA. Five-year survival rates were comparable.

Conclusion

SIA enhances symptom-free survival rates without MAE and further Q-TWiST. It is cost effective, allowing for a high patient turnover without compromising QALY and is technically successful in most patients. SIA is the gold paradigm in the management of CLI.

Fast-track open aortic surgery: reduced postoperative stay with a goal-directed pathway

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Objective

Open aortic aneurysm repair is traditionally associated with an extended hospital stay. The aim of this study was to examine the feasibility of reducing postoperative stay through the implementation of a fast-track, goal-directed, clinical pathway for elective open aortic surgery.

Method

A fast-track clinical pathway for aortic surgery was introduced in a regional vascular unit in September 2005. The pathway has daily goals and discharge is targeted for all patients on the third postoperative day. This study compares 30 consecutive discharges of unselected patients undergoing elective infrarenal aortic surgery following introduction of the pathway to the 30 consecutive cases preceding its introduction. Reasons for prolonged hospital stay were recorded.

Results

Six of 30 patients achieved discharge by day three. The median hospital stay reduced from nine (range 4 to 17 days) to five days (range 2 to 12 days) following introduction of the pathway. There was one readmission within 30 days and no complications attributable to the pathway implementation. Cardiac complications and home planning were the most common causes of delayed discharge.

Conclusion

Postoperative stay in patients undergoing standard elective open infrarenal aortic surgery can be safely reduced with the introduction of a goal-directed pathway.

Does aneurysm rupture risk decrease in patients who are anatomically suitable for endovascular repair?

EVAR 2 Trial Participants

Imperial College, London

Objective

To investigate factors associated with large abdominal aortic aneurysm (AAA) rupture in patients anatomically suitable for endovascular repair but considered unfit for open surgery.

Method

Patients randomised in the EVAR 2 trial (n=404 by August 2004) were followed up until December 2005 for AAA rupture. Patients without rupture were censored as non-emergency AAA repair, death, loss to follow-up or known emigration, or end of follow-up period. Cox regression, adjusted for baseline covariates, was used for analysis of pre-specified factors (gender, diabetes, initial AAA diameter, aneurysm neck and sac lengths) associated with rupture.

Results

The overall rupture rate in EVAR 2 was 15.6 (95% CI 11.6-20.6) per 100 patient years and for those with 6+ cm aneurysms, 17.4 (95% CI 12.9-23.4) per 100 person-years, appeared to be significantly lower than that from meta-analysis of other studies, 27.0 (95% CI 21.1-34.7) per 100 person-years, p=0.026. Patients with shorter neck lengths appeared to have a higher rupture rate than those with longer necks, but this was of borderline significance p=0.10. Patients with diabetes also showed a trend towards lower rupture rates. The covariate baseline statin usage appeared to reduce the rupture rate. Post-hoc analysis showed that patients taking statins at baseline had half the rupture rate of non-statin patients, HR 0.52 (95% CI 0.27-0.98), p=0.044, which was similar after adjustment for other baseline covariates.

Conclusion

This study supports the hypothesis that patients anatomically suitable for endovascular repair have lower AAA rupture rates than patients who are not anatomically suitable for endovascular repair. The possibility that statins reduce rupture rates should be tested prospectively.

Recurrence and neovascularisation two years after varicose vein treatment: a comparison of surgery and endovenous laser ablation (EVLA)

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Objective

Recurrent varicosities following previous treatment are common with neovascularisation being a major cause after conventional surgery. This study compares recurrence rates and the incidence of neovascularisation following surgery (saphenofemoral [SF] ligation, stripping above-knee great saphenous vein [GSV]) and above-knee GSV EVLA.

Method

One hundred and twenty-nine consecutive limbs (118 patients - 72 females, 46 males, median age 48 [32-68]) underwent treatment (group A: surgery, n=60 limbs; group B: EVLA n=69 limbs) for primary SF/GSV reflux over 17 months and were reviewed at a mean of 24 months (range 18-30). Clinical varicose vein recurrence, duplex ultrasound-detected groin neovascularisation and patient satisfaction (visual analogue scale) were recorded. Statistical analysis used the Fisher exact test to compare recurrence and neovascularisation rates, and unpaired student t-tests to compare patient satisfaction.

Results

Recurrence rates at two years were: group A 4/60 (6.6%); group B 5/69 (7%), (p=0.631). The causes of recurrence were: group A: mid-thigh perforator n=2, residual GSV with neovascularisation n=2; group B: GSV recanalisation n=3 (all received <50J/cm laser energy), mid-thigh perforator n=1, new anterior saphenous vein reflux n=1. Neovascularisation was detected in 11/60 (18%) of group A and 1/69 (1%) of group B, p=0.001. Patient satisfaction was 90% and 88%, respectively (p=0.37).

Conclusion

Although there was no difference in the frequency of recurrent varicose veins following conventional surgery or EVLA at two years, the incidence of neovascularisation, a predictor of future recurrence, was significantly lower following laser therapy. Further, current recommendations to deliver ≥70J/cm laser energy should reduce the risk of recanalisation and recurrence in EVLA patients.

A randomised placebo-controlled double-blind trial to evaluate ezetimibe combination therapy on abdominal aortic aneurysm wall proteolysis and inflammation

Dawson J, Choke E, Cockerill G, Loftus I, Derodra J, McFarland R, Loosemore T, Thompson M

St George's Vascular Institute, St George's Hospital, London

Objective

HMG-CoA reductase inhibitors (statins) have the potential to retard abdominal aortic aneurysm (AAA) growth. Statins have been associated with suppression of aneurysm formation in a murine model, and reduced concentrations of aneurysm wall MMP-9 and IL-6 in humans. These effects may be consequent upon a reduction in serum LDL-C. Ezetimibe is a novel cholesterol absorption inhibitor used in combination with statins to lower LDL-C. This study aimed to compare the biological effects of combining ezetimibe and simvastatin with the actions of simvastatin alone on parameters relevant to aneurysm expansion.

Method

In a double-blinded randomised controlled trial, nine patients scheduled for elective open AAA repair were randomised to simvastatin 40mg + ezetimibe 10mg daily and nine to simvastatin 40mg + placebo. Total concentrations of TNF-a, IL-1b, IL-6, IL-8, IL-10, MMPs-1,-2,-3,-8,-9,-12,-13, TIMP-1 and TIMP-2 were measured in plasma, aortic wall homogenates and tissue culture explants. Median trial duration was 30 days.

Results

Two patients in the placebo arm underwent EVAR precluding aortic samples. There were no significant differences in plasma levels between groups. There were significant reductions in aortic wall MMP-9 ($p=0.016$) and IL-10 ($p=0.03$) concentrations associated with ezetimibe use. Tissue culture revealed a significant reduction in MMP-1 ($p=0.02$), MMP-2 ($p=0.02$) and IL-6 ($p=0.02$) in the ezetimibe group.

Conclusion

These results suggest that ezetimibe combination therapy reduces aortic wall proteolysis and inflammation, key processes that drive AAA expansion. A larger RCT is justified focusing on aneurysm growth rates in small AAA.

Surgical versus endovascular reconstruction for chronic mesenteric ischaemia

Davies RSM, Wall ML, Silverman SH, Vohra RK, Bradbury AW, Adam DJ

University Department of Vascular Surgery, Heart of England NHS Foundation Trust, Birmingham and the Department of Vascular Surgery, University Hospital Birmingham NHS Foundation Trust, Birmingham

Objective

To compare the immediate and long-term outcomes of surgical (SR) and endovascular (ER) reconstruction for chronic mesenteric ischaemia (CMI).

Method

Retrospective review of consecutive patients who underwent SR or ER for CMI in three vascular surgery units in the UK between 1996 and 2006. Early (<30 days) outcome (technical success, major morbidity, mortality, length of hospital stay) and late (>30 days) outcome (symptom recurrence, vessel/graft patency, re-intervention, mortality) were assessed.

Results

Twenty-six patients underwent 32 mesenteric arterial reconstructions: SR (n=18), ER (n=14). Comorbidity and anatomical distribution of mesenteric disease did not differ between the two groups. Forty-three of 58 (74%) diseased arteries were revascularised. Twenty-six vessels underwent SR (bypass [n=25], endarterectomy [n=1]) for stenosis in 14 (54%) and occlusion in 12. Seventeen vessels underwent ER for stenosis in 15 (88%) and occlusion in two. Peri-operative mortality for SR and ER was 6% and 0%, respectively (p=0.56). Hospital stay was significantly shorter following ER compared to SR (mean, 4.5 vs. 14.8 days; p=0.0003). ITU admission was significantly more likely following SR compared to ER (p<0.0001). Mean (range) follow-up for SR and ER was 30 (1-94) months and 33 (0-135) months, respectively. At two years, there was no significant difference between SR and ER for primary patency (83% vs. 50%), secondary patency (87.5% vs. 62%), clinical patency (90% vs. 79%) and re-intervention-free survival (65% vs. 57%).

Conclusion

ER is associated with significantly shorter hospital stay and comparable long-term outcome as SR and represents an acceptable first-line treatment option in appropriately selected patients with CMI.

Driving advice given by vascular surgeons: a survey of Vascular Society Members

Gohil R, Russell DA, Johnson BF

Academic Vascular Surgery Unit, Hull Royal Infirmary, Hull

Objective

It is a legal requirement of doctors to assess all patients' fitness to drive based on DVLA guidelines. Our aim was to assess the current advice given to patients by vascular surgeons and compare this to national guidelines.

Method

A postal survey was performed of 438 members of The Vascular Society. Six questions covered a spectrum of scenarios commonly seen in vascular surgical practice. Options were provided in line with DVLA guidelines for domestic driving.

Results

The response rate was 52.5% (n=230). Thirty-three (14.3%) gave no driving advice for any scenario, whereas no respondents gave answers in keeping with guidelines for all scenarios. Two hundred and twenty-six (98.3%) gave correct advice for claudicants. Patients with a single TIA were stopped from driving inappropriately in 40.3% of cases, whilst those with multiple TIAs were allowed to drive inappropriately in 27.0%. By contrast patients with a 5.5cm AAA were prevented from driving inappropriately in 6.6% of cases, whilst those with a 6.5cm AAA were incorrectly allowed to drive in 74.6%. Advice given to patients with a peri-operative MI was highly variable (appropriate in 32 [19.9%]).

Conclusion

Current driving advice given by members of The Vascular Society is highly variable. Patients with TIA are likely to be given correct or over-cautious advice, whereas those with aneurysmal disease are more likely to be allowed to drive against DVLA guidelines. Further education of vascular surgeons regarding driving advice and, perhaps, re-appraisal of guidelines, are required.

The value of graft surveillance in infra-inguinal bypasses performed with small diameter veins

Mofidi R, Sanjay P, Flett M, Nagy J, Griffiths GD, Stonebridge PA
East of Scotland Vascular Network, Ninewells Hospital, Dundee

Objective

Within the context of a surveillance programme, we sought to assess the impact of pre-operative diameter of the venous conduit on re-intervention rate and its relationship to outcome following infra-inguinal vein graft bypass.

Method

Consecutive infra-inguinal vein bypasses between January 2001 and December 2006 were reviewed. All patients underwent pre-operative vein mapping and measurement of vein graft diameter (VGD). Grafts were classified into those with VGD <3.5mm or grafts with VGD >or equal to 3.5mm. All patients were enrolled in a duplex surveillance programme. The association between VGD and re-intervention rate was assessed. Graft patency and amputation rates were compared.

Results

Three hundred and seventy-seven bypasses were followed up for a median of 21 months (range: 2-67). Forty-month primary, primary assisted, and secondary patency were 73%, 79% and 83%. VGD was <3.5mm in 139 grafts (36.9%) and >or equal to 3.5mm in 238 (63.1%). A higher proportion of smaller vein grafts (32.3%) required re-intervention to maintain graft patency compared with larger conduits (20.2%), (Chi 2=7.7, p<0.001). VGD (odds ratio: 2.87 [95% CI: 1.63-3.81], [p<0.001]), smoking (odds ratio: 1.83 [95% CI: 1.39-3.20], [p=0.02]) and the type of bypass (odds ratio: 1.86 [95% CI: 1.49-2.47], [p=0.02]) were variables associated with a higher re-intervention rate. There was no difference in graft patency (p=0.13) or amputation rates (p=0.35) between the two groups, stratified on the basis of VGD.

Conclusion

Use of smaller vein grafts is associated with a higher re-intervention rate. Provided that these grafts are surveyed and where necessary repaired, the use of smaller vein grafts is successful and expands the availability of autogenous conduit for infra-inguinal arterial reconstruction.

Abdominal aortic aneurysm screening - why wait?

Al-Allak A, Thomas JE, Davies S, Hedges AR

Bro-Morgannwg NHS Trust, Bridgend

Objective

The introduction of an abdominal aortic aneurysm screening programme, without additional funding, has been explored. The Trust serves a population of 270,000. The aim of this study was to review feasibility, costs, results and patient satisfaction two years after introduction.

Method

Trust and LHB approval were obtained. 'Second offer surgery' funded two ultrasound machines. The vascular consultant and nurse specialist performed the scans and the vascular secretary undertook all administration. A patient satisfaction questionnaire was sent to a random selection of 150 patients with screened normal aortas and all patients who had screen-detected aneurysms. The non-pay costs for running the programme were calculated.

Results

In the two-year period, 2946 patients were invited for an abdominal ultrasound (2620 attended). Sixty-five aneurysms were discovered; seven underwent surgery. There was a 71% return of questionnaires - 100% thought the programme a good idea; 99% were happy with the organisation and would encourage others to attend. Of those with screen-detected aneurysms, 100% were happy that they had attended, but 20% felt their lifestyle was subsequently affected. Non-pay costs totalled £1115.46 per year.

Conclusion

We have demonstrated that it is possible to introduce a screening programme with no additional resources. The programme has been accepted by patients. Patients with screen-detected aneurysms were happy to have had them discovered but one in five felt their lifestyle was affected as a result of the diagnosis. Annual non-pay costs of running the programme are minimal.

The role of pre-operative angiography in the morphological assessment of ruptured abdominal aortic aneurysm

Badger SA, O'Donnell ME, Arya N, Loan W, Hannon RJ, Lau LL, Lee B, Soong CV

Vascular and Endovascular Surgery Department, Belfast City Hospital, Belfast

Objective

Angiographic aortic aneurysm neck visualisation is an alternative to computerised tomography (CT) for endovascular aneurysm repair (EVAR), with time-saving potential in the emergency setting. We evaluated angiography in the assessment of aortic neck morphology as a complementary or replacement investigation.

Method

Patients admitted for elective or emergency EVAR were assessed by pre-operative CT and intra-operative angiography. The proximal and distal aortic neck diameters, and neck length were measured. Measurements were expressed as mean (± standard deviation) and compared by Student's t-test. The correlation between measurements was assessed by Pearson's correlation coefficent.

Results

Thirty-five patients (20 male) were assessed from August 2003 to January 2005 for elective (26) and emergency (9) EVAR. The mean proximal neck diameter was 22.33mm (±3.21) on CT, or 21.22mm (±4.25) on angiography (p=0.01). The mean distal neck diameter was 23.03mm (±3.15) on CT, or 22.75mm (±4.67) on angiography (p=0.29), while the mean neck length was only slightly greater on angiography relative to CT (24.78mm ± 10.21 vs. 23.45mm ± 8.51; p=0.76). There was a close relationship of results for the proximal neck diameter (r=0.67, p>0.0001), distal neck diameter (r=0.74, p>0.0001) and neck length (r=0.44, p=0.02). The stent grafts deployed were oversized by 26.76% (±14.84) relative to the CT measurements, and 33.66% (±15.64) relative to angiographic measurements.

Conclusion

The use of on-table angiography appears to be an acceptable alternative to determine the neck diameter and thus the stent graft size. Further research is needed to ascertain the ultimate success of this investigative modality in the emergency setting.

Endovascular vs. open repair of acute abdominal aortic aneurysms - a meta-analysis

Sadat U, Walsh SR, Boyle J, Hayes PD

Addenbrooke's Hospital, Cambridge

Objective

To compare the results of emergency open repair of acute AAA with that of endovascular repair.

Method

A systematic literature search was performed to identify series that reported comparative outcomes. PUBMED, Embase, the RCT register and all relevant major journals were searched independently by two researchers. Twenty-three studies were identified, out of which 22 studies were eligible. The outcome measures were 30-day mortality, ITU stay, hospital stay, blood loss and operative duration.

Results

The total number of patients in the pooled data was 7040, of which 730 belonged to the e-EVAR group. e-EVAR was associated with a significant reduction in mortality (pooled odds ratio 0.624; 95% CI 0.518 to 0.752; $p<0.0001$). The EVAR group had a significantly shorter ITU stay (pooled effect size estimate -0.70 days; 95% CI -1.05 to -0.35 days; $p<0.0001$) and significantly reduced hospital stay (pooled effect size estimate -0.33 days; 95% CI -0.50 to -0.16 days; $p=0.0001$). EVAR was also associated with a significant reduction in blood loss (pooled effect size estimate -1.88 litres; 95% CI -2.49 to -1.27; $p<0.0001$) and reduced procedure time (pooled effect size estimate -0.65 hours; 95% CI -0.95 to -0.36 hours; $p<0.0001$).

Conclusion

There has been debate about the benefit of EVAR in ruptured AAA. This meta-analysis indicates clear benefits to the selected group of patients undergoing this minimally invasive procedure. There is a reduction in high mortality, prolonged intensive care requirement, total hospital stay, large blood loss and operative duration which are historically associated with open repair.

EVAR for emergency AAA: not an easier option!

Richards T, Goode S, Kuhan G, Chandrashaker S, Tennant W, MacSweeney S, Braithwaite B

Queen's Medical Centre, Nottingham

Objective

In 2004 the National Vascular Database mortality for ruptured AAA was 41%. We wished to assess the results of EVAR for the management of emergency AAA.

Method

One hundred and forty-two patients underwent emergency EVAR. Patient age, size of AAA and mode of presentation were compared. Mortality at 24 hours, 30 days and 12 months were compared. Causes of mortality were also compared in particular cases where EVAR led to death.

Results

There were 51 acute ruptured AAA and 91 acute symptomatic AAA. Women (26) were older than men (116) (average age 77 v 73, p=0.009). There was no difference in average AAA size (median 7.2cm) between men and women or mode of presentation. Mortality figures at 24 hours, 30 days and one year were: 16%, 29%, 49% for ruptured AAA and 12%, 24%, 37% for symptomatic AAA. Mortality from ruptured AAA was greater at one year, p=0.046. Overall causes of death by 30 days were as expected (bleeding 8, cardiac 5, organ failure 12, other 3); a further six deaths occurred due to EVAR failure (persistent endoleak, renal artery occlusion, graft thrombosis). A further four patients later died (3-7 years) following graft failure.

Conclusion

EVAR for emergency AAA is associated with increased complications related to graft deployment. If these problems are overcome then mortality may be lower.

Annual General Business Meeting Agenda

Thursday 29 November 2007 at 5-6pm
Manchester Central Convention Complex

1. Apologies
2. Minutes of AGM 2006
3. Any other business
4. President's Report: Professor George Hamilton
5. Honorary Secretary's Report: Mr Jonothan Earnshaw
6. Honorary Treasurer's Report: Mr David Berridge
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
12. Vice-President's Report: Mr Michael Gough
13. Election of Officers: Result of ballot for Ordinary Members of Council

Honorary Secretary's Report

Jonothan Earnshaw

It seems hardly possible that almost a year has gone by since I took over the reins from Peter Lamont. Once over the initial collywobbles, I realized how well I had been prepared in my shadow year. Peter left the Society in great order, and with the support of Jeanette and Audley in the secretariat office, the transition phase has been smooth and problem free. The Vascular Society owes a great debt to Peter, and I wish to add my considerable personal thanks as he now becomes Chair of the Professional Standards Committee and the Specialist Advisory Committee for General Surgery.

But time moves on and the issues continue to evolve. This year we have grappled with four main themes: the future direction of the Society, the thorny issue of endovascular training, trying to push forward a national aneurysm screening programme and modernising the National Vascular Database. I will leave the latter to Tim Lees, who is ably steering the Society through a big change in the provision of NVD services, and Cliff Shearman will bring news to the Society about new training schemes at the AGM. I will update you on the other issues in the following report; please remember that this is written in September and I will provide further news in the pre-AGM newsletter and at the AGM.

Future of the Vascular Society

Since I became the Honorary Secretary, I have had many comments from members about the future direction of the Society. I reproduce a typical letter as follows:

> *"I am very concerned about the (slow) rate at which vascular surgery is separating from general surgery. The trainees are separating at a faster rate and will be pure vascular surgeons only represented in authority by general surgeons in their hospitals. We have made great efforts here to become vascular specialists, going from two general/vascular surgeons to five vascular surgeons with vascular on call. We are, however, still part of general surgery and their budget. Our Trust seems to have no interest in vascular surgery. Certainly it is interested in orthopaedics and coronary stenting, and even bariatric surgery, as they make money, but not the expensive treatment of the elderly, often as an emergency. It may almost be seen that this evolution to vascular specialization is led by general surgeons, who cannot get away from vascular surgery quick enough. So whose toes are we likely to tread on? I keep feeling that the rest of the universe has a more advanced vascular service than the UK."*

The Association of Surgeons has produced a report concerning emergency surgery that explicitly expects vascular surgeons to leave emergency general surgery rotas. Similarly, there are a number of problems, alluded to above, as new consultants lack the expertise in general abdominal surgery of their forebears a decade ago. This has caused fragmentation of general surgery emergency rotas and difficulties in many smaller hospitals. Our agreed

position to share training with radiology trainees emphasises the importance of interventional training, meaning less time can be spent in general surgery. Everything points inevitably towards a split from general surgery, particularly for training.

So, your Council asked me to send you a questionnaire about the future of vascular surgery which you should have completed in August. The initial results were reported in the pre-AGM newsletter, and, at the AGM, there should be more news about our discussions with Professor Peter Rubin, Chair of the Postgraduate Medical Education and Training Board, and The Royal College of Radiologists.

No doubt the debate will be controversial; everyone hates change when it concerns them directly. I do remind all members to consider that we are now planning for a future in ten to fifteen years, after many current consultants have retired. It is important we design a career that is practical and sustainable for young colleagues, and perhaps even more importantly, that it offers the best treatment for their patients. I look forward to engaging with you on the debate.

A voice for vascular disease

We have also been trying to increase the profile of The Vascular Society. We want the Society to be the first point of contact for all those who need information or advice about the management of vascular diseases. In a document entitled "A voice for vascular disease", your Council recommended increasing our profile through judicious engagement with the media. In partnership with the Communications Department at The Royal College of Surgeons of England we have sought contact with various sections of the media to highlight vascular issues. We have also joined with the Circulation Foundation to contact politicians; I, and other Officers, have had meetings with several of them to try and push the agenda of vascular disease. We are trying to politicise The Vascular Society, to use the organization to influence national bodies. In particular, we have used this to highlight aneurysm screening, though as yet there is a deafening silence from the Department of Health about any future plan.

Although we are at an early stage I hope you will start to see VS Officers appearing as spokesmen on appropriate matters in national media and at national committees. The plan is to reinforce this with six press releases per year based on topical issues such as aneurysm screening or stroke, or based around our national meetings including the AGM. Your comments about this would also be welcome.

As we try and push the current agenda, publication of the new plan for stroke prevention and treatment is likely to have significant implications for vascular specialists. The recommendation that the patients who suffer a TIA should be offered carotid endarterectomy or stenting within 48 hours is likely to require a major re-organisation of vascular services.

Finally, I am sad to have to report that Audley Farrell left the secretariat office in September to take up a position in Human Resources. For many of you, he will have been the first point of contact with the secretariat on the telephone. Always good humoured and efficient, Audley has worked tirelessly for the Society for six years and he leaves with my personal thanks and best wishes.

Honorary Treasurer's Report

David Berridge

I am pleased to report another good year for your Society. The Annual General Meeting in Edinburgh produced a profit of over £90,000 and the Endovascular Forum contributed a further £10,000 to both The Vascular Society and to the BSIR, respectively.

A complete review of the expenses of the Society was conducted in conjunction with Jeanette Robey. Combined with the self-administration of our membership database, this resulted in a reduction of administration costs from £216,820 in 2006 down to £197,876 in 2007.

This year we have also changed the arrangements with our accountants to ensure that both the VSGBI Ltd and The Vascular Society accounts are fully audited.

The National Vascular Database is also undergoing radical changes. Tim Lees will be discussing this in the Audit and Research Committee report. This represents a substantial investment over the next three years (£65,000) in the joint collaboration with Dr Foster. To ensure satisfactory cash flow the fee to Dr Foster will effectively be spread over three payments and will be offset by two AGMs. The Society does have sufficient funds to cover this initiative, and this does not put us at immediate risk, even if we lose Major Sponsorship or have a poor profit at an AGM. The Audit and Research Committee would like to enhance the NVD with additional facilities in the future, for which further funding is being sought.

In order to keep pace with the development and maintenance costs, and also the fact that some membership changes have occurred since self-administration of our database, it is proposed that the annual membership subscription is increased. The proposed changes are shown below.

AGM venues in Bournemouth 2008 and Liverpool 2009 have been successfully negotiated and booked to ensure that we can achieve our necessary operating profit.

The Vascular Society website (www.vascularsociety.org.uk) has been revised, by our webmaster Kieren Hasler and Jeanette Robey. I hope the new site gives a fresh modern appearance and is more user friendly. Please send any comments to The Vascular Society Office and we will attempt to modify the site accordingly.

The Circulation Foundation has reinstituted its grant-giving programme due to a substantial legacy (£100,000), a donation from George Davis (£25,000) and a further grant of £15,000 from Medtronic. The Circulation Foundation report will highlight future fundraising events attempting to increase the income further.

Many thanks to our five Major Sponsors: B.Braun, Diomed, Le Maitre, Vascutek and WL Gore, for their continued support.

Finally, I would like to add my thanks to Mr Audley Farrell, Executive Assistant, who left the Society at the end of September to progress his career.

Membership categories	Subscription Rate 01.01.07	01.01.08
	£	£
Ordinary	167	175
Affiliate	95	100
Overseas	95	100
Associate	95	100
Senior	35	35
Honorary	Nil	Nil

VSGBI Ltd. - Profit and loss account

Year ended 31st December 2006

	2006 £	2005 £
Turnover	362,415	373,790
Cost of sales	(281,808)	(267,404)
Gross Profit	80,607	106,386
Administrative expenses	(20,853)	(17,507)
Other operating income	48,807	21,409
Operating Profit	108,561	110,288
Interest receivable	874	465
Profit on ordinary activities before taxation	109,435	110,753
Tax on profit on ordinary activities	-	-
Profit on ordinary activities after taxation	109,435	110,753
Deed of Covenant	(109,435)	(110,753)
Profit for the financial year	-	-

The Vascular Society
Income and expenditure accounts
Year ended 30th June 2007

The Vascular Society	2007 Unrestricted Funds £	2007 Restricted Funds £	2007 Total £	2006 Total £
Incoming resources				
Subscriptions	83,280	-	83,280	77,690
Deed of covenant	109,435	-	109,435	110,753
Sponsorship	50,000	-	50,000	50,000
Donations and other income	6,590	-	6,590	14,149
Activities to generate funds:				
Bank interest	7,828	-	7,828	4,913
Total incoming resources	**257,133**	**-**	**257,133**	**257,505**
Resources expended				
Costs of generating funds:				
Research costs	21,781	-	21,781	30,519
Direct charitable expenditure:				
Donations:	6,750	-	6,750	9,750
Management and administration of the charity				
Travel and subsistence	26,998	-	26,998	24,667
Management expenses	979	-	979	588
Office costs	14,102	-	14,102	27,494
Salaries and wages	79,764	-	79,764	80,597
Tutor costs	7,500	-	7,500	3,750
Printing	7,251	-	7,251	4,302
Computer support costs	5,894	-	5,894	7,117
Stationery, postage and photocopying	8,723	-	8,723	11,384
General expenses	3,345	-	3,345	5,382
Prizes	1,000	250	1,250	1,000
Audit and accountancy	7,050	-	7,050	4,685
Insurance	595	-	595	617
Legal and professional	-	-	-	683
Depreciation	4,201	-	4,201	4,285
Loss on disposal of fixed assets	1,693	-	1,693	-
	169,095	**250**	**169,345**	**176,551**
Total resources expended	**197,626**	**250**	**197,876**	**216,820**
Net incoming resources for the year	**59,507**	**(250)**	**59,257**	**40,685**

The Vascular Society

Income and expenditure accounts

Year ended 30th June 2007

Circulation Foundation

	2007 Unrestricted Funds £	2007 Restricted Funds £	2007 Total £	2006 Total £
Incoming resources				
Donations and other income	36,997	40,000	76,997	53,813
Legacies	100,000	-	100,000	14,000
Activities to generate funds:				
Fundraising income:-				
- Golf day	17,832	-	17,832	9,307
- Marathon	8,515	-	8,515	3,100
- Annual dinner	18,653	-	18,653	35,160
- Other	2,919	-	2,919	-
Bank interest	11,479	-	11,479	7,033
Tax recoveries and interest	7,699	-	7,699	1,609
Total incoming resources	**204,094**	**40,000**	**244,094**	**124,022**
Resources expended				
Costs of generating funds:				
Fundraising expenditure:-				
- Golf day	8,663	-	8,663	4,929
- Marathon	1,650	-	1,650	1,469
- BVF dinner	10,178	-	10,178	23,050
- Other	4,560	-	4,560	3,219
	25,051	-	25,051	32,667
Direct charitable expenditure:				
Research awards	30,000	28,000	58,000	6,000
Management and administration of the charity				
Travel and subsistence	1,402	-	1,402	1,819
Office costs	1,893	-	1,893	2,926
Salaries and wages	34,542	-	34,542	37,202
Printing	12,773	-	12,773	6,349
Stationery, postage and photocopying	1,083	-	1,083	4,358
General expenses	869	-	869	1,098
Recruitment fee	-	-	-	6,345
Computer support costs	891	-	891	1,844
Prizes	750	-	750	750
Audit and accountancy	2,350	-	2,350	1,540
Insurance	168	-	168	218
Legal and professional	2,633	-	2,633	1,116
	59,354	**-**	**59,354**	**65,565**
Total resources expended	**114,405**	**28,000**	**142,405**	**104,232**
Net incoming resources for the year	**89,689**	**12,000**	**101,689**	**19,790**

Audit & Research Committee Report

Chairman: Tim Lees

National Vascular Database

In the last newsletter I reported that we were negotiating with Dr. Foster to agree a specification for hosting the National Vascular Database (NVD). These negotiations are now complete and by the time of the AGM the new web-based system for the NVD will be available. This has been funded by the Society. Initially this system will be used for the index procedures of aortic aneurysm repair, infrainguinal bypass, and amputation. Data entry for carotid endarterectomy (CEA) will continue with the current system until completion of the UK and Ireland carotid audit and you will be informed when this changes. Until that time you should continue to enter your NVD carotid data into the current webtool provided by Dendrite.

I encourage you to enter your data on-line. However, for those centres wishing to continue to use their current data collection system there is an import facility into the new system if your data conform to the standard defined in the Data Dictionary available on the VSGBI website (www.vascularsociety.org.uk/committees/audit.asp). If you choose this method of data entry please submit your data to the system at regular intervals so that real-time data can be used for national analysis and problems with data format are dealt with at an early stage. If you enter live data on-line you will also have an export facility available.

There are facilities for basic data analysis available on the web tool. In addition, there are plans to incorporate more complex statistical analysis, risk modelling and HES data comparisons. Over the next few years there will be increasing pressure to monitor and publish outcomes of surgery for all specialties and I believe that it is important for us to collect and own our data so that we can have confidence in its accuracy. I encourage all VSGBI members to submit their data to the NVD. I can also reassure you that the data in the NVD remains the property of the VSGBI and any publications arising from it will only be with the agreement of the Committee and VSGBI Executive.

Carotid audit with the Royal College of Physicians and the Healthcare Commission

This began in December 2005 as a collaborative project between the Clinical Effectiveness and Evaluation Unit of the RCP, the Healthcare Commission and the VSGBI. An organisational survey was conducted at the start of the audit and repeated 12 months later. The results of these two surveys have now been published and distributed to the surgeons who participated. Their data were combined to feed back at Trust level, via the Trust Chief Executives. An interim report incorporating data from the first 16 months of the study has also been published and distributed to all consultant surgeons (n=392) known to undertake CEA in the UK & Ireland. Electronic copies of the reports are available by email request from ceaaudit@rcplondon.ac.uk. The fundamental objective is to examine service provision and

organisation, resource issues, delays to treatment and geographical variations. It is not intended to produce individual surgeon outcome data.

The study is ongoing, so please continue to contribute your data ensuring that you complete the outcome and follow-up data for each patient you registered. The contract with the Healthcare Commission included a recruitment target of 4000 patients and we are well on our way to achieving this. I would like to take the opportunity of thanking all those who are contributing to this audit, and again to emphasise that by contributing to this audit you are submitting your carotid data directly to the NVD.

New Lay Member

I am very pleased to welcome a new Lay member, Peter Barker, to the Audit and Research Committee of the VSGBI. Peter has a background in civil engineering and management, and he has also worked for VSO. Before taking early retirement he worked in local Government and is well versed in the legislative requirements and pressure of targets versus budgets. He is keen to support our work and will be invaluable to us in providing a lay perspective on committee matters.

Vascunet

Chris Gibbons has continued to forge links with the International Vascular Community on behalf of the Audit and Research Committee via Vascunet. This year has seen the publication of a new international collaborative document on aortic aneurysm surgery by Dendrite Clinical Systems Ltd on behalf of the Vascunet group.

Feedback and collaboration

If you have any feedback on the NVD or any other issues please contact me (Tim.Lees@nuth.nhs.uk, tel: 0191 223 1269), or Sara Baker (see below). For the protection of the members we cannot release NVD data to individuals but we welcome proposals for collaborative projects. I receive regular requests from members for various national vascular surgical statistics and by introducing the changes outlined above members will now have access on-line to this information through the NVD.

Endovascular Registries

The Committee actively supports contributions to the endovascular registries, details of which are on the website, and this is a requirement from NICE. In the new webtool for AAA data entry, there are also fields relating to EVAR and laparoscopic AAA surgery and it is a NICE requirement that these are completed by surgical teams performing these procedures.

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Training & Education Committee Report

Chairman: Cliff Shearman

The main issue facing the Training and Education Committee this year has been how to create opportunities for trainees to gain experience in imaging and endovascular techniques. The statement of intent to develop a joint training pathway in vascular surgery and interventional radiology issued by the working group of the Royal Colleges of Radiologists (RCR) and Surgeons (RCS) (Edinburgh, England and Glasgow) was an enormous step forward. This has stimulated a lot of work to develop plans of how to implement suitable training programmes for trainees in interventional radiology and vascular surgery. The essence of these programmes is that they will run collaboratively between radiologists and surgeons. Ultimately it is envisaged that trainees would pass through modules based on a curriculum and assessed in a similar way to the recently launched Intercollegiate Surgical Curriculum Project (ISCP). The Training and Education Committees of The Vascular Society and the British Society for Interventional Radiology (BSIR) have worked together this year and a consolidated curriculum has been produced. This has already involved a lot of work and there is more to do. It is planned to meet with the Postgraduate Medical Education Training Board (PMETB) later this year before proceeding further to check that this approach is likely to be successful.

The Colleges have been supportive of this idea. In the short term we need flexibility to allow vascular trainees to have these posts recognised in their current programmes. Both the Joint Committee on Higher Surgical Training (JCHST) and General Surgery Specialist Advisory Committee (SAC) have been supportive of the concept. We are now beginning to approach the Schools of Surgery who will ultimately deliver the training programmes locally.

In the meantime I think we are all acutely aware of the current trainees who need to get these skills that they will require to be competitive for consultant posts. With this in mind it is hoped that the RCR/RCS working group will sanction the development of pilot programmes. These training posts would allow current trainees in interventional radiology and vascular surgical training to gain meaningful and educationally valuable experience in the areas they will be involved in as vascular specialists of the future. The posts will also act as pilot schemes for the future development of run-through training and the curriculum can be tested by the

trainees in these posts. I hope by the time you read this the announcements of these posts will have been made.

Waquar Yusuf has collated a registry of training courses available. It is becoming apparent with the reduction of study leave funds that the larger, more expensive courses are becoming less easy to fill and it is time to develop and rationalise courses. He will be working on this over the next year in collaboration with the Raven Department of Education.

The format of the VSGBI Educational Bursary has changed this year. There will be two Bursaries up to a maximum of £500 available to Affiliate Members of the Society in their last two years of training. The awards will be made annually and announced at the AGM. Details are available on the VSGBI website

Last year's Vascular and Endovascular Masterclass was a great success with 82 participants. The feedback was good and the concept of looking at difficult clinical situations has been continued with this year's Masterclass "Scary Moments." The Faculty on the Masterclass has a hard job and I am enormously grateful to everyone who has contributed. I also hope those of you who attended enjoyed it and found it useful. Any ideas about future themes or topics would be gratefully received.

Professional Standards Committee Report

Chairman: Peter Lamont

The membership of the Professional Standards Committee has been revised by Council and new members appointed since last year's AGM. The Committee is now composed of the following statutory members:

- Chairman (appointed by Council)
- President Elect
- Immediate past-President
- Chairman of Audit and Research Committee
- Two Senior Members (appointed by Council)

The President is also involved *de facto* where serious professional issues arise.

The Society maintains a list of respected Senior Members who might be called upon by the College or other responsible body to offer advice or opinion on matters of professional conduct. A number of these members have retired since the list was first drawn up four years ago, and so one task of the Committee this year has been to recommend a revised list of around 25 Senior Members to Council. Should any member feel the need for external advice regarding matters of professional conduct, then please do contact either myself or the Secretariat for assistance.

The Society has robust governance arrangements to deal with any underperformance identified on the National Vascular Database. Recently an issue has arisen where data from outside the Society on the NHS HES database (used by Dr. Foster) have identified apparently poor performance in a number of Trusts as part of a research project being submitted for publication in a peer-reviewed journal. Acting on the advice of the journal editors, the authors have contacted the Professional Standards Committee to alert them to their findings. Notwithstanding the recognised unreliability of the HES database, we have written to the Trusts involved asking them to check their results and offering assistance, as per the governance

protocol designed originally for the NVD. Reassuringly, a number of the Trusts involved had already recognised their poor outcomes from their own data and had reconfigured or otherwise modified their services to address the problem. Members are reminded that, for better or worse, HES data are the figures used by the NHS and it is up to each individual surgeon to ensure that the data being submitted from their Trust to HES are as accurate as possible by either directly inputting or validating the codes themselves.

Circulation Foundation Report

Chairman: Sir Peter Bell

It is now over a year since the launch of the Circulation Foundation and the appointment of our fundraiser, Terrie McCann. Money has been steadily flowing into the Foundation and allowed us, for the first time in many years, to offer a substantial grants programme. The grants on offer included the Circulation Foundation Research Fellowship, worth £15,000, and two grants of £5,000 to allow members to travel elsewhere from their own centre and obtain vital endovascular training. A grant of £5,000 has also been given to the Society for Vascular Technology. In addition to this money, George Davies of the company *per una* has generously given the Foundation £25,000 a year for five years to fund a fellowship in memory of his mother, Mary Davies. This year, half of this money will be used to fund a research project to be carried out by Professor Annie Anderson in Dundee to look at the content of various substances in food. This will hopefully allow us to get involved with companies to stamp our logo of approval on the food in exchange for a fee. The other £12,500 is available for a research project.

Over 60 applications were received and I am pleased to announce that the following projects will receive funding from the Circulation Foundation:

- **The Circulation Foundation Research Fellowship** *In vitro* and *in vivo* therapeutic effects of erythropoietin in critical limb ischaemia - Mr TK Ho
- **The Mary Davies Research Fellowship** An investigation into carotid atherosclerotic plaque instability - Mr MJ Bown
- Finding the healthy meal - an innovative endorsement system to help the consumer - Professor A Anderson
- **Travel grants to learn endovascular techniques** - Mr G Roche-Nagle, Mr P Flora

The Foundation also gave out its annual award in memory of Owen Shaw in March. A preliminary report from the team has already been put together and news of their results will be available next year.

The assistance we are obtaining from George Davies will continue next year with a new project to launch a range of women's sportswear with the Circulation Foundation logo via Marks and Spencer. Profits from the sale of this sportswear will be shared with the Circulation Foundation and should allow us to make the public more aware of what we do, whilst providing valuable money for further grant support.

Terrie McCann has been active in trying to get trusts and companies to donate money and has been successful in obtaining £15,000 from Medtronic to publicise abdominal aortic aneurysm screening and knowledge about vascular disease in general. If she approaches you for contacts please give her your help.

We hope also to appoint someone from The Vascular Society Council to act as a liaison person between Terrie and the Council and in this way promote a smoother running of the organisation. If we wish to be successful in future it is vital that members of the Society embrace the Circulation Foundation and support it personally. One way that we wish to take the Foundation forward in the next year is to ask surgeons at various centres, starting with the Council members, to provide us with the names of patients who would be willing to start a patient organisation and raise money locally. This will have a number of important spin-offs and once again publicise the importance of vascular disease. Any other ideas that you may have to raise money with local events would be appreciated and I would ask the Council members if they could lead the way by holding functions in their own area to help to raise money. An example of how to do this is the golfing weekend organised in Leeds by David Berridge and Julian Scott which was very successful. The annual dinner held at the Merchant Taylors' Hall in London was again a great success and we would like this to continue as an annual event. Many people helped but I would like to thank Andrew May for once again obtaining so many great raffle prizes and John Wolfe for organising the meeting on aneurysm screening before the dinner. However, it is important that we try to improve the attendance at this annual meeting and dinner, and also to encourage potential supporters to attend. Next year's dinner will be held on Friday 9th May, at Vinopolis, London - please keep this date free and consider bringing a group of friends along. Invitations and further details will be available at the CF stand.

The first year of the Circulation Foundation has been successful and I am confident that the organisation will be raising large amounts of money in future to supply the obvious need for grant money that exists in the vascular community. Please support us and do what you can to help with this project.

The Circulation Foundation would like to thank the following Members of The Vascular Society for their donation this year

Mr Ademola Akomolafe
Professor Sir Peter Bell
Mr Paul Burns
Mrs Linda De Cossart
Mr Ian Franklin
Mr Michael Gough
Mr Simon Hardy
Mr Shane MacSweeney
Mr David Mitchell
Professor Julian Scott
Mr Kevin Varty
Mr Kenneth Woodburn
Mr Munther Aldoori
Mr David Berridge
Mr Rod Chalmers
Mr Richard Downing
Mr Simon Fraser
Mr Gareth Griffiths
Mr David Harvey
Mr Adrian Marston
Mr Deji Olojugba
Professor Cliff Shearman
Ms Lucy Wales
The Society for Vascular Technology
Mr Roger Baird
Mr Bruce Braithwaite
Mr Richard Corbett
Mr Jonothan Earnshaw
Mr Andrew Garnham
Professor George Hamilton
Professor Michael Horrocks
Mr Andrew May
Mr David Reilly
Mr Malcolm Simms
Mr David Williams
Mr Jonathan Beard
Professor Kevin Burnand
Mr Alun Davies
Mr Robert Edmondson
Mr Chris Gibbons
Mr Ashok Handa
Mr Tim Lees
Mr Mark McCarthy
Mr Paul Renwick
Mr Peter Taylor
Mr John Wolfe

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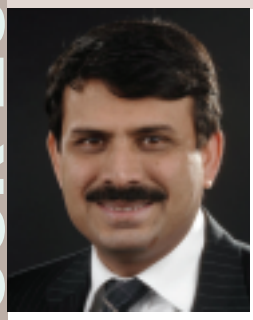
Vascular Tutor's Report



Waquar Yusuf

I am pleased to have inherited a high quality portfolio of vascular courses. The facilities at the Raven Department of Education are undergoing major renovation and will enhance the quality further. The first phase is nearly complete and the next course on the aortic arch, upper limb and head and neck vessels will take place in the new state-of-the-art dissection room. The feedback from these courses confirms the value of cadaver dissection for learning and practising vascular procedures. Despite the cost involved, such courses will become more important with the changes in training opportunities and limited learning of anatomy at both undergraduate and postgraduate level.

Vascular surgical trainees are keen to receive more formal training in endovascular procedures. The Training and Education Committees of The Vascular Society and the British Society for Interventional Radiology are developing a pilot scheme for joint training posts. I intend to work closely with the radiologists to develop courses which would meet the needs of vascular trainees in this particular area.

One of the priorities for the Raven Department is to streamline the core skills courses in all specialties at the ST1 and ST2 level and link them to the new curriculum. Vascular surgery may be heading towards a specialty status, but at present it remains under the umbrella of general surgery. The core skills in vascular surgery are therefore relevant to trainees at ST3 level onwards. However, it is important that the courses for ST1 and ST2 trainees in general surgery have some vascular component. It has been agreed that the core skills in emergency general surgery will include scenarios for the early management of ruptured aortic aneurysm and the ischaemic leg.

I am grateful for the valuable advice that I have received from many members of the Society. I would encourage others to send their suggestions about the courses. I would also like to thank the Rouleaux Club for helping with the survey of trainees to obtain their views on the vascular courses.

One of the main challenges being faced is the limited amount of time and money available for trainees to attend courses. It is unlikely that the Deaneries and Trusts will be able to increase these allocations in the near future and I recognise the need for subsidising the courses.

Finally, I would like to thank the staff at the Raven Department for their hard work and all the colleagues who have so generously given their time and support.

Chief Executive's Report

Jeanette Robey

For the Society's secretariat, this year has been one of change and new developments. The administration of the Society's membership is now undertaken solely by the secretariat and we are grateful to those colleagues who have renewed their membership for this year, and completed a Direct Debit Mandate to ensure their future continued subscription. Although this initiative has resulted in a significant cost saving for the Society, the loss of some Members during the changeover process has unfortunately led to a drop in income. We hope that these Members will rejoin the Society in due course.

Consideration has been given during the year as to how to improve communication with Society Members and ensure they are kept fully informed of developments within the Society. Jonothan Earnshaw and I have redesigned the Society's newsletter so that it now contains more 'news' reports from your Council. We hope that Members find this helpful and we would welcome any comments and suggestions for future articles.

As a result of administering our own membership database, it is now possible to send regular e-mails to all Members, which is not only cost effective but also a more direct method of communication. It is important that Members keep us updated with any changes in their contact details so we can be sure that they continue to receive information from the Society. We will try to avoid bombarding you with unnecessary e-mails, and will only use this facility to inform you of important information.

This year saw the introduction of the amendment to the Society's Memorandum and Articles, passed at last year's AGM, to allow the President to be elected two years prior to taking office. We welcome Mr Peter Taylor who takes office as Vice-President in November 2007, and Professor Cliff Shearman who will become Vice-President Elect in November 2007. It is hoped that this new development will enable incoming Presidents to become fully conversant with all current issues debated by Council well before their Presidential year.

The secretariat has undergone significant change this year. Audley Farrell, who worked for the Society for six years, left at the end of September to pursue a career in Human Resources. Following a workload review of the office, it was agreed to appoint a part-time Assistant and it is hoped that the post will be filled by the end of the year. This will create a significant cost saving for the Society and will help to maintain expenditure in line with the Treasurer's financial strategy.

Society of Vascular Nurses

The Society of Vascular Nurses was founded fourteen years ago and provides the only UK network for nurses working in the vascular field. Our primary role is to enable nurses to access information, education and resources to enable them to maintain and improve the quality of care for patients with vascular disease. Our membership spans all branches of the specialty and levels of experience, from staff nurses to nurse consultants. Members come from all areas of the UK. We also have a number of overseas members and will be represented at this year's annual conference of our sister organisation in Australia and New Zealand.

In order to achieve our aims, we support our members in a variety of ways: through production of a quarterly newsletter, via the society's website, via the provision of educational bursaries, through supporting regional group meetings, holding research awareness workshops and supporting research applications, and via the annual conference. We are assisted in our activities by our close links with organisations such as The Vascular Society, The Society for Vascular Technology, and the Venous Forum. We are regularly invited to contribute to national policy development in the vascular field. The SVN has also contributed to the shortlisting and judging for the Vascular category in the prestigious national 'Nurse 2007' awards, run by the Royal College of Nursing.

Our annual conference is held alongside those of The Vascular Society and The Society for Vascular Technology. The conference includes a mixture of guest presentations and original research papers for the James Purdie Prize, donated by the Circulation Foundation.

Jo Gibson
President

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The Society for Vascular Technology (SVT) of Great Britain and Ireland

The work of The Society for Vascular Technology continues to grow and develop. Current changes within the NHS and healthcare delivery as a whole, together with technological advances in ultrasound and other areas of medicine, have posed difficulties as well as challenges and opportunities in recent times, all of which we have endeavoured to embrace.

This year the Society has been particularly involved in on-going discussions with the Department of Health, the Federation of Healthcare Science, the NHS Workforce Development Team and Skills for Health on the topics of education, development and regulation of the healthcare science workforce.

The Education Committee continues to deliver the Society's professional examinations, accreditation and continuing professional development programme and to organise study days.

The Professional Standards Committee is involved in compiling a set of practice guidelines for the Department of Health and has also undertaken, along with The Vascular Society, to publish guidelines on interpretation criteria for the quantification of internal carotid artery stenosis.

The Society continues to publish a quarterly Newsletter. The website has been subject to on-going development including integration of the membership database.

We look forward to this year's AGM which takes place alongside The Vascular Society and the Society of Vascular Nurses.

Rachel Walker
President

Annual General Meeting

Manchester, Thursday 29th November 2007

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Vice President
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Past President Paul Brannigan, Belfast
Treasurer Jane Murray, Southport
Membership Secretary
Maggie Glass, Edinburgh
Conference Secretary
Grant Robinson, Denbighshire
Newletter Editor
Patricia Smart, London
Member without portfolio
Eleanor Walker, Bristol

Education Committee

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Practical Exam Co-ordinator
Bridget Boyle, London
Exam Registration
Steve Wallace, Liverpool
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Surinder Dhanjil, London
Officer responsible for exams (in Ireland) Nuala McMahon, Dublin
Examination Papers
Teresa Robinson, Bristol
Annette Quinn, London
Jacqui George, Plymouth
Study Day Organiser
Trevor Frankel, Wrexham
Newsletter Questions
Karen Gallagher, Edinburgh

Professional Standards Committee

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Members
Crispian Oates, Newcastle
Theresa Fail, Southampton
Pouran Khodabakhsh, Leicester,
Sonia Charles, Manchester
Mohamed Aslam, London
Keith Humphries, London

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The Venous Forum of the Royal Society of Medicine

The Royal Society of Medicine

Richard Corbett, our outgoing President, organised another excellent, well attended Venous Forum Symposium at the VSGBI annual meeting in November 2006 on new treatments for varicose veins. This included laser, radiofrequency and foam sclerotherapy. The meeting concluded with a lively debate on whether venous surgeons should now offer alternatives to conventional surgery.

I would like to take this opportunity of thanking Richard for all his hard work over the last two years during which time the Venous Forum has prospered. I would also like to welcome Jonothan Earnshaw who took over as our new President after the November meeting.

Our Annual General Meeting in Spring this year was organised by Frank Smith and was held in Bristol. In addition to free scientific paper presentations sessions, there were plenary sessions when we heard from a range of experts in the field of venous disease. "How I do it" lectures covered all aspects of new venous treatments and we had an excellent dermatology session. There was also a British Society of Sclerotherapists session on the use of foam sclerotherapy and the meeting concluded with a lecture on the management of arteriovenous malformations by Professor Rowland. I congratulate Frank on organising a very successful meeting.

There have been three new appointments to Council this year, Jonathan Michaels, Isaac Nyamekye, and Bruce Braithwaite, and also Teresa Robinson joins the Council as the SVT representative. Three further council members will be required following the November meeting, as Keith Poskitt, Gerry Stansby and Marianne Vandendriessche complete their term of office. I would like to take the opportunity of thanking them for their significant contribution to the Venous Forum. Mike Callam has also announced his intention to step down as Treasurer in November. Mike has been Treasurer for the last 4 ½ years and leaves the Venous Forum in a very healthy financial state.

The Forum's journal, *Phlebology*, continues to go from strength to strength under the editorship of Alun Davies.

Following discussions at the AGM, Jonothan Earnshaw has developed plans to increase the profile of the Venous Forum over the next two years. At the November meeting the VEnous INtervention project will be announced and I hope that you will be able to attend the Venous Forum Symposium to discuss and influence this exciting new development.

Tim Lees
Secretary

Principal Officers

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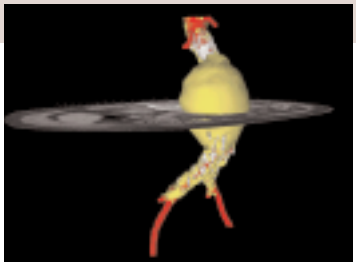
Endovascular Forum



2007 has been a year for planning and taking stock for the Forum. The next meeting will be on 20th June 2008 in Stratford upon Avon, and the programme is being organised along traditional lines. The Committee decided that it was too soon from the publication of the last Endovascular book to attempt an update this year. Several trials in carotid, EVAR and lower limb intervention are likely to come through 2008, and it was thought more appropriate to wait for the meeting after 2008 to re-visit this venture.

The constitution of the Endovascular Forum was re-considered by the Committee. Although the essential ethos was considered to be satisfactory, some areas were considered to be unclear and these should be more clearly defined. The proposed changes were then transmitted to the VS and the BSIR, and agreed by their respective Councils.

Particular attention was paid to offering SpRs and other trainees concessions for registration and accommodation for the June 2008 meeting. The costs for trainees are better than in previous years, and it is hoped that this message will be disseminated to trainees by VS and BSIR members.

The prospect of a common training stem for vascular surgical and vascular interventional registrars is to be debated and explored in depth at the 2008 meeting. This would be an added attraction for VS and BSIR trainees.

We look forward to welcoming you all to the 2008 Endovascular Forum.

Mohan Adiseshiah
Co-Chairman
Nick Chalmers
Co-Chairman

Principal Officers

Co-Chairmen

Mr Mohan Adiseshiah
Dr Nick Chalmers

Dr David Kessel
Professor Matthew Thompson
Mr Geoff Gilling-Smith
Dr Raman Uberoi

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The Joint Vascular Research Group

The Joint Vascular Research Group (JVRG) continues to flourish and I am honoured to have been appointed Chairman. To date, our research has successfully focused on observational collaborations. Last year saw the publication of two textbooks, *Rare Vascular Disorders* and the 2nd edition of *The Evidence for Vascular Surgery*. A paper entitled "A multicentre review of carotid body tumour management" has been accepted by the *European Journal of Vascular and Endovascular Surgery*.

In June, we held a successful meeting in the Peak District, where there was a unanimous vote to restructure the group. The climate of unfunded research is changing and we will be developing a new portfolio over the ensuing months with the emphasis on JVRG applications to major grant awarding bodies for significant funding of joint projects.

Our next meeting is in Manchester at 7.30pm on Tuesday 27th November 2007. If you are interested in joining the JVRG, please let Christine know. We are in a unique position as a group of interested individuals who have collaborated over research for many years. We are now able to apply for major funding and would encourage your involvement and support. We look forward to welcoming you to the JVRG in Manchester.

Mike Wyatt
Chairman

Contact details

Chairman

Mike Wyatt

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Group co-ordinator

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Rouleaux Club

The Rouleaux Club continues to go from strength to strength and now has over 160 members distributed throughout the United Kingdom. We aim to actively represent the views of trainees in vascular surgery and help to shape the future direction of training.

Our website, www.rouleauxclub.com, is free and open to all trainees who have a declared interest in vascular surgery. Training courses, meetings, fellowships and consultant posts are regularly advertised on this site. The website also allows us to canvas the opinion of vascular trainees on important training issues. We welcome submissions from organisations wishing to contact vascular trainees regarding events of interest to our members.

We meet twice a year, in November at The Vascular Society (VS) AGM, and in June after the Joint Vascular Research Group (JVRG) meeting. Both meetings are sponsored, informal and very enjoyable. We try to make the summer meeting a family event and strongly encourage members to bring their partners and children.

We have fostered very good links with the VS and JVRG, allowing an exchange of information, ideas and research projects between the most senior and most junior members of our specialty. We are aiming to enhance our links with radiology trainees over the coming year as they have many training issues in common with us.

We urge all trainees to join us, without cost, by logging on to the website. If you wish to become more involved or have suggestions regarding future activities of the club please email one of the Committee directly or via the website.

Marco Baroni
Rouleaux Club Secretary

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European Representative
Vikas Pandey

Exhibitors

28-30 November 2007
Manchester Central Convention Complex, Manchester

Alphabetical list of confirmed exhibitors as at 17th October 2007; number = 62

Company	Stand
Abbott Laboratories Ltd	8
Andrew Hodgson Associates	60
Ark Therapeutics	18
Atrium Medical International	48
B. Braun Medical Ltd	31
Bard Ltd	19
Bauerfeind UK	59
Biofisica UK Ltd	53
BITECIC Ltd	38
BSN Medical	45 & 46
BVM Medical Ltd	49
Credenhill Ltd	32
Cryolife Europa Ltd	29
Datascope	41
Dendrite Clinical Systems Ltd	23 & 24
Diomed	14
Edwards Lifesciences	54

Company	Stand
Huntleigh Healthcare	25
Innocoll Pharmaceuticals	17
Juzo UK Ltd	44
KCI Medical	35
LeMaitre Vascular	30
Lombard Medical Technologies plc	1 & 2
Lynton Lasers	11
Medi UK Ltd	50
Medtronic	26
Mentice	63
Molnlycke Healthcare Ltd	37
Nuros Ltd	42
Nuview Ltd	4
Olympus Keymed	43
Otsuka Pharmaceuticals (UK) Ltd	55
Perimed (UK) Ltd	5
Philips Medical Systems	33

Company	Stand
Pierson Surgical	3
Promed Ltd	21
Pulse Surgical Ltd	27
Scanmed Medical	34
Siemens Medical Solutions	58
Sigvaris Britain Ltd	16
Smith & Nephew Healthcare Ltd	10
Soering Ltd	52
Sonosite Ltd	15
STD Pharmaceuticals Ltd	51
Synergy Healthcare (UK) Ltd	28
TSL plc	47
Unetixs Vascular Inc.	57
Unitech	39 & 40
Vascutek	13
Viasys Healthcare	7
VNUS Medical Technologies UK Ltd	9 & 12
W L Gore	22
Wisepress	53a
York Medical Technologies Ltd	20
Zonare Medical Systems UK Ltd	36

Other exhibiting companies:

ACST Trial

Dr Foster Intelligence

GALA Trial

National Tissue Bank

tfm Publishing Ltd

The Vascular Society/Circulation Foundation

UKCEA

Vascular News

The Society would like to express their thanks to Edwards Lifesciences for their support of the Renal Access Symposium.

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

14-16 November 2008	Bournemouth International Centre
18-20 November 2009	Arena and Convention Centre, Liverpool

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