

VASBI ANNUAL MEETING 2013



26TH & 27TH SEPT 2013
LIVERPOOL HILTON

3 Thomas Steers Way
Liverpool, L1 8LW



**PROGRAMME & ABSTRACT
HANDBOOK**

www.vasbi.org.uk

WELCOME

Dear All,

I am very happy to welcome you all to VASBI 2013. This years meeting is set to be our largest to date. We have received a record number of abstracts this year and the standard is yet again very high. I am reminded that the meeting can only be a success thanks to your considerable input and I am very grateful for all your efforts.

Interactive electronic voting returns this year to allow everyone to get involved. Your opinion counts, particularly to our debating teams who will try to persuade you of their view points.

I am hugely grateful to our industrial sponsors whose support makes the meeting possible each year. This year our industrial partners have embraced VASBI's multidisciplinary approach to dialysis access by not just providing the excellent exhibition but by presenting their very own "Dragons Den" session where they will showcase their latest technologies. There are any number of new and exciting innovations on display in the technical exhibition and I encourage you to visit all of the stands.

VASBI continues to develop strong relationships with the vascular access society of Europe (VAS) and the vascular access societies of the Americas (VASA). We now have a position on VAS council which Mr Nick Inston (President Elect) will fill and all three societies plan to collaborate on training documents and guidelines for the future.

Sadly my time as president of the society has come to an end and my final duty will be to open this years meeting. I'll be handing the reigns over to Nick Inston who I'm sure will steer the society to success. I wish him very good luck. This means that following the meeting there will be elections held for council positions. Details will be available on the website and no doubt this will be discussed in the AGM report.

The Liverpool Hilton is the perfect venue for a conference and the hospitality is great. The city boasts fantastic nightlife, art galleries, shopping and of course football stadia. I'm sure you will enjoy your stay in Liverpool.

Once again, welcome and I hope you enjoy VASBI 2013.

Steve Powell
President VASBI

VASBI FACULTY LIST 2013

Dr Steve Powell	President - VASBI Consultant Interventional Radiologist	Royal Liverpool University Trust
Mr Nicholas Inston	Vice President - VASBI Consultant Renal Transplant Surgeon	University Hospitals Birmingham NHS Foundation Trust
Dr Sarah Lawman	Secretary - VASBI Consultant Nephrologist	Brighton and Sussex University Hospitals
Dr Peter Littler	Treasurer - VASBI Consultant Interventional Radiologist	Freeman Hospital Newcastle Upon Tyne
Dr Tom Veseley	President of VASA	Vascular Access Services, LLC St Louis
Mr Eric Chemla	Consultant Vascular Surgeon	St George's Hospital, London
Dr Nick Fardon	Consultant Nephrologist	Sheffield Kidney Institute
Dr Sandip Mitra	Consultant Nephrologist	Manchester Royal Infirmary, UK
Professor Jeffrey Lawson	Medical Director, Surgery CRU/ Program Director, Surgery Research	Duke University
Mr Paul Gibbs	Consultant Suregon	Queen Alexandra Hospital, Portsmouth, UK
Dr Joel Nwosu	Renal Unit	Queen Elizabeth Hospital, Birmingham
Mr Domenico Valenti	Consultant Vascular Surgeon	King's College Hospital, London
Mr Mick Kumwenda	Director of Renal Services	Glan Clywd Hospital, Wales
Dr Jason Wilkins	Consultant Interventional Radiologist	King's College Hospital, London
Mr Max Troxler	Consuultant Vascular Surgeon	Leeds Vascular Institute
Dr Jennifer Hanko	Consultant Nephrologist	Belfast City Hospital
Dr Rob Jones	Consultant Interventional Radiologist	University Hospitals Birmingham NHS Foundation Trust
Ms Stephanie Kershaw	Dialysis Access Nurse Specialist	Norfolk and Norwich University Hospital
Mr Danilo San Diego	Senior Staff Nurse Renaly Dialysis	Brighton and Sussex University Hospitals

VASBI 2013 - CONFERENCE DINNER FEATURING: MS FRANCESCA MARTINEZ



Francesca is an award-winning wobbly* comedian who has toured internationally with sell-out runs around the world. Francesca is a regular face on TV and is well-known for starring in five series of Grange Hill and a much-loved appearance on The Frank Skinner Show. Ricky Gervais is a big supporter of her work and wrote a starring role especially for her in Extras, opposite actress Kate Winslet. Currently, Francesca is in the middle of a 55-date UK/Ireland tour, is developing her own sitcom project, starting work on her first book, is a regular newspaper reviewer on TV and Radio and continues to deliver motivational and after dinner speeches across the globe. (* Oh yeah, she has mild cerebral palsy but she much prefers the word 'wobbly!')

08.00 - 09.15	REGISTRATION (GRACE SUITE FOYER)	
09.15 - 09.30	WELCOME & INTRODUCTION (GRACE SUITE 2/3)	VASBI PRESIDENT
09.30 - 11.00	GOLD STANDARDS IN VASCULAR ACCESS	CHAIRS: Dr Steve Powell & Dr Sarah Lawman
	<ul style="list-style-type: none"> • THE BEST WAY OF DIALYSING • THE STATE OF RESEARCH IN VASCULAR ACCESS • BIOENGINEERED SYNTHETIC VESSELS - A NEW BREAKTHROUGH 	SPEAKERS: Dr Sandip Mitra Mr Nick Inston Dr Jeffrey Lawson
11.00 - 11.30	COFFEE EXHIBITION & POSTERS (GRACE SUITE FOYER)	
SCIENTIFIC SESSION 1		
11.30 - 11.40	1. FAILED DIALYSIS ACCESS: A COMPARISON OF ENDOVASCULAR SALVAGE TECHNIQUES	
	Christopher A. Hilditch ¹ , Milind Nikam ² , Nicholas Chalmers ¹ . 1: Dept of Radiology, Manchester Royal Infirmary, Manchester, UK. 2: Dept of Renal Medicine, Manchester Royal Infirmary, Manchester, UK.	
11.40 - 11.50	2. DIALYSIS STATUS, RENAL FUNCTION AND EARLY FAILURE OF ARTERIOVENOUS FISTULAE	
	CY Kong ¹ , E Aitken ² , DB Kingsmore ² . 1: University of Glasgow, Scotland. 2: Department of Surgery, Western Infirmary, Glasgow, Scotland	
11.50 - 12.00	3. PACLITAXEL-COATED BALLOONS IN FISTULA.	
	Panagiotis M. Kitrou ¹ , Stavros Spiliopoulos ¹ , Konstantinos Katsanos ² , Maria Kyriakopoulou ¹ , Dimitris Karnabatidis ¹ , Dimitris Siablis ¹ . 1: Patras University Hospital, Patras, Greece. 2: Guy's and St Thomas' Hospital Foundation Trust, London, UK	
12.00 - 12.10	4. BIOCHEMICAL MARKERS OF ARTERIOVENOUS FISTULA FAILURE	
	Academic Vascular Surgical Unit, , Hull & East Yorkshire NHS Trust, Hull	
12.10 - 12.20	5. THE ROLE OF CIRCULATING ENDOTHELIAL PRECURSOR CELLS IN THE DEVELOPMENT OF ARTERIOVENOUS FISTULAE USED FOR HAEMODIALYSIS	
	Vesey AT1, Burden A2, Hillyard D2, Gajree S2, Glen J1, Aitken E1, Clancy M. 1: Renal Transplant Unit, Western Infirmary, Glasgow. 2: BHF Glasgow Cardiovascular Research Centre, University of Glasgow	
12.20 - 12.30	6. EFFECT OF ETHNICITY AND SOCIO-ECONOMIC FACTORS ON PRIMARY FAILURE RATE AND SURVIVAL OF SIMPLE ARTERIOVENOUS FISTULAE	
	A Wijewardane, A Murley, S Powers, C Allen, J Baharani, T Wilmink. Departments of Renal Medicine and Vascular Surgery, Heart of England Foundation Trust, Birmingham	
12.30 - 12.40	7. A META-ANALYSIS OF RANDOMISED TRIALS COMPARING SURGERY VERSUS ENDOVASCULAR TECHNIQUES FOR THROMBOSED FISTULAS AND GRAFTS	
	DC Ormesher, GA Antonioui, D Van Dellen, F Farquharson, N Chalmers, G Kuhan, S Pa. Department of Vascular and Endovascular Surgery, Manchester Royal Infirmary	
12.40 - 12.50	8. ARTERIOVENOUS FISTULA/GRAFT FAILURE RISK FACTORS. VASCULAR CALCIFICATION AND PREVIOUS AVF FAILURE ARE THE STRONGEST PREDICTORS OF FAILURE.	
	K Abdulnabi, N Danham, H Omer, I Karpha, M Howse, H Anijeet, J Alexander, P pai 1 S Powell ² , Mr Dan Ridgway ³ . The Royal Liverpool and Broadgreen University Hospital, Liverpool	
13.00 - 14.00	LUNCH EXHIBITION & POSTERS (GRACE SUITE FOYER)	
14.00 - 15.00	VIRTUAL MDT - COMPLEX CASE SESSION (GRACE SUITE 2/3)	CHAIRS: Dr Jennifer Hanko & Dr Jason Wilkins
15.00 - 16.00	INDUSTRY "OPEN MIC" SESSION (GRACE SUITE FOYER)	
16.00 - 16.30	COFFEE EXHIBITION & POSTERS	
16.30 - 17.30	DEBATES (GRACE SUITE 2/3)	CHAIRS: Dr Peter Littler & Mr Max Troxler
	<ul style="list-style-type: none"> • SURVEILLANCE IN VA IS A WASTE OF RESOURCES • RADIOLOGICAL SALVAGE OF THE CLOTTED FISTULA IS THE GOLD STANDARD 	SPEAKERS: For: Mr Paul Gibbs Against: Mr Mick Kumwenda
		SPEAKERS: For: Dr Tom Vesely Against: Mr Eric Chemla
17.30 - 18.00	SURGICAL & RADIOLOGICAL TRAINING IN VASCULAR ACCESS	CHAIRS: Mr Nick Inston & Dr Rob Jones
19.15	DRINKS RECEPTION (GRACE SUITE)	LIVERPOOL HILTON
20.00	CONFERENCE DINNER	FEATURING: Ms Francesca Martinez

09.15 - 10.30 ACCESS - WHAT'S GOOD FOR PATIENTS (GRACE SUITE 2/3)

- WHAT'S GOOD TO NEEDLE?
- IF YOU MUST PUT IN A CATHETER?
- A NEPHROLOGIST'S PERSPECTIVE

CHAIRS: Dr Sarah Lawman
& Dr Steve Powell

SPEAKERS: Ms Stephanie Kershaw
Dr Tom Vesely
Dr Nick Fardon

10.30-11.00 COFFEE EXHIBITON AND POSTERS (GRACE SUITE FOYER & GRACE SUITE 1)**SCIENTIFIC SESSION 2****11.00-11.10 9. ONGOING EFFICACY OF THE CATHETER CARE BUNDLE IN MINIMISING DEVICE INFECTIONS IN HAEMODIALYSIS**

Sister Helen Spooner, Dr J Nicholas. Newcross Hospital, Wolverhampton.

11.10-11.20 10. OUTCOMES OF PRIMARY AV FISTULAE IN ELDERLY PATIENTS WITH END STAGE RENAL FAILURE.

Goh MA, Iype S, Ali J, Pettigrew GJ. Department of Surgery, Addenbrooke's Hospital, Cambridge

11.20-11.30 11. SUPERFICIALISATION OF NATIVE RADIO-CEPHALIC AND BRACHIO-CEPHALIC FISTULAE: PROVIDING VASCULAR ACCESS IN THE OBESE

Evans RPT, Jafferbhoy S, Goussous G, Legge J, Papp L, Ehsan O, Pherwani. University Hospital Of North Staffordshire

11.30-11.40 12. CLINICAL ASSESSMENT VERSUS ROUTINE DUPLEX SCANNING TO ESTABLISH ARTERIO-VEIN FISTULA (AVF) MATURATION

Paula Davies, Sue Taylor, Mr Justin Woolgar, Mr Chris Davies, Dr Anthony Davies, Mrs Karen Edwards, Julia Mapstone. Morriston Hospital, Swansea

11.40-11.50 13. HAEMODIALYSIS ACCESS – PATIENT REASONING AND FISTULA REFUSAL

D Ashby, L Johansson, J Budge, C Burtenshaw, N Duncan, J Crane. Imperial College, London

11.50-12.00 14. EFFECT ANTI-THROMBOTIC MEDICATION ON PRIMARY FAILURE RATE AND SURVIVAL OF SIMPLE ARTERIOVENOUS FISTULAE

A Murley, A Wijewardane, S Powers, C Allen, J Baharani, T Wilkink
Departments of Renal Medicine and Vascular Surgery, Heart of England Foundation Trust, Birmingham

12.00-12.10 15. VASCULAR ACCESS QA MEASUREMENTS – DO THEY PREDICT FAILURE?

A Matched Case-Control Study Evaluating Qa Trends Prior to Access Failure in Arteriovenous Fistulas and Grafts in a Regional Dialysis Unit, J Shepherd1, J Senaratne1, T Doult2, T Rix1. Kent & Canterbury Hospital, East Kent University Hospitals NHS Foundation Trust, Canterbury, Kent

12.10-12.20 16. ARTERIOVENOUS FISTULA/ GRAFT THROMBOSIS RISK FACTORS

K Abdulnabi, N Danham, A Ullah, M Morcos, A Khalil, M Howse, I Rylands, J Alexander, P Pai1, S Powell2, Mr Dan Ridgway3. The Royal Liverpool and Broadgreen University Hospital, Liverpool

**12.30-13.30 LUNCH EXHIBITION (GRACE SUITE FOYER)
ORAL POSTER SESSION (GRACE SUITE 1)****WL GORE SYMPOSIUM: NEW ACCESS TECHNOLOGIES (GRACE SUITE 2/3)**

CHAIR: Mr Nick Inston
SPEAKERS: Mr David Kingsmore &
Dr Domenico Valenti

13.30 - 15.00 VASBI WORKSHOPS

- A: RADIOLOGY – INTERPRETING FISTULOGAM (ROOM 2)
- B: SURGICAL INNOVATIONS (GRACE SUITE 3)
- C: PERITONEAL DIALYSIS (ROOM 7)
- D: LINE INNOVATIONS (ROOM 7)
- E: USS GUIDED NEEDLING OF DIFFICULT ACCESS (GRACE SUITE 2)

*(These workshops will be rotated every 30 mins.
Please book workshops at registration)*

Dr Jason Wilkins & Dr Peter Littler
Mr Domenico Valenti
Dr Joel Nwosu
Dr Tom Vesely & Dr Steve Powell
Mr Danillo San Diego

**15.00-15.30 VASBI PRIZE GIVING (GRACE SUITE 2/3 - COFFEE WILL BE SERVED)
SOCIETY REPORT
TREASURER'S REPORT
CLOSE OF MEETING**

Dr Steve Powell
Dr Sarah Lawman
Dr Peter Littler

POSTERS LIST

ORAL POSTER LIST:

- 17. MANAGEMENT OF "STUCK" HAEMODIALYSIS LINES**
Randhawa KS, Jones R, Duddy M, Rai S
Queen Elizabeth Hospital, Edgbaston, Birmingham
- 18. END STAGE VASCULAR ACCESS: WHAT IS THE OPTIMAL MODALITY FOR DIALYSIS?**
Aitken E1, Jackson A, Kasthuri R2, Kingsmore D
Department of Renal and Transplant Surgery, Western Infirmary, Glasgow
- 23. NEW "TRICKS" - CLINICAL UTILITY OF A NOVEL VENOGRAPHY TECHNIQUE FOR THORACIC VEIN ASSESSMENT**
Haridian Sosa Barrios MD, Jeremy Crane MD, Wladyslaw Gedroyc, Damien Ashby PhD
Imperial College London
- 24. MAPPING THE VASCULAR ACCESS PATHWAY: A SIMPLE APP BASED APPROACH**
Inston N, Chana M, Austin, Jones R
Queen Elizabeth Hospital Birmingham, University Birmingham NHS foundation Trust
- 28. IS 'DISTAL FIRST' ALWAYS THE CORRECT APPROACH TO ARTERIO-VEIN FISTULA FORMATION?**
Jafferbhoy S, Evans RPT, Goussous G, Legge J, Ehsan O, Papp L, Fairhead J, Rajagopalan S, Pherwani AD.
Department of Vascular Surgery, University Hospital of North Staffordshire
- 31. SHOULD DISTAL AV FISTULAE BE PERFORMED IN TYPE 1 DIABETIC PATIENTS WITH VASCULAR CALCIFICATION AND RADIAL ARTERY CALIBRE LESS THAN 2.2MM?**
Abdulnabi1, N Danham1, A Ullah1, Hsu Chong, A Khalil1, M Howse1, H Anijeet1, J Alexander1, P Pai1, S Powell2, H Sharma3, Mr Dan Ridgway3
The Royal Liverpool and Broadgreen University Hospital Liverpool
- 34. SURVIVAL FOLLOWING ARTERIO-VEIN FISTULA FORMATION: ARE PRIMARY GRAFTS INDICATED IN THE ELDERLY**
McGrogan D, Field M, Marie Y, Brown T, Guy A, Tullet K, Inston N.
University Hospitals Birmingham, Queen Elizabeth Hospital, Birmingham
- 39. HAS THE INTRODUCTION OF A RENOVASCULAR MULTIDISCIPLINARY TEAM (MDT) CONTRIBUTED TO ACHIEVING DIALYSIS TARGETS?**
S Pal/ R Lochiel/C Sibson/ C Hay
Royal Infirmary of Edinburgh, Little France, EH16 4SA
- 44. PREDICTING THE OUTCOMES OF FOREARM FISTULAE – A PILOT STUDY OF THE USE OF THE DISTAL SCORING SYSTEM IN RADIO-CEPHALIC FISTULAE**
Bosanquet DC1, Rubasingham J1, Imam M1, Taylor S2, Davies P2, Davies C1
Department of Vascular Surgery, Morriston Hospital, Swansea
- 48. OMNIFLOW BIOSYNTHETIC GRAFTS: CURRENT EVIDENCE FOR USE IN HAEMODIALYSIS**
Mr Andrew Choong1,2, Dr Sophie Howell1, Mr Vamsee Bhugubanda3, Mr Kirtan Patel3
Northwick Park Hospital, Middlesex, UK

POSTERS:

- 1. THE EFFECTIVENESS OF THE SECONDARY EXTENSION TECHNIQUE IN THE MANAGEMENT OF DIALYSIS ACCESS-ASSOCIATED STEAL SYNDROME- 12 YEAR FOLLOW UP**
H. Al-khaffaf
Vascular unit, East Lancashire hospitals NHS trust, Blackburn
- 2. DOES EDUCATION ENHANCE SURVEILLANCE AND ASSESSMENT FOR DIALYSIS NURSES IN ARTERIO-VEIN FISTULA (AVF) OR ARTERIO-VEIN GRAFT (AVG)?**
Sarah Wilson (Haemodialysis Access Specialist Practitioner), Nicki Angell-Barrick (Haemodialysis Access Advanced Nurse Practitioner) and James Gilbert (Vascular Consultant Surgeon)
Oxford Kidney and Transplant Unit, Churchill Hospital, Oxford
- 3. THE EVALUATION OF A NEW (PALINDROME) CATHETER TO OVERCOME CATHETER DYSFUNCTION.**
Dr J Nicholas
Newcross Hospital, Wolverhampton. U.K.

- 4. IS THERE AN ASSOCIATION BETWEEN CENTRAL VEIN STENOSIS AND LINE INFECTION IN PATIENTS UNDERGOING HAEMODIALYSIS VIA TUNNELLED CENTRAL VENOUS CATHETERS?**
Honour P, Johnson NE, Kingsmore D, Aitken E
University of Glasgow; and Departments of Vascular and Renal Surgery, Western Infirmary, Glasgow
- 6. FISTULOPLASTY ASSISTED MATURATION OF ARTERIOVENOUS FISTULAE: A CASE SERIES**
Mr S Khan¹, Mrs S Valentine², Miss S Tang¹, Mr S Mabbutt¹, Dr R Dey¹, Mr G Libertiny¹
Northampton General Hospital NHS Trust
- 7. LENGTH OF FUNCTIONAL PATENCY OF AV FISTULAE FOLLOWING SUCCESSFUL URGENT RADIOLOGICAL DECLOTTING.**
Lourinti Fletchman, Zufikar Pondor and Rosie Donne
Salford Royal NHS Foundation Trust
- 8. EVALUATION OF THE ANGIOJET RHEOLYTIC DEVICE IN MANAGING THROMBOSED HAEMODIALYSIS ACCESS.**
Dr J Nicholas, Dr M Collins, Dr J Dyer, Dr B Rangarajan, Dr K Sandhu
Newcross Hospital, Wolverhampton. UK.
- 9. ARE TWO-STAGE PROCEDURES FOR THE CREATION OF BRACHIOBASILIC FISTULAS SUPERIOR TO ONE-STAGE?**
IL Sheldrake¹, TE Rowlands¹
¹Department of Surgery, Royal Derby Hospital
- 10. ARE TRAINEES A RISK FACTOR FOR WORSE OUTCOMES IN AVF SURGERY?**
McGrogan D¹, van Dellen D², Marie Y¹, Mellor S¹, Hamsho A¹, Krishnan H¹, Inston N¹, Field M¹.
Queen Elizabeth Hospital Birmingham, Birmingham Manchester Royal Infirmary, Manchester,
- 11. AVF TROUBLESHOOTING ALGORITHMS: A POSTER FOR DISPLAY IN CLINICAL AREAS S/N**
Samantha Mckelvey and S/N Angela McCann
- 14. SKIN ADHESIVE AS TISSUE CLOSURE IN VASCULAR ACCESS - AN EVALUATION STUDY**
McGrogan D¹, Field M¹, Tullet K¹, Brown T¹, Inston N¹.
Queen Elizabeth Hospital Birmingham University Hospitals Birmingham
- 16. DUAL SURVEILLANCE SYSTEM OF HAEMODIALYSIS ACCESS**
Y Khan, L Tunstill, L Rushton, H Al-khaffaf
Vascular unit, East Lancashire hospitals NHS Trust, Blackburn
- 19. EARLY SINGLE-CENTRE EXPERIENCE OF EARLY CANNULATION (FLIXENE™ TRUMPET) GRAFT**
Knight SR^{1,2}, Sinha S¹ and Gilbert JA¹
Oxford Transplant Centre, Nuffield Department of Surgical Sciences, Oxford
Centre for Evidence in Transplantation, Royal College of Surgeons of England, London
- 20. EFFECTS OF TRANSDERMAL GLYCERYL TRINITRATE ON FISTULA MATURATION: RESULTS OF A PILOT STUDY.**
H. Baird¹, Z. Hodi¹, O. Masood¹, Z.Pondor², R. Donne², A. Tavakoli^{1,2}, D. van Dellen^{1,2}
¹Renal and Pancreas Transplantation, Manchester Royal Infirmary ²Nephrology, Salford Royal Foundation Trust
- 26. IS PRE-OPERATIVE ECHOCARDIOGRAM A USEFUL PREDICTOR OF FISTULA MATURATION?**
Marie Y, McGrogan D, Inston NG
Department of Renal Surgery and Nephrology, Queen Elizabeth Hospital Birmingham
- 27. THE EFFICACY OF THE PRIMARY EXTENSION TECHNIQUE IN THE PREVENTION OF DIALYSIS ACCESS- ASSOCIATED STEAL SYNDROME (DASS)**
H Al-khaffaf
Department of Vascular surgery, Royal Blackburn Hospital
- 29. DOES HAND DOMINANCE IMPROVE PATENCY RATES AND MATURATION OF RADIO-CEPHALIC FISTULAE?**
SM Dilke, CE Wheeler, YAM Hassen, M Metcalfe, M Guest
Lister Hospital, Stevenage
- 30. THE SLF GRAFT, SPIRAL FLOW AND CLINICAL RELEVANCE – AN UPDATE**
Marie Y¹, Jones R¹, Heire P², Hoffman W³, Inston NG¹
Dept. Renal Surgery and Radiology , Queen Elizabeth Hospital Birmingham

POSTERS LIST

33. ARTERIOVENOUS FISTULA FORMATION: A PROCEDURE TO BE PERFORMED BY SENIOR SURGEONS ONLY?

Barnes R1, Smith GE1, Chetter IC1
1Academic Department of Vascular Surgery, Hull & East Yorkshire NHS Trust

37. NURSE-LED VASCULAR ACCESS SERVICE: A SUCCESS?

Waters EK, Billimoria V, Hubbard S, Glasby MJ.
Leicester Royal Infirmary

38. A PILOT STUDY OF TREATING DYSFUNCTIONAL DIALYSIS FISTULAS WITH DRUG ELUTING ANGIOPLASTY BALLOONS

Jones RG1, Mehrzad H1, Willis AP1, Inston NG2, Riley PL1
Queen Elizabeth Hospital Birmingham,

40. BLEEDING FISTULA'S – ENHANCING PATIENT SAFETY PROCESSES.

J Wishart, J Hanko and A McCann
Regional Nephrology Unit, Belfast City Hospital

41. Failed Arterio-Venous Dialysis Access; Complications of Endovascular Salvage

ES Lake1, CA Hilditch1, M Nikam2, N Chalmers1
Department of Radiology, Manchester Royal Infirmary

43. PERCUTANEOUS THROMBECTOMY FOR THROMBOSED AUTOGENOUS FISTULAE AND PROSTHETIC ARTERIOVENOUS GRAFTS: WHAT ARE THE PREDICTORS OF OUTCOME?

Subhachandra Navaratne1, Onali Jaffer1, D. Valenti1, Jason Wilkins1, Dean Huang1, David Evans1, Ozgur Kilickesmez1,
Department of Radiology, Kings College Hospital, London

50. BRACHIOBASILIC FISTULAE (BBF): AN UPPER LIMB AUTOLOGOUS OPTION FOR EVERYONE?

Harris Hameed, Emma Aitken, David Kingsmore
University of Glasgow, NHS Greater Glasgow and Clyde, University Department of Surgery, Western Infirmary, Glasgow

51. CAN DEFINED NORMAL RANGES FOR ARTERIAL AND VENOUS PRESSURES PROVIDE PRESCRIPTIVE DIALYSIS PARAMETERS AS PART OF A SURVEILLANCE PROGRAM?

Sheera Sutherland1, David Meredith1 2, Christopher Pugh1 2 and James Gilbert
1Oxford Kidney Unit and Transplant Centre, Churchill Hospital, Oxford UK

52. PRE-OPERATIVE FISTULA PLANNING WITH ULTRASOUND: ACCURACY AND ASSOCIATION WITH OUTCOME.

D Ashby, P Herbert, J Crane, Imperial College London

53. ANEURYSM FORMATION FOLLOWING LIGATION OF HAEMODIALYSIS ARTERIOVENOUS FISTULAE

Bynvant Sandhu1, David Ellis1, Neill Duncan1, Damien Ashby1, Jeremy Crane
Hammersmith Hospital, London.

56. THE CHALLENGES ASSOCIATED WITH IMPLEMENTING BUTTONHOLE CANNULATION IN A BUSY AND GEOGRAPHICALLY WIDESPREAD RENAL UNIT

Nicki Angell-Barrick, James Gilbert, Oxford Kidney Unit (OKU)

57. NEW GENERATION AV DIALYSIS GRAFT (FLIXENE TM) – 5 YEAR SINGLE CENTRE EXPERIENCE

H Mistry1, C.J Wilkins2, D. Huang 2 et D. Valenti1
King's College Hospital, London

63. TRAINING ACCESS NURSE SPECIALISTS IN THE USE OF ULTRASOUND SCANNING IN ASSOCIATION WITH ARTERIO-VENOUS FISTULAE.

C.Pearce, C.Wilson
Freeman Hospital, Newcastle Upon Tyne Hospitals NHS Foundation Trust

LATE SUBMISSION:

FISTULA REFUSAL: A QUALITATIVE STUDY EXPLORING THE ACCOUNTS AND LIVED EXPERIENCES OF HAEMODIALYSIS PATIENTS DECIDING AGAINST FISTULA ACCESS

Jennifer Hoare, Helen Spooner Johann Nicholas Dept of Renal Psychology Services
Dept of Renal Medicine, Wolverhampton General Hospital

ABSTRACT 12: FAILED DIALYSIS ACCESS: A COMPARISON OF ENDOVASCULAR SALVAGE TECHNIQUES

For consideration for both oral presentation and poster presentation

Christopher A. Hilditch¹, Milind Nikam², Nicholas Chalmers¹

1. Dept of Radiology, Manchester Royal Infirmary, Manchester, UK.

2. Dept of Renal Medicine, Manchester Royal Infirmary, Manchester, UK.

Purpose: Endovascular salvage can restore patency following dialysis access failure. Balloon maceration, angioplasty, thrombolysis and mechanical thrombectomy are used. We sought to determine factors associated with success following percutaneous intervention.

Materials and Methods: A prospective audit of referrals for failed dialysis between January 2008 and December 2011 was performed. Primary outcome measure was primary patency. Other outcome measures included procedural success, defined as ability to use the access for dialysis on at least one occasion post procedure, secondary patency, and complications. Site and type of access (native fistula vs. graft), thrombectomy technique (balloon maceration &/or angioplasty vs. other) and individual operators were compared. Outcomes were analyzed using Kaplan Meier curves and differences assessed using the log rank test.

Results: 445 episodes of failed access were referred and 406 procedures were carried out. Overall 1 year primary and secondary patency was 38% and 70% for native fistulas. The most common endovascular procedure was balloon maceration +/- angioplasty (N=134). Mechanical thrombectomy and/or thrombolysis was used in 128 cases. Native vessel fistulas had statistically significant better survival compared to artificial grafts following intervention. Leg access was associated with poorer survival following intervention compared to forearm or antecubital fossa. There was no significant advantage of mechanical thrombectomy over angioplasty and/or balloon maceration. There was significant difference between individual operators in terms of procedural success.

Conclusion: Balloon maceration is safe. It is no less effective than more expensive techniques such as mechanical thrombectomy. No significant complications using balloon maceration were shown in this study. Fistula thrombectomy success is operator dependent.

ABSTRACT 15: TITLE: DIALYSIS STATUS, RENAL FUNCTION AND EARLY FAILURE OF ARTERIOVENOUS FISTULAE

Authors: CY Kong¹, E Aitken², DB Kingsmore²

1. University of Glasgow, Scotland

2. Department of Surgery, Western Infirmary, Glasgow, Scotland

Purpose: Guidance varies regarding timing of arteriovenous fistula (AVF) creation in patients who are approaching the need for haemodialysis. The aim of this study was to evaluate the association between renal function, haemodialysis and early AVF failure.

Materials and Methods: Data was collected prospectively for 570 consecutive radiocephalic (RCF) and brachiocephalic (BCF) fistulae. The primary outcome was early AVF failure (<6 weeks). Patients were stratified by site of AVF. Dialysis status (haemodialysis (HD); pre-dialysis (Pre-D)) and eGFR at the time of AVF creation were evaluated to determine if they affected early AVF failure. Continuous and categorical data were compared using student's t-test and chi-squared test, respectively. Kaplan-Meier survival curves were used to evaluate long-term AVF patency. P<0.05 is significant.

Results: There was no significant difference in early failure rate of either RCF or BCF depending on dialysis status (pre-D RCF 12.2% (n=188); pre-D BCF 15.8% (n=165); HD RCF 15.7% (n=102); HD BCF 25.6% (n=115); p=0.09). There was no significant difference in primary patency at 6 weeks amongst Pre-D patients who had their AVF created with an eGFR \geq 15 ml/min/1.73m² compared to those with eGFR<15 ml/min/1.73m² (76.8% (n=56) vs. 81.1% (n=297)). Long-term primary patency was better in patients who had their AVF made Pre-D than those on HD (p=0.003).

Conclusions: There was no difference in early AVF outcomes based on dialysis modality or eGFR at the time of AVF creation. Our results support current guidance regarding early referral for definitive vascular access creation in pre-dialysis patients.

ABSTRACTS - SESSION 1

ABSTRACT 22: TITLE: PACLITAXEL-COATED BALLOONS IN FISTULA.

Panagiotis M. Kitrou¹, Stavros Spiliopoulos¹, Konstantinos Katsanos², Maria Kyriakopoulou¹, Dimitris Karnabatidis¹, Dimitris Siablis¹
¹Imaging and Interventional Radiology Department, Patras University Hospital, Patras, Greece
²Interventional Radiology, Guy's and St Thomas' Hospital Foundation Trust, London, UK

Purpose: To report the final 1-year results of a prospective randomized controlled trial investigating paclitaxel-coated balloon (PCB) versus plain balloon (PB) angioplasty for the treatment of failing Arterio-Venous fistulae (AVF).

Material and Methods: From May 2011 to September 2012, 40 patients were randomized to undergo either PCB dilation (Group PCB, n=20) or PBA (Group PB, n=20). Enrollment criteria included a clinical and angiographic diagnosis of dysfunctional AVF circuit due to at least one stenotic lesion. Regular angiographic follow-up was scheduled every two months. Study primary end points included technical success (defined as residual stenosis of the treated lesion <30% without any significant dissection) and primary patency of the treated site (defined as angiographic visualization of a patent lesion with <50% restenosis and no need for any additional repeat procedure within the previously treated lesion due to failing access).

Results: Baseline variables were equally distributed among the two groups. Technical success was 100% for both groups. Interim calculation of the primary endpoint outcome showed a significantly superior primary patency in group PCB compared to group PB at 6-months (65.0% vs. 30%, respectively; p=0.04).

Conclusion: Six-month interim results show that PCB angioplasty could be a valid solution in to our armamentarium for the treatment of failing Arterio-Venous Fistulae. Long-term 1-year final data will be announced.

ABSTRACT 35: BIOCHEMICAL MARKERS OF ARTERIOVENOUS FISTULA FAILURE

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Purpose: The prevalence of patients reliant on renal replacement therapy increases annually, 51000 UK patients in 2010. Arterio-venous fistula(AVF) remain the access gold-standard, however early failure occurs in up to 40% patients. AVF failure is multifactorial and increased knowledge of contributing factors may enable risk reduction. Plasma tissue factor(pTF) and Microparticles(MP) are emerging markers in Vascular disease and may serve as predictors of early failure of AVF.

Materials and Methods: Ethical approval was obtained from National Research Ethics Service and the Trust for a study of patients presenting for AVF formation to establish whether a correlation exists between pTF and MP concentration, determined by ELISA analysis, and AVF patency. Blood samples were obtained at baseline and 1 month post-operatively.

Results: 57 patients(40 men, 17 women), mean age 64 years were recruited. Prior dialysis, co-morbidities and commonly used medications did not impact on baseline MP or pTF concentrations. Baseline MP levels were significantly higher in patients who subsequently suffered early AVF failure compared to those patent at 30 days(p<0.05). No statistically significant difference was found in baseline pTF levels between the groups(p=0.572). There was no statistically significant difference in the change in concentration of either MP or TF over one month between those with patent fistulae and the early failures.

Conclusion: Patients with particularly elevated MP levels at the time of AVF formation appear more likely to suffer early thrombosis and failure of AVF. The clinical application and relevance of measuring MP levels when planning AVF formation may warrant further investigation.

All authors are aware of the submission.

None of the authors have any competing interests.

For consideration for oral presentation

ABSTRACT 42: THE ROLE OF CIRCULATING ENDOTHELIAL PRECURSOR CELLS IN THE DEVELOPMENT OF ARTERIOVENOUS FISTULAE USED FOR HAEMODIALYSIS

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2BHF Glasgow Cardiovascular Research Centre, University of Glasgow

Competing interests: None to declare
Please consider for oral presentation

Purpose: A functioning autogenous arteriovenous fistula (AVF) is crucial to improving outcomes for haemodialysis (HD) patients. No medical therapies that effectively promote AVF maturation or patency exist. Putatively bone marrow-derived CD34+ CD309+ CD133+ 'endothelial progenitor cells' (EPC) have been hypothesized to play a role in post-natal vasculogenesis and have been associated with improved cardiovascular outcomes. We aimed to establish whether patients with higher levels of circulating EPCs have improved AVF outcomes.

Materials & Methods: Patients with end-stage renal failure due to undergo AVF creation were recruited. Whole blood was sampled pre- and post-operatively. CD34+ CD309+ CD133+ cells were enumerated by flow cytometry. Clinical and duplex ultrasound assessment was undertaken pre-operatively and at several time points post-operatively. Cell titres were compared with clinical and duplex outcome data.

Results: Interim data are reported (n = 55). Circulating EPC levels were not associated with any measure of AVF outcome. Furthermore, we were unable to replicate the findings of certain groups who have previously observed significant differences between controls and HD patients or between smokers and non-smokers. This observation persisted despite re-gating to enumerate CD34+ CD309+ cells or CD34+ CD309+ CD133- cells.

Conclusion: In line with new research casting doubt on the paradigm of bone marrow-derived CD34+ CD309+ CD133+ cells, we have not been able to demonstrate an association with AVF outcomes or indeed cardiovascular risk factors. The absence of statistical signal when examining CD34+ CD309+ cells in terms of cardiovascular risk may be related to a lack of statistical power.

ABSTRACT 49: EFFECT OF ETHNICITY AND SOCIO-ECONOMIC FACTORS ON PRIMARY FAILURE RATE AND SURVIVAL OF SIMPLE ARTERIOVENOUS FISTULAE

Authors: A Wijewardane, A Murley, S Powers, C Allen, J Baharani, T Wilmink
Institution: Departments of Renal Medicine and Vascular Surgery, Heart of England Foundation Trust, Birmingham, B95SS

Purpose: To examine the effect of ethnicity, socio-economic status and co-morbidity on fistula outcomes.

Materials and Methods: Retrospective review of two prospective databases of access operations and dialysis sessions from 2003-2011. Follow up till March 2013. Primary failure (PF) defined as an arteriovenous fistula (AVF) used for fewer than 6 consecutive dialysis sessions. AVF-survival was defined till date AVF abandoned. Ethnicity was coded from hospital records. Deprivation index (DI) calculated from postcodes and 2011 census-data from Office of National Statistics. Co-morbidities were calculated using Charlson Index.

Results: 1002 patients were analysed: 619 (62%) had radiocephalic AVF (RCAVF), 303 (30%) had brachiocephalic AVF (BCAVF), 80 (8%) had brachiobasilic AVF (BBAVF). Sixty-eight percent were Caucasian, 25% Asian and 6% Afro-Caribbean. Half (49%) were in the most deprived category and 11% in the least deprived group. Caucasians were older than Asians and Afro-Caribbean's (p= 0.0001). In 74%, the fistula was used for dialysis, 21% had PF and 5% the outcome was unknown. Women had 25% PF compared to 18% for men (p < 0.009). PF did not differ by ethnicity (p = 0.47), DI (p = 0.97), co-morbidities (p = 0.60) or diabetes (p = 0.58). AVF-survival was not significantly different according to gender (logrank test, p = 0.33), co-morbidities (logrank test, p = 0.10), or DI (logrank test p = 0.83). Afro-Caribbeans had slightly worse AVF survival (logrank test p = 0.054),

Conclusion: Ethnicity, socio-economic status and co-morbidity had no significant effect on primary failure rate, but Afro-Caribbeans had slightly worse AVF survival.

ABSTRACTS - SESSION 1

ABSTRACT 58: A META-ANALYSIS OF RANDOMISED TRIALS COMPARING SURGERY VERSUS ENDOVASCULAR TECHNIQUES FOR THROMBOSED FISTULAS AND GRAFTS

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The aim of the study was to carry out a systematic review of randomised trials comparing surgery versus endovascular therapy for occluded fistulas and grafts.

All randomised trials that compared surgery and endovascular therapy for occluded fistulas and grafts were retrieved from 1990 onwards. The following search terms were used - "haemodialysis", "thrombosis", "arteriovenous fistula", "arteriovenous shunt" and "end stage renal failure" on MEDLINE, PubMed. The results of the pooled data was analysed using a fixed-effect model.

There were no randomised trials comparing surgery versus endovascular therapy for native fistulas and vein grafts. There were 6 randomised studies on 573 occluded grafts. The mean Jadad score was 2.5. Technical success, need for access line and primary patency at 30 days were similar between the two groups (OR 1.40 (95% CI 0.91, 2.14), 0.77 (95% CI 0.44, 1.34) and 1.15 (95% CI 0.79, 1.68) respectively. There was no significant difference in morbidity at 30 days between groups OR 1.12 (95% CI 0.67, 1.86). Surgery had a better 1 year primary patency rate although it was not statistically significant OR 2.08 (95% CI 0.97, 4.45). Primary assisted patency at 1 year was better with surgery OR 3.03 (1.12, 8.18) in a single study.

Comparable short term results to surgery have been achieved with endovascular techniques for occluded prosthetic grafts for dialysis access. Long term data comparing the two groups is lacking. Further trials designed to encompass variations among units is warranted in order to obtain the best available evidence.

ABSTRACT 60: ARTERIOVENOUS FISTULA/ GRAFT FAILURE RISK FACTORS. VASCULAR CALCIFICATION AND PREVIOUS AVF FAILURE ARE THE STRONGEST PREDICTORS OF FAILURE.

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Objective: Arterio-venous fistula (AVF) failure is associated with significant clinical morbidity, economic burden, hospitalisation and inadequate dialysis which may decrease patient's survival (1). This study was designed to assess the effect of co-morbidities, pharmacological therapy and interventional procedure on AVF/ graft failure.

Methods: Retrospective data analysis on 426 AVF and 54 arteriovenous graft (AVG) on prevalent haemodialysis patients was undertaken at a tertiary renal centre.

Results: Prevalent of AVF/AVG is 91%. Primary assisted patency was 85% at 3 month and 78% at 1 years' time. Mean survival of AVF and AVG was 3.4 (\pm 3.2) and 2.4 (\pm 2) years respectively. Variables associated with failure were calcification, Type 1 DM, female gender, radial artery calibre (Distal AVF) on pre-op venous mapping, angiojet-lyses, thrombosis and previous AVF failure (OR=2.3 (p<0.009); OR=3 (p<0.002); OR=1.6 (p<0.006); OR=4.7 (p<0.01); OR=2 (p<0.007) and OR= 35 (p<0.03) respectively). Age, AF, PVD, IHD, CVA, LVD, HTN, Type 2 DM, hypercoagulation status, and intra-dialytic hypotension, duration on HD, dual anti-platelets therapy, Aspirin, Dipyridamol, warfarin, fistula site and arterial flow on venous mapping or Doppler quantitative wave form were not associated with the risk of thrombosis. Clopidogrel shows a trend toward significance in reducing AVF/AVG failure (OR=0.4, p<0.08) ANOVA analysis was very significant for only previous AVF failure and presence of calcification on venous mapping (p<0.001) Angiojet-lysis was associated with failure (OR=2, p<0.007) with significant correlation (p<0.001) with number of procedures per AVF, but not in AVG (p=0.3) Risk of AVF failure is reduced by performing angioplasty (OR= 0.58 p<0.007) but less significantly when >3 angioplasty performed per AVF (OR=0.7 p<0.03)

Conclusion: Vascular calcification, previous AVF failure, type 1DM, thrombosis and Angiojet-lysis are associated with AVF failure while angioplasty reduce this risk. There was no obvious benefits of pharmacological therapy.

References:

1. Feldman HI, Kobrin S, Wasserstein A (1996) 'Hemodialysis vascular access morbidity' J Am Soc Nephrol. 7: 523-535.

ABSTRACT 21: ONGOING EFFICACY OF THE CATHETER CARE BUNDLE IN MINIMISING DEVICE INFECTIONS IN HAEMODIALYSIS

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Introduction: Device associated infections lead to increase morbidity and mortality in dialysis patients. A rigorous catheter care bundle and clean hospital policy has been instituted in this centre in order to address these difficulties. The national standards for device associated infections advice an event rate of less than 2/1000 catheter days for all renal centres.

Methods: A number of measures were introduced in this centre to combat infections. These included the use of the national catheter care bundle, a clean hospital policy, the use of antimicrobial line locking solutions, mandatory training of staff in hand washing and increased education of patients regarding line care. All these measures have been in place since 2005. In addition, concerted effort had been taken to reduce the use of dialysis lines.

Results: 2004 – 2006: noted device associated infections (DAI) , using the Centre of Disease Control definition, of over 2/1000 catheter days. The full application of the catheter care bundle resulted in a significant reduction in DAI to 1/1000 catheter days in 2008. By 2013, the rates have remained consistently below the national guidance at 0.7/1000 catheter days. When bacteraemic events (confirmed positive blood cultures alone) were analysed, the event rates changed from over 2/1000 catheter days in 2005 - 2006, falling to 1/1000 catheter days in 2007 and further to a median 0.5/1000 catheter days since 2008 to 2013. Within the same period, infections associated with fistulae have remained below 0.1/1000 patient days. Line use for haemodialysis over a 9 year period noted variations from 40% in 2004 to 35% in 2010. With access to extra surgical resources since 2011, dialysis catheter use has fallen to 18% in 2013.

The annualised hazard risk of death for all haemodialysis patients within a year of dialysing with a line as compared to arteriovenous fistulae has improved from 3.9 (2.61 to 6.11 95%CI) in 1996 to 2.35 (1.95 to 2.87 95%CI) in 2000 to 1.35 (1.12 to 1.64 95%CI), $p < 0.05$ by 2012.

Conclusions: All measures taken to reduce infections have resulted in significant and concerted reductions. Despite these interventions and improvements, patients remain at risk if they are exposed to dialysis lines. Further effort is required to reduce infections to levels approaching those of fistulae and ideally the avoidance of all venous catheters for dialysis.

ABSTRACT 25: OUTCOMES OF PRIMARY AV FISTULAE IN ELDERLY PATIENTS WITH END STAGE RENAL FAILURE.

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Purpose: An expanding population of elderly patients require haemodialysis. In our centre, wrist fistulae are the preferred primary fistulae and are subsequently revised proximally if necessary. We analysed outcomes after primary fistulae in this patient cohort.

Methods: Patients aged 70 or above who had either a primary wrist (WF) or elbow (EF) arteriovenous fistula created between 1st January 2005 and 31st Dec 2012 were identified from a prospectively maintained database.

Results: Primary fistulae were created in 299 (WF) and 12 (EF) patients aged over 70; no arteriovenous grafts were created. 74 WF and 2 EF patients remained pre-dialysis and were excluded from further analysis. Of the remainder, 154 (68.4%) WF and 8 (80%) EF patients were already dialysing through a line when the fistula was created. The fistula matured to provide satisfactory haemodialysis in 139 (61.8%) and 6 (60%) in the WF and EF groups, respectively. Median primary patency was 22 months (range 2-96 months) for WF and 35 months (range 3-46 months) for EF. Of this cohort, 46 (33.1%) WF and 2 (33.3%) EF patients subsequently underwent fistula revision. Notably, of the 86 patients whose primary wrist fistula failed to mature, 32 (37.2%) had a further attempt at creating an ipsilateral or contralateral wrist fistula; only 10 had elbow fistulae created.

Conclusion: In the elderly dialysis population, acceptable patency rates are achieved following wrist fistula formation and should still be considered the first option. Failure of the first wrist fistula to mature should not preclude formation of a second.

ABSTRACTS - SESSION 2

ABSTRACT 32: SUPERFICIALISATION OF NATIVE RADIO-CEPHALIC AND BRACHIO-CEPHALIC FISTULAE: PROVIDING VASCULAR ACCESS IN THE OBESE

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Purpose: The Department of Health estimates that currently in the UK, 61.3% of the population are overweight or obese (BMI>25). Fistulae in the obese often fail to mature or prove inadequate to needle due to excessive depth (>6mm). This study is a summary of our experience with brachio and radio-cephalic vein superficialisation in the obese.

Materials and Methods: From May 2008 to October 2012 22 patients underwent superficialisation of the cephalic vein following radio-cephalic or brachio-cephalic AVF creation. Data were obtained from a prospective database (Cyberen®) and retrospectively analysed.

Results: The study included 23 AVF in 22 patients (7 male, 15 female) of which, 13 were brachio-cephalic and 10 radio-cephalic. The mean age of the patients was 56 (median 60, range 19-78). The mean BMI was 36.7 (median 32, 25-58). 6 Week post procedure duplex ultrasonography recorded the mean fistula depth to be 7.7mm (median 8mm, 5-15mm) and mean flow rates were 961ml/min (median 800ml/min, 320-1968ml/min). Of the 23, 22 fistulae matured successfully. One thrombosed and the patient required a second AVF formation with subsequent superficialisation. There were no procedure related complications. During follow up 2 patients underwent transplantation prior to fistula use and 2 patients died of unrelated causes. The remaining 18 fistulae remain in use and under access surveillance (mean follow-up 32 months, median 30months, range 9-56months).

Conclusion: Superficialisation of brachio/radio-cephalic fistulae is an excellent option to optimise the cephalic vein for needling, assisting primary patency. Superficialisation of the cephalic vein helps maintain long term functional access in overweight and obese patients.

ABSTRACT 45: CLINICAL ASSESSMENT VERSUS ROUTINE DUPLEX SCANNING TO ESTABLISH ARTERIO-VEIN FISTULA (AVF) MATURATION

Authors: Paula Davies RGN, Cert ed. Sue Taylor RGN, MSc, PGCE. Renal Unit, Morriston Hospital, Swansea. Mr Justin Woolgar, Consultant Vascular Surgeon, FRCS(ed) FCS (SA). Mr Chris Davies, Consultant Vascular Surgeon, MBBCH FRCS, Dr Anthony Davies, Consultant Radiologist, MRCP, FRCR. Mrs Karen Edwards. Vascular Scientist, AVS, DMV, DCR (r) BA. Julia Mapstone, Vascular Scientist, AVS, BSc

Purpose: To increase incident patients starting dialysis with a usable AVF and prevalent patients having an AVF maturing in a timely manner. To achieve the Renal Association recommendations of 65% incident patients and 85% of prevalent patients dialysing via an AVF and reduce central venous catheter usage.

Material and methods: All patients having first AVF creation from January 2012 and December 2012 were included n = 96. The cohort comprised of pre dialysis patients and those established on haemodialysis. Clinical assessment was undertaken on each patient by the VANS and duplex scan performed independently by the Vascular Technologist. The clinical assessment format was based on observation, palpation, and auscultation with vessel assessment on tourniquet.

Results: Comparison was made between the clinical assessment and the duplex findings and as a result four main categories of outcomes were identified.

- 70 (72.9%) were suitable for cannulation where duplex scan supported clinical findings
- 5 (5.2%) were suitable for cannulation where duplex scan findings identified a problem.
- 10 (10.4%) were not suitable for cannulation where the duplex scan reported good vasculature
- 11(11.5%) demonstrated a non maturing AVF supported by a poor duplex scan

Conclusion: Routine duplex scanning is not mandatory and should be reserved for those where clinical assessment has judged it to be appropriate or those where clinical assessment is inconclusive. The foundation to determine AVF maturation is good clinical assessment skills. Duplex scanning can identify if surgical revision is necessary or those where fistula maturation can be enhanced by fistuloplasty.

ABSTRACT 46: HAEMODIALYSIS ACCESS – PATIENT REASONING AND FISTULA REFUSAL

D Ashby, L Johansson, J Budge, C Burtenshaw, N Duncan, J Crane

Purpose: Various incentives have been developed to increase fistula prevalence but some patients are reluctant to undergo fistula formation.

materials & Methods: Patient reasoning and decision-making influences were explored using questionnaires and structured interviews.

Results: Fifty-eight patients (aged 34–87, 58% male) currently dialysing on a tunnelled line and unwilling to have a fistula were identified.

Most reasons for declining fistula formation were common to a number of patients, of which the most frequent were pain during dialysis (cited by 71%), appearance (67%), pain at home (57%), permanence (24%) and fear of bleeding (21%). The risk of surgical failure was often cited, but other individual-specific reasons were also often given (eg. "I work in a prison"; "I wouldn't be able to use crutches") which were considered by the patient to outweigh other considerations. All patients understood what a fistula is and most reported being told that a fistula is a safer form of access, but in structured interviews, all patients clearly thought that this is not the case. Other patients were far more influential than professionals in decision making (cited by 87% and 26% respectively, $p < 0.001$). In structured interviews some patients expressed mistrust of professional advice (eg. "it was told very one-sidedly") often associated with perceived pressure (eg. "they tried to convince me"), and all patients felt strongly that access is a personal choice.

Conclusion: Patient-specific components to reasoning are not uncommon and decision-making is more influenced by other patients than by professionals. Better understanding of patient experience and reasoning could improve concordance between patient and professional and facilitate informed choice.

ABSTRACT 47: EFFECT ANTI-THROMBOTIC MEDICATION ON PRIMARY FAILURE RATE AND SURVIVAL OF SIMPLE ARTERIOVENOUS FISTULAE

Authors: A Murley, A Wijewardane, S Powers, C Allen, J Baharani, T Wilkink

Institution: Departments of Renal Medicine and Vascular Surgery, Heart of England Foundation Trust, Birmingham, B95SS

Purpose: To examine the effect of antithrombotic medication on primary fistula outcomes.

Materials and Methods: Retrospective review of two prospective databases of access operations and dialysis sessions from 2003 till 2011. Follow up till March 2013. Primary failure (PF) defined as an arteriovenous fistula (AVF) used for fewer than 6 consecutive dialysis sessions. AVF-survival defined as date AVF abandoned. Antithrombotic medication was ascertained from case records at the time of referral for vascular access. Antithrombotic medication was not stopped prior to AVF formation.

Results: 425 patients were analysed: 312 (73%) had radiocephalic AVF (RCAVF), 113 (27%) had brachiocephalic AVF (BCAVF). Only 197 patients (46%) were on antithrombotic medication: 169 patients (40%) on antiplatelet medication and 28 (7%) on warfarin. Antiplatelet medication was aspirin in 133 (79%), clopidogrel in 9 (5%) and dual therapy in 27 (16%). Fifty-four percent of patients over 60 years of age were on antithrombotic medication compared to 30% of those under 60 ($p < 0.001$). Women had higher PF than men (28% v 12%, $p < 0.0001$). Proportion of patients on antithrombotic medication was not different between men and women. Antithrombotic medication had no significant effect on PF ($p = 0.56$) or AVF-survival (log rank test, $p = 0.20$) in univariate analysis. Antithrombotic medication was also not an independent predictor for PF or AVF-survival in a multivariate analysis with a regression model adjusted for age, sex and type of AVF.

Conclusion: Prior antithrombotic medication had no significant effect on primary failure rate and survival of AVF.

ABSTRACTS - SESSION 2

ABSTRACT 54: VASCULAR ACCESS QA MEASUREMENTS – DO THEY PREDICT FAILURE? A MATCHED CASE-CONTROL STUDY EVALUATING QA TRENDS PRIOR TO ACCESS FAILURE IN ARTERIOVENOUS FISTULAS AND GRAFTS IN A REGIONAL DIALYSIS UNIT.

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Purpose: Periodic ultrasound flow dilution—Qa (ml/min-1) is used for surveillance of vascular access in dialysis patients. This study aims to further clarify whether access failure is predicted by 1) Initial Qa (IQa) and 2) Change in Qa (Δ Qa) over time.

Materials & Methods: We used a case-control retrospective design with a 365-day study period. Cases included fistulas and grafts that failed in 2011-2012 at a regional dialysis unit. Controls with patent access during this timeframe were matched for age, gender, diabetes, smoking, access type/age, and dialysis unit. Exclusion criteria included previous access intervention or <2 available Qa readings.

Results: There were no demographic differences between cases (N=38) and controls (N=38, $p < 0.05$). Each cohort contained 28 fistulas and 10 grafts. Failed fistulas had lower IQa vs. controls (median 545 vs. 1525, $p < 0.01$). When $IQa > 1500$ (N=16) the fistula failure rate was 6%, vs. 67% at $IQa < 1500$ (N=68, $p < 0.001$). Failed grafts also trended lower IQa vs. controls (median 775 vs. 1315, $p = 0.37$). Linear regression with log₁₀ transformations demonstrated a relationship between Δ Qa and time to failure in failed fistulas ($R = 0.353$, $R^2 = 0.124$, $p < 0.001$) and grafts ($R = 0.596$, $R^2 = 0.355$, $p < 0.001$), and no relationship in control groups over the 365-day period.

Conclusions: IQa can predict long-term access failure. Fistulas with $IQa > 1500$ are unlikely to fail for ≥ 365 days, therefore may require less frequent surveillance and conserve resources. Δ Qa can also predict failure however it only explained 12.4% (fistulas) and 35.5% (grafts) of the variance in our data, so must be interpreted in conjunction with other clinical findings.

ABSTRACT 62: ARTERIOVENOUS FISTULA/ GRAFT THROMBOSIS RISK FACTORS

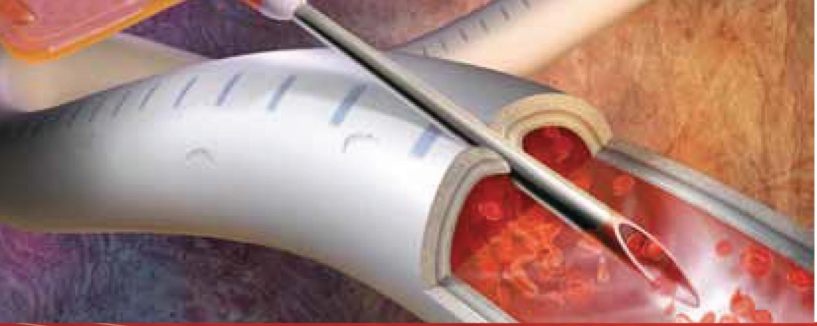
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Objective: Arteriovenous fistula (AVF) thrombosis is the most common cause of AVF failure and related complications. It is almost always associated with the presence of stenosis (1). This study was designed to assess the effect of comorbidities, pharmacological therapy and interventional procedure on AVF/ graft thrombosis.

Methods: Retrospective data analysis on 426 AVF and 54 arteriovenous graft (AVG) on prevalent haemodialysis patients between 2006 and Oct 2012 was undertaken at a tertiary renal centre. Thrombosis was defined as thrombosis which renders AVF/AVG non-functioning and requiring intervention.

Results: Thrombosis was reported in 63% of AVG compared only to 28% of AVF, $p \leq 0.0001$. AVF: age, gender, AF, PVD, IHD, CVA, LVD, HTN, type 2 DM, hypercoagulation status, and intra-dialytic hypotension were not associated with the risk of thrombosis. However, type 1 DM and history of venous thrombosis were ($p \leq 0.01$, $p \leq 0.03$ respectively). Aspirin is associated with higher incidence of thrombosis ($p \leq 0.01$) while Clopidogrel, Dipyridamol or dual antiplatelet therapy are constant variables. Duration on dialysis, past history of AVF failure, Angiojet-lyses, angioplasty or metallic stenting were also associated with increased risk ($p \leq 0.0001$). Finally, calcification and radial artery calibre on pre-op venous mapping were also associated with thrombosis ($p \leq 0.02$, $p \leq 0.03$). Warfarin showed a trend toward significance ($p \leq 0.07$) in reducing thrombosis only in AVF but not in grafts. The number of previous angioplasty procedures is significantly associated with thrombosis, reporting 16%, 36% and 50% for 0, 1-3 and > 3 angioplasty per fistula ($p = 0.0001$).

Conclusion: Anti-platelet therapy doesn't decrease the risk of AVF/ AVG thrombosis. Warfarin may decrease the risk of thrombosis in AVF but not in AVG (2,3). Significant correlation was noted between angioplasty and thrombosis. This may be due inducing smooth muscle cell proliferation which leads to re-stenosis.



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