VASBI 2014



25TH & 26TH SEPT 2014 HOLIDAY INN STRATFORD UPON AVON

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WELCOME TO VASBI 2014

WELCOME TO VASBI 2014 STRATFORD UPON AVON!

Following successful conferences in Manchester, Brighton and Liverpool we have decided to get as central as possible. The membership is spread around the UK and ROI. VASBI is the only society to bring together the multidisciplinary team that is key to planning, creating and maintaining long term dialysis access.

The society is still young and is evolving. We are keen to promote this and many changes are taking place.

This year we are putting a lot more emphasis on "what do you want?" from VASBI. We apply this question to both members and our ever supportive industry sponsors.

We are really keen to hear your views and ideas about the development of the conference and society as a whole. Over the last year we have been working hard to add value to the society and to your membership. The Journal of Vascular Access is available to members as an electronic subscription to keep costs down and maintain good green credentials.

We have built up strong links with sister organisations in the Americas and Europe (VAS, VASA, BSIR, Vascular Society). Our research base is developing with strong representation with the ERBP guidelines group, the ReDVA consortium and with KRUK. A major undertaking this year has been the development of Vascular access graft registry in partnership with Dendrite and Maquet which will the 1st of its kind in the world.

VASBI is a society for everyone involved in access. Vascular access is an exciting area to be in and the benefits of well managed VA has great importance to the individual patient. In addition in an economically challenged NHS the requirement of evidence is becoming increasingly more important. We are in a unique position to work together to generate that evidence.

We welcome you to VASBI 2014!

Nick Inston, President Rob Jones, Conference Organiser



VASBI PRESIDENT

Mr Nick Inston PhD FRCS is a renal transplant and vascular access surgeon at the Queen Elizabeth Hospital Birmingham. He is current president of the Vascular Access Society of Britain and Ireland (VASBI) and a member of the European Best practice guidelines group for vascular access. He has lectured on vascular access at international meetings and has interests in both clinical and basic science research.

FACULTY LISTS

VASBI 2014 FACULTY

Mr Nick Inston	Dr Jason Wilkins	Mr Dave Parker
Dr Sarah Lawman	Dr Jennifer Hanko	Mrs Nikki Cullen
Dr Peter Littler	Mr Paul Gibbs	Mr Richard Craven
Dr Steve Powell	Mr James Gilbert	Ms Stephanie Kershaw
Mr Max Troxler	Dr Johann Nicholas	Mr Mark Edwards
Dr Rob Jones	Dr Anirudh Rao	

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INTERNATIONAL FACULTY

Dr Charmaine Lok

DrDheeraj Rajan

Dr Maurizio Gallieni

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WL GORE FACULTY

Mr David Kingsmore

Dr Peter Riley

Mr Domenico Valenti

THURSDAY 25TH SEPTEMBER 2014

ALL MAIN SESSION IN MAIN BALLROOM UNLESS INDICATED ALL REFRESHEMENTS IN EXHIBITION HALL - HALL D

TIME	SESSION/TOPIC	CHAIR*/SPEAKER
08.00 - 09.15	Registration (Foyer)	VASBI President, Mr Nick Inston
09.15 - 09.30	Welcome & Introduction	Mr Nick Inston* & Dr Sarah Lawman*
09.30 - 10.30	Scientific Session 1 (For full details go to Scientific Session Abstract Section on page 9)	
10.30 - 11.00	COFFEE, EXHIBITION & POSTERS	
11.00 - 12.30	Plenary Session 1: State of the Art - Whats New? Trials, Therapeutics, IR and Access AV access and the cardiovascular system	Mr Max Troxler* & Dr Steve Powell* Dr Charmaine Lok & Dr Dheeraj Rajan Dr Maurizio Gallieni
12.30 - 13.00	Moderated Poster Session 1 Judging Panel: Dr Sarah Lawman, Dr Jason Wilkins, Dr Jennifer Hanko & Mr James Gilbert	
	Industry Open Mic Session What industry can do for you	Industry Partners
13.00 - 14.00	LUNCH, EXHIBITION & POSTERS	
14.00 - 15.30	Mega MDT Session	
	-	
15.30 - 16.00	COFFEE, EXHIBITION & POSTERS	
15.30 - 16.00 16.00 - 17.30	 COFFEE, EXHIBITION & POSTERS Debates: Debate 1: End stage access: Heroic interventions or well managed lines. For: Mr James Gilbert. Against: Dr Sarah Lawman. Debate 2: AV Access dysfunction best treated by Surgeons or Radiologists. For Surgery: Mr Paul Gibbs. For Radiology: Dr Rob Jones 	Dr Jennifer Hanko* & Dr Jason Wilkins* Dr Peter Littler* & Mr Nick Inston*

19.00DRINKS RECEPTION ON THE RIVER TERRACE

20.00 CONFERENCE DINNER

FRIDAY 26TH SEPTEMBER 2014

ALL MAIN SESSION IN MAIN BALLROOM UNLESS INDICATED ALL REFRESHEMENTS IN EXHIBITION HALL - HALL D

TIME SESSION/TOPIC

CHAIR*/SPEAKER

- 08.30 -09.30 Registration & VASBI Membership Renewal
- 09.30 -11.00 Plenary Session 2: International Trends in Vascular Access VASA VAS UK Renal Registry The Developing World

Mr Max Troxler* & Dr Johann Nicholas*

Dr Charmaine Lok & Dr Dheeraj Rajan Dr Maurizio Gallieni Dr Anirudh Rao Mr Nick Inston

Dr Jennifer Hanko* & Dr Steve Powell*

11.00 - 11.30 COFFEE EXHIBITION & POSTERS

11.30 -12.30 Scientific Session 2

(For full details go to Scientific Session Abstract Section on page 9)

12.30 - 13.00 Moderated Poster Session 2 Judging Panel: Mr Paul Gibbs, Dr Peter Littler, Dr Jennifer Hanko & Mr Max Troxler

13.00 - 14.00 LUNCH EXHIBITION & POSTERS WL Gore Symposium: (For full details go to page 7)

14.00 - 14.45 The Way Forward : What do you want from VASBI? VASBI Group Lead Discussions Sonographers/Radiographers (Bancroft)

> Nursing (Hatton) Research (Terrace Seminar Room) Training (Main Auditorium)

Mr Dave Parker, Mrs Nikki Cullen & Mr Richard Craven Ms Stephanie Kershaw Mr Nick Inston & Dr Rob Jones Mr Max Troxler, Dr Jennifer Hanko & Mr James Gilbert

- 14.45 15.15 Presentations of Group Lead Discussion: Dr Sarah Lawman* & Mr Nick Inston* Summaries Coffee will be served
 15.15 - 15.30 VASBI /Prize Giving and Conclusions
 - Society ReportVASBI Secretary, Dr Sarah LawmanTreasurer's ReportVASBI Treasurer, Dr Peter Littler

CLOSE OF MEETING

Gore Lunch Symposium at VASBI 2014

Friday, September 26 13:00 Main Ballroom

Recent innovations and outcomes

Moderator: Mr Domenico Valenti King's College Hospital, London

The Practical Use of GORE® ACUSEAL Vascular Graft to Replace Lines *Mr David Kingsmore*, *Western Infirmary*, *Glasgow*

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Dr. Peter Riley, Queen Elizabeth Hospital, Birmingham

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MAURIZIO GALLIENI, MD

President, Vascular Access Society Director, Nephrology and Dialysis Unit, San Carlo Borromeo Hospital, Milano, Italy

Doctor Gallieni has more than 25 years of clinical practice and research in Nephrology. He was trained in Italy (University of Milano, University of Verona) and in the United States (Brown University, Providence, RI; University of Chicago; and Washington University, Saint Louis, MO). He has published more than 170 peer-reviewed papers and is a member of the editorial board of leading worldwide scientific journals in the nephrological field. Doctor Gallieni also participates in teaching activities and tutorship at University of Milano. He is a member of the nephrology and vascular access scientific societies in Italy, Europe and the USA and served as a medical consultant to several pharmaceutical companies in Europe.



DR. CHARMAINE LOK

Dr. Charmaine Lok is a Professor of Medicine, Faculty of Medicine, at the University of Toronto and Senior Scientist at the Toronto General Hospital Research Institute. She is also associated with the Department of Clinical Epidemiology and Biostatistics, Faculty of Health Sciences, McMaster University. Dr. Lok is the medical director of both the chronic kidney diseases and hemodialysis vascular access programs at the Toronto General Hospital, Toronto, Canada. Her research focus is on chronic kidney disease (CKD) and endstage kidney disease (ESKD) outcomes. She has a special interest in improving hemodialysis vascular access outcomes and reducing cardiovascular events and mortality. She is active in raising awareness of CKD and ESRD and its importance in population health. Dr. Lok is involved in a variety of local and international scientific and educational programs, including CIHR, KFOC, DOPPS, NKF, ASN, VASA and ASDIN.



DR. DHEERAJ RAJAN

Dr. Dheeraj Rajan completed his Diagnostic Radiology residency at Wayne State University in 1999 and fellowship in Vascular and Interventional Radiology at the University of Pennsylvania in 2000. After completing his training he accepted a position on staff at the University Health Network/Mount Sinai Hospitals with the University of Toronto. Over his career, he has published 70 papers and one textbook with a primary interest in dialysis and arterial interventions including EVAR's. He is an Associate Professor and Academic Head of VIR at the University of Toronto. His current interest is percutaneous dialysis fistula creation.

SCIENTIFIC SESSION 1 THURSDAY 25TH SEPTEMBER 2014

Time	Abstract ID	Title	Presenter
09.30 - 09.40	4	A review of buttonhole cannulation within the Oxford Kidney Unit - Two years on.	Nicki Angell-Barrick
09.40 - 09.50	6	Early results using Brain natriuretic peptide (BNP) as a marker for the efficacy of secondary extension technique (SET) in improving myocardial function in dialysis patients with high flow fistulas.	H. Al-Khaffaf
09.50 - 10.00	9	Cephalic arch lesions in ipsilateral arteriovenous fistulas - Balloon or Stent-Graft?	S. Karkhanis
10.00 - 10.10	10	Single Centre Experience on Haemodialysis Reliable Outflow (HeRO) grafts.	Georgios Vrakas
10.10 - 10.20	14	Vascular Access in the Elderly, If You Can't Beat Them Needle Them.	A.Masengu
10.20 - 10.30	17	Is Fistula First always the right approach for bariatric CRF patients?	Catherine Boffa

SCIENTIFIC SESSION 2 FRIDAY 26TH SEPTEMBER 2014

Time	Abstract ID	Title	Presenter
11.30 - 11.40	19	Arterial stiffness correlates with arteriovenous fistula outcomes.	D. McGrogan
11.40 - 11.50	34	Bovine pericardium patch angioplasty for recalcitrant or recurrent venous stenosis in vascular access.	Pauline Buxton
11.50 - 12.00	38	Can Drug-Eluting Balloon angioplasty reduce the frequency of interventions in selected high-maintenance dialysis fistulae – early results of a case series.	Tereza Cairns
12.00 - 12.10	39	Patient and Nurse reported outcomes of Far Infrared therapy to assist fistula care in haemodialysis patients.	Helen Spooner
12.10 - 12.20	42	Effect early needling survival of arteriovenous fistulae.	Sarah Powers
12.20 - 12.30	45	Early cannulation grafts: complications and the learning curve.	Emma Aitken

Title: A review of buttonhole cannulation within the Oxford Kidney Unit – Two years on Authors: Nicki Angell-Barrick, Sarah Wilson and James Gilbert Institution/Affiliations: Oxford Kidney Unit

Introduction: The Renal Association recommends buttonhole cannulation as the preferred needling method for autologous fistulae. Last year we presented our challenges surrounding the introduction of buttonhole cannulation in 2 of our 6 dialysis units. We are interested in the clinical outcomes of this technique in relation to rope ladder needling.

Methods: We undertook a retrospective analysis of our buttonhole cannulation database and reviewed data for all patients who had started buttonhole cannulation since the programme was introduced. We specifically looked at the time to blunt needle cannulation, local infection, bacteraemia and stenotic complications.

Results: 100 patients have started buttonhole cannulation. The male : female ratio is 71 : 29. Median age is 67 years (range 34 – 96). 25 new fistulae were buttonholed. 75 previously rope laddered fistulae were converted to buttonhole. 89 patients have established tracts. Median time to tract formation for these 89 was 16 days (range 7:120 days). 2 patients have recently started cannulation, 9 patients had abandonment of buttonhole needling. 1 (1.12%) of the 100 patients had a proven bacteraemia. 9 (10.1%) patients needed a radiological intervention for buttonhole stenoses.

Discussion: We believe that our data is very favourable compared to previously reported results. We have achieved a very short median time to tract formation which is associated with only 10.1% requiring a radiological intervention for buttonhole related stenosis and less than 2% bacteraemia rates.

Take-home message: A successful buttonhole cannulation programme is achievable. It is dependent upon a wellplanned implementation strategy and key motivated buttonhole champions, including patients.

ABSTRACT 6

Title: Early results using Brain natriuretic peptide (BNP) as a marker for the efficacy of secondary extension technique (SET) in improving myocardial function in dialysis patients with high flow fistulas. Authors: H Al-Khaffaf Institution/Affiliations: East Lancashire Regional Vascular unit, Royal Blackburn Hospital

Introduction: The association of dialysis fistulas and heart failure believed to be due to high cardiac output. (BNP) which is secreted by the cardiac ventricles in response to excessive stretching of heart muscle cells has been used as a marker of heart failure with 80% sensitivity. We report our early experience in using BNP levels to test the efficacy of (SET) in improving myocardial function by reducing fistula flow.

Methods: Seven patients with high fistula flows (> 3L/m, all brachio-cephalic) and raised BNP underwent SET between 2012 and 2014. SET involves extending the anastomosis from brachial to either proximal radial or ulnar arteries. We measured BNP levels, fistula flow and Clinical improvements both pre and post operatively.

Results: There was a dramatic drop of BNP levels (by more than 50% within 2 weeks) and immediate reduction of fistula flow (by 50-70%) in all seven patients. Although there was an overall clinical improvement of patient's symptoms this was difficult to quantify. No interposition grafts were required.

Discussion: Our small study shows that SET is an effective way of reducing fistula flow. It also shows that BNP may be a reliable marker in assessing the impact of the technique on cardiac function. We plan to continue our study with more patients and longer follow up to assess the long term efficacy of the technique.

Take-home message: SET is an effective technique in reducing fistula flow and BNP is potentially a reliable marker in assessing its effect on cardiac function.

Title: Cephalic arch lesions in ipsilateral arteriovenous fistulas – Balloon or Stent-Graft? Authors: S Karkhanis, A Khawaja, R G Jones, A P Willis, I J McCafferty, P L Riley Institution / Affiliations: University Hospital of Birmingham NHS Trust, Birmingham

Introduction: Cephalic arch stenosis and occlusion has been implicated in arteriovenous fistula (AVF) failure in 19.5-77% of cases and is a common site for frequent re-intervention. We present a 2-year experience of endovascular management of cephalic arch disease in patients with functioning upper limb fistulas.

Methods: A retrospective review was carried out over a 2-year period (Sept 2010 - Dec 2012) using 'cephalic arch' as a keyword search of the radiology information system. Patient and procedural demographics were recorded along with follow-up imaging results and further interventions. Complications were also recorded.

Results: Thirty-five patients with functioning AVF, who had cephalic arch interventions, were identified (mean age=64, M: F=18:17). Mean follow-up period was 16.5months (range 0-35months).

Patients managed with venoplasty alone (n=21), had primary patency rates of 76%, 37%, 26% and 26 % and primary assisted patency of 92%, 70%, 60% and 44% at 3, 6, 9 and 12 months. In comparision, patients managed with stent-grafts (n=12) demonstrated primary patency rates of 100%, 64%, 54% and 60% (p value= 0.8) and primary assisted patency rate of 100%, 100%, 100% and 75% (p value= 0.12) at 3, 6, 9 and 12 months.

Discussion: In management of cephalic arch disease in functioning upper limb AVF, apparent improved patency rates were achieved with stent-grafts compared to venoplasty alone, but this was not deemed significant in this small series.

Take-home message: Use of stent grafts to manage cephalic arch disease showed an apparent improved patency, however, larger, prospective studies are required to quantify its true extent.

ABSTRACT 10

Title: Single Centre Experience on Haemodialysis Reliable Outflow (HeRO) grafts Authors: Georgios Vrakas, James Gilbert Institution/Affiliations: Oxford Transplant Centre, Churchill Hospital, Oxford, OX3 7LE, UK

Body: Introduction: The recent advent of the HeRO graft has enriched our armamentarium in the management of patients with challenging central venous occlusive disease.

Methods: We undertook a retrospective review of HeRO graft placements from July 2013 to June 2014. Patients' demographics, access history, HeRO patency, and number of interventions pre and post HeRO insertion were analyzed. Kaplan Meier estimates were used for primary and secondary graft patency.

Results: Five patients have so far undergone HeRO grafts placement. All grafts are currently working. Average duration of haemodialysis prior to HeRO insertion was 1425 days. Average survival and primary patency so far are 175.4 days and 150.8 days respectively. The insertion of HeRO grafts has reduced the average annual number of interventional radiology procedures for venous hypertension from 6 to 0.

Discussion: In patients with central venous pathology, the HeRO device can provide an efficient long-term dialysis option when an arteriovenous fistula or graft is not possible or would result in venous hypertension. Our experience has seen a reduction in radiology visitations to deal with recurrent central stenosis and has provided improved dialysis adequacy and quality of life. Close follow-up and subsequent aggressive interventions can prolong the use of the HeRO.

Take home message: The HeRO device can provide an efficient long-term dialysis option when an arteriovenous fistula or graft is not possible.

Title: Vascular Access in the Elderly, If You Can't Beat Them...Needle Them! Authors: A.Masengu, J.Hanko Institution: Belfast City Hospital

Introduction: Current literature debates the optimal vascular access (VA) in elderly patients. A recent study suggests that the 'Fistula First' approach may not be best as they have poorer vessels and are less likely to get catheter-related bacteraemia1. We sought to compare rates of arteriovenous fistula (AVF) in patients aged above and below 75 years of age in our dialysis unit.

Methods: Data was extracted from a renal database and analysed for incidence (2011-2013) and prevalence rates (Jan 2014).

Figure 2: Prevalence R

Figure 1: Incidence Rates (n = number) AGE 2011-2012 2013 τοται **Results:** AVF n (%) Total AVF Total 6 (30) <50 20 5 2 (40) 25 8 (32) 50-64 20 8 (40) 11 5 (45) 31 13 (42) 65-74 21 6 (29) 8 3 (38) 29 9 (31) >75 24 7 (29) 11 7 (64) 35 14 (40) 85 27(32) 17 (49) 120 44 (37) 35

ates in January 2014	AGE	AVF RATE % (n)	_
	<65	54 (43/79)	-
	65-74	52 (26/50)	-
	>75	55 (33/60)	-

Discussion: In our unit, the highest incidence and prevalence of AVFs occurred in patients over 75 years of age. Patients below the age of 50 have the worst incidence of AVF for a number of reasons. Attention needs to be focused on these patients to improve their access.

Take-home message: It is crucial to optimise quality of life and VA in our elderly population. They should all be considered for the creation of AVF if deemed to have suitable vessels.

Reference. 1. R.Oliver, J. Quinn. Recalibrating Vascular Access for Elderly Patients. CJASN April 07, 2014 9): (4) 645-647;

ABSTRACT 17

Title: Is Fistula First always the right approach for bariatric CRF patients? Authors: Miss Catherine Boffa, Mr Sanjay Sinha, Mr James Gilbert Institution / Affiliations: Oxford Transplant Unit

Introduction: Autologous arteriovenous fistulas (AVFs) are the recommended initial form of vascular access wherever possible. We suggest that this may not be the best option in morbidly obese patients.

Methods: All cases of PTFE forearm loop AVF created in obese patients between November 2007 and May 2014 were analysed. Patient and graft outcomes were noted.

Results: 18 bariatric patients (BMI >35) had PTFE forearm loop AVFs created between November 2007 and May 2014 under regional anaesthetic (age range 51-88). 8 patients (44%) had primary patency at 1-year, 2 patients (11%) needed venoplasty in the first year post PTFE loop insertion to achieve patency at 1-year. 1 patient (6%) has 6-month patency (graft inserted October 2013), 4 grafts have been done in the last 4 months and are running well and 3 patients (17%) died within 4 months of having the forearm loop created. 4 patients (22%) had a post-operative wound infection (1 of which needed surgical debridement).

Discussion: Forearm loop PTFE configuration done under regional block is a safe option for bariatric patients. The procedure is minimally invasive in comparison to superficialisation or transposition of a deep autologous vein fistula. It provides a quick to use access option in patients who tend to present late and provide a huge challenge for Tesio line insertion. Our series demonstrates excellent patency rates and low long-term infection rates. 22% died within 2 years with functioning grafts which supports the argument that forearm loops provide reliable and easy to establish access in a very high risk group of patients.

Take-home message: Fistula first recommendations may not always benefit bariatric patients, and we suggest that primary PTFE grafts are a safe option in this patient sub-group.

Title : Arterial stiffness correlates with arteriovenous fistula outcomes Authors: McGrogan D, Jesky M, Cockwell P, Stringer S, Inston N. Institution/Affiliations: Department of Renal Transplant and Nephrology, University Hospitals Birmingham, Queen Elizabeth Hospital, Birmingham.

Introduction: Aortic pulse wave analysis is considered the gold standard for assessing arterial stiffness as it gives the clearest pathophysiological significance since the majority of the buffering of pulse waves is performed by the aorta. Non-invasive Vicorder[®] measurements provide information regarding peripheral and central blood pressures in addition to pulse wave velocity and augmentation index. We sought to correlate vascular access outcomes against assessment of arterial stiffness.

Methods: 654 patients are currently enrolled in the Renal Impairment In Secondary Care (RIISC) study of which 67 have proceeded to vascular access formation. Patients enrolled in the RIISC study undergo BP Tru and Vicorder assessment. Information regarding demographics, peripheral and central blood pressure, pulse wave velocity and augmentation index were correlated against the 6 week patency rates.

Results: Primary failure rate of arteriovenous fistulas was 26.8%. Statistically significant variables included peripheral diastolic blood pressure (p=0.047) and augmentation index (p=.032). Binary logistic regression analysis of significant variables (peripheral diastolic blood pressure and augmentation index) and those approaching significance (Peripheral mean arterial pressure) identifies this model to have a positive predictive value of 72.6%.

Conclusions: In this study, a higher augmentation index and lower peripheral diastolic blood pressure are associated with successful early vascular access outcomes.

Take home message: Novel predictors of vascular access outcomes may allow for tailored, patient specific vascular access planning however further prospective studies are necessary to confirm these findings.

ABSTRACT 34

Title: Stenosis of a vascular access (VA) can lead to thrombosis and fistula failure Authors: Pauline Buxton, Richard Evans, Lewis Meecham, Parmindar Kaur, Jocelyn Legge, Sriram Ragagopalan, Lorraine Corfield, Omer Ehsan, Arun Pherwani. Institution/Affiliations: University Hospital of North Staffordshire, Staffordshire & South Cheshire Vascular Network

Introduction: Stenosis of a vascular access (VA) can lead to thrombosis and fistula failure. If radiological angioplasty is unsuccessful or early restenosis occurs, patch angioplasty can be performed. Autologous vein or synthetic Dacron/PTFE are commonly used but Bovine Pericardium Patch (BPP) could be an alternative, we present our experience over the last 2 years of BPP angioplasty.

Methods: VA requiring rescue BPP were identified from a prospectively kept renal access database(Cyberren R). Case notes were reviewed for type of VA (AVF or AVG), position of stenosis, previous angioplasties, post procedural infections, restenosis and re-intervention rates.

Results: There were 15 bovine pericardium patch angioplasties since 2012. Type of VA were upper limb AVF:Wrist(2), Forearm(1), Elbow(10) and Lower limb: Bovine AVG(1) and Thigh AVF(1). Patches were placed for significant stenosis causing reduction in dialysis flow rates with Duplex confirmation(13), Stenosis/false aneurysm(1) and thrombosis(1). All stenosis were venous, with one stenosis at the venous anastomosis of a bovine AVG. All had previous attempts at radiological fistuloplasty (median attempts = 2, Interquartile range =1). All patches were XenoSureBiologic(LeMaitre). Median follow-up from patch angioplasty = 12months, Interquartile range =4.5, with all fistulae patent to date. There have been no patch infections, restenosis or re-interventions.

Conclusion: Our experience of BPP angioplasty for stenosis of VA shows it is a robust alternative to vein or synthetic patches, demonstrated by no patch infections, loss of fistula to thrombosis/restenosis and the added bonus that a BPP can also be needled.

Take home message: BPP is a good alternative for patch angioplasty of VA stenosis.

Title: Can Drug-Eluting Balloon angioplasty reduce the frequency of interventions in selected high-maintenance dialysis fistulae – early results of a case series. Authors: Dr Tereza Cairns, Dr Michelle Gaffney, Dr Ramita Dey Institution/Affiliations: Northampton General Hospital

Purpose: There is anecdotal evidence of using drug eluting balloons (DEBs) in dialysis fistulae. Our aim was to assess if use of DEBs could reduce the frequency of interventions in selected high-maintenance arterio-venous (AV) dialysis fistulae, thus reducing total overall cost.

Material and methods: DEB fistuloplasty was performed in 11 patients with radiocephalic and brachiocephalic fistulae, over 24 months. Patient selection was directed by 2 or more previous same-segment fistuloplasties or a short period to re-stenosis following previous plain balloon (PB) fistuloplasty. Data was gathered from the CRIS system and analysed using Excel 2013. The time intervals between PB and DEB intervention were compared to the intervals between DEB and subsequent intervention. Cost analysis was done using current UK HRG codes for vascular day cases.

Results: 1 patient was lost to follow-up following transplant. 8 patients remain stenosis-free following DEB fistuloplasty. There is a significant difference in the stenosis-free period following DEB plasty compared to PB plasty (p=0.0043; unpaired t-test). Cost analysis shows that 1 day-case angioplasty episode attracts a tariff of £1590. Even with a DEB costing an additional £500 compared to £45 for a PB, the resultant saving of 2.1 fistuloplasties per year, equates to a cost benefit of £3339 per year for this cohort

Conclusion: Some fistulae need multiple maintenance interventions, with high procedural costs and inconvenience to the patient. Our early results show that use of DEBs in dialysis fistulae is safe, with, even in this small series, an encouraging trend to prolonging time to restenosis compared to PB fistuloplasty. There is considerable total cost-benefit per fistuloplasty avoided, even allowing for the high cost of DEBs.

ABSTRACT 39

Title: Patient and Nurse reported outcomes of Far Infrared therapy to assist fistula care in haemodialysis patients. Authors: Sr Diane O'Hara, Sr Helen Spooner, Dr. J Nicholas Institution/Affiliations: New Cross Hospital, Wolverhampton

Introduction: Far Infrared (FIR) therapy can aid fistula (AVF) maturation, lead to reduced symptoms of pain, bruising and less access failures. Use of FIR in the UK has been hindered by a lack of familiarity with this treatment and a paucity of patient and nurse experiences.

Methods: HD patients in a single centre with AVFs were evaluated and considered for FIR therapy. All were grouped according : new fistulae awaiting maturation; established AVFs with problems with needling, problems with excessive bruising or with pain on needling. Those who were problem free were not included. Patients and nurses filled in questionnaires about their experiences with fistula use before and after FIR therapy lasting a month.

Results: 36 patients were involved. 21 had issues with pain on needling, 6 had problems with bruising, 14 had problems with needling in established AVFs, 4 were new fistulae awaiting maturation. Following therapy, significant pain symptoms associated with needling fell from 61% to 17% of patients. Those patients with excessive bruising, noted a reduction in significant pain symptoms from 75% to 50%. Nurse experiences were positive, with no problems in deploying the treatment during dialysis or of storing the devices after use.

Discussion: Pain associated with AVF needling was attenuated in a significant number of patients following FIR therapy. Nursing experience of FIR therapy was very positive.

Take-home message: FIR therapy is effective in reducing AVF needling pain in HD patients. Wider use of FIR therapy in HD units is advocated to attend to this distressing symptom.

Title: Effect early needling survival of arteriovenous fistulae Authors: Sarah Powers, Teun Wilmink, Jyoti Baharani Institution: Departments of Renal Medicine & Vascular Surgery, Heart of England Foundation Trust, Birmingham, B9 555

Purpose: To examine the effect of time to needling on arteriovenous fistula (AVF) survival.

Materials and Methods: Retrospective review of two prospective databases of access operations and dialysis sessions from 2002 till end 2011. Follow up till 1 June 2014. Time to needling was defined as time from operation date to first needling date. AVF-survival was defined till date AVF abandoned.

Results: 1235 AVF patients were created: 895 (72%) had dialysis on the AVF. Needling-time varied from 1 day to 267 days. Eightyfour AVF (9%) were needled within 4 weeks and 662 (54%) AVF were needled after 16 weeks. Early needling was not associated with worse AVF survival (logrank test p = 0.67) compared to needling between 4 and 16 weeks, but late needling was associated with improved survival (logrank test p < 0.0001). Type AVF, diabetes, pre-dialysis state at operation, and six successful cannulations from the start were all independent predictors for AVF survival (table).

Variable	HR (for failure)	95% CI	р	Variable	HR (for failure)	95% CI	р	Variable	HR (for failure)	95% CI	р
BCAVF	1.39	1.05 - 1.84	0.02	Sex	1.12	0.87 - 1.44	0.37	Six from start	0.69	0.50 - 0.96	0.025
BBAVF	1.81	1.26 - 2.60	0.001	Diabetes	1.38	1.07 - 1.77	0.11	Pre dialysis	0.67	0.51 - 0.88	0.004
Age	1.00	0.99 - 1.01	0.2	Late needling	0.70	0.51 - 0.96	0.024				

Take-home message: Needling after 16 weeks or ensuring six successful AVF cannulations from the start are strong predictors of better AVF survival.

ABSTRACT 45

Title: . Early cannulation grafts: complications and the learning curve Authors: Emma Aitken & David Kingsmore Institution / Affiliations: Department of Renal Surgery, Western Infirmary, Glasgow

Introduction: ecAVGs, such as the GORE [®] Acuseal[™], have "low bleed" properties permitting cannulation within 24 hours of insertion. They may provide an alternative to TCVCs in patients requiring urgent vascular access.

Methods: We present our early experience of 86 patients treated with the GORE [®] Acuseal[™]. Complications and our learning curve are described.

Results: 54 upper limb, 30 lower limb and 2 complex graft procedures have been performed to date. Indications for ecAVG: bridge to transplantation (20.9%); bridge to AVF maturation (25.5%); AVF salvage (11.6%); no native options (41%, including 18 patients with bilateral central vein stenosis). 85 AVGs (98.8%) were successfully cannulated. Time to first cannulation: 12.4 +/- 21.2 hours (range: 0.5-192). Primary and secondary patency rates at 3, 6 and 12 months were 65.1%, 47.7%, 32.6% and 69.7%, 60.4%, 41.8% respectively. Venous stenosis was the most common reason for graft thrombosis. Rates reduced following modification of surgical technique. The systemic bacteraemia rate was 0.2 per 1,000 access days. Other complications included: cannulation site haematoma (n=10), pseudoaneurysm (n=3), steal (6) and local infection (n=8). Steal was also more common in the initial cohort and a modified anastomotic technique has been developed to prevent this. Haematomas and pseudoaneurysms from poor cannulation technique reduced following nurse education events (12 vs. 2 in 6 months pre- and post- education day). 64 patients (74.4%) achieved a "personal vascular access solution": bridge to transplantation (n=15), bridge to functioning AVF/ interposition AVG (n=25), maintenance HD via ecAVG (n=23); death with functioning AVG (n=1).

Conclusions: Early experience with the GORE [®] Acuseal[™] is encouraging. Patency and bacteraemia rates are acceptable in this patient group, many of whom have complex vascular access needs. The graft has unique properties resulting in a learning curve of both operative and cannulation technique.

Take home messages: Early cannulation grafts provide a useful alternative to TCVCs in patients requiring urgent vascular access for haemodialysis. A learning curve of both operative technique and cannulation technique is evident given the unique properties and handling of Acuseal.

THURSDAY 25TH SEPTEMBER 2014

1. A reflection on the impact of expanded renal transplantation on prevalent vascular access modality in a Scottish Renal Unit

Nehikhare I, Aitken E, Thomson P, Clancy M University of Glasgow, Western Infirmary General Hospital

- 2. Aseptic Non-Touch Technique For Renal Haemodialysis Buttonhole Cannulation Caroline McCloskey Renal Unit, Altnagelvin Hospital, Glenshane Road, Derry, Northern Ireland.
- 3. Independent Nurse-Led Vascular Access Clinics: "Striving to exceed the Renal Association Standards!" Mr Chris Davies, Mrs Paula Davies Miss Karen Sillick ,Mrs Liz Pernas,Mrs Karen Edwards. Renal Unit, Morriston Hosptial, Swansea
- 5. The efficacy of a Dual Surveillance system for Arterio-Venous Fistulas (AVF) in improving access patency Natasha Charlwood, Haytham Al-khaffaf East Lancashire regional vascular unit, Royal Blackburn Hospital
- 7. Cardiovascular parameters and fistula maturation: the influence of vessel size and cardiac output Emma Aitken, Daniele Kerr & David Kingsmore Institution Department of Renal Surgery, Western Infirmary, Glasgow
- 8. Percutaneous transluminal fistuloplasty of juxta-anastomotic stenoses: Plain balloon fistuloplasty versus fistuloplasty with drug coated balloons. Louise Ramskold, Mike Guest, Sadasivam Selvakumar, Sam Stuart, Matthew Metcalfe & Kate Steiner The Lister Hospital East and North Herts NHST
- **11. Arteriovenous Fistulas/Grafts for Patients with Intestinal Failure: Innovation or Insanity?** Georgios Vrakas, Anil Vaidya, James Gilbert Oxford Transplant Centre, Churchill Hospital, Oxford, OX3 7LE, UK

12. Peritoneal Dialysis First

A.Masengu, J.Hanko Belfast City Hospital

13. Optimising Optimal Renal Replacement Therapy Initiation

A.Masengu, J.Hanko Belfast City Hospital

26. A comparison of peritoneal dialysis catheter placement practice for renal replacement therapy against national guidelines.

Kenny H, Janowski M, Guthrie GJK, Suttie SA Department of General and Vascular Surgery, Ninewells Hospital and Medical School - University of Dundee, Dundee, DD1 9SY

36. No title as yet

Shilpi Pal, William Cheung, Chris Hay Royal Infirmary of Edinburgh

- **37. Expanding the skills of the vascular access specialist nurse** Simon Daniel , Lila Elliott, David Mitchell North Bristol NHS Trust
- **40. Introducing an area puncture algorithm to improve needling technique of AVF** Sr Helen Spooner, Sr Diane O'Hara, Dr Johann Nicholas New Cross Hospital Wolverhampton
- 41. Infections in tertiairy vascular access; a comparision between Brachio-basilic arteriovenous fistuale and Arterio-venous grafts

Safia Zaffarullah, Sarah Powers, Jyoti Baharani, Teun Wilmink Dept of vascular surgery and renal medicine, Birmingham Heartlands Hospital, Birmingham

44. The role of a dedicated Vascular Access Training Fellowship Emma Aitken & David Kingsmore Department of Renal Surgery, Western Infirmary, Glasgow

- **46. Carbon Dioxide as a Contrast Agent in Dialysis Access Intervention** A.Khawaja, R. Jones, N. Inston, J. Hopkins Queen Elisabeth Hospital Birmingham
- 47. Pre-operative examination for arteriovenous access in hemodialysis: an insight into clinical practice guidelines

Deirdre Cassidy1, A Khawaja3, J Ayub4, N Inston3, E Lancelot4, S Matthew1, R Jones3, JG Houston1, 2 1: Division of Cardiovascular and Diabetes Medicine, University of Dundee, UK,

- 2: Ninewells Hospital, Dundee, UK,
- 3: Queen Elizabeth Hospital, Birmingham, UK,
- 4: Guerbet, Paris, France

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FRIDAY 26TH SEPTEMBER 2014

- **15. Central Vein Stenosis Angioplasty: The Fate of the Fistula** Jackson AJ, Aitken EL, Kasthuri R, Kingsmore DB
- **16. Central Vein Stenosis: The healthcare burden and associated cost** Jackson AJ, Aitken EL, Kingsmore DB
- 18. A feasibility study: can pre and post-surgery duplex ultrasound measurements predict arteriovenous fistula (AVF) outcome in adult patients requiring haemodialysis? Sophie Coles
- **20. Fistula Fast' Initial experience from a new, rapid access arteriovenous fistula pathway** McGrogan D, Marie Y, Freckleton S, Phillips J, Chana M, Tullett K, Austin S, Day C, Eddington H, Inston N.
- **21. Vascular Access and Patient Values: Fistula Refusal may be Rational and Non-Modifiable** D Ashby, A Janmohamed, N Duncan, J Crane, L Johansson

POSTER LIST

22. Transjugular approach as an alternative to graft puncture in dialysis fistula interventions: our experience

Dr Diana Bosanac MBBS FRCR, Dr Giorgio Garzillo MBBS, Dr Anastasia Hadjivassiliou MBBS, Dr Kate Steiner MBBS FRCR, Dr Dominic Yu MBBS FRCR

23. Multiple Failed Fistulae: The Lower Limb Options

RPT Evans, P Buxton, P Kaur, L Meecham, GC Kirby, J Legge, J Asquith, L Papp, L Corfield, AD Pherwani

24. Dual use of an Arterio-Venous Fistula for Total Parentral Nutrition and Haemodialysis: Potential and Pitfalls

Kirby GC, Meecham L, Evans RPT, Leslie F, Wessels J, Asquith JR, Legge J, Kaur P, Pherwani AD.

- **27. The Hemodialysis Reliable Outflow (HeRO®) Graft: UK cost-consequence analysis** Nicholas Inston1*, Robert Jones2*, Grant Maclaine3, David Hollinworth4
- **28. Group and Save sampling in routine arterio-venous fistula surgery** J. Winchester, N. Ibrahim, D. Sookloll, N. Inston, D. McGrogan.
- **30. The challenge of haemodialysis access in patients with central venous stenosis** Goh MA, Ali JM, Lagaac R, Barlow AD, Pettigrew GJ
- **31. Iliac vein patch angioplasty to accommodate PTFE leg AV fistula for rescue vascular access** L. Meecham, G. Kirby, P. Buxton, R.P. Evans, P. Kaur, J. Legge, S. Rajagopalan, A.D. Pherwani
- **32. Retrograde brachio-cephalic AV fistulas represent a novel needling site for haemodialysis** U Khalid, S Horvath, E Saunders, L Davies, R Morris, A Ilham, M Stephens Vascular Access Service, Cardiff & Vale University Health Board, Cardiff, UK
- **33. Age is not a limiting factor in octogenerians to choose radiocephalic fistulas** Sultan M J, Wilkinson D, Mercer G K
- 35. The use of FAR infrared therapy to minimise pain and discomfort associated with AV fistulae whilst on haemodialysis

Tamasin Stevenson & Sarah Powers

43. Does Diabetes Really Affect Arteriovenous Fistula Outcomes? A Retrospective Study Quinn Kevin*, Wong Vidette*, Aitken Emma**, Kingsmore David**

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