



*40th
Anniversary Edition*

Perfusionist

Bi-monthly publication of

The Society of Clinical Perfusion Scientists of Great Britain and Ireland



Volume 41, Number 5

September/October 2017



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Publication of The Society of Clinical Perfusion Scientists of Great Britain and Ireland

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and
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PERFUSION SCIENTISTS**

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Editorial

John Campbell, *Interim Editor*

In this anniversary edition we have reprinted a copy of the first edition of the newsletter that was the forerunner of the today's publication. The reprint makes for extremely interesting reading, in 1977, hard as it is to imagine or remember that we were without the world wide web, word processors, desk top publishing or mobile communications. Information and its delivery was dependant upon selfless individuals ensuring that material was delivered and available to the membership in a reliable consistent format. We are privileged to have a first-hand account of the Birth of The Perfusionist from the original Editorial/production team of Dereck Wheeldon and Don Bethune.

There is an article looking at the events that were occurring in 1977 at the time of the first publication of the Perfusionist. Interestingly the similarities in events occurring at the inception and 40th

anniversary have both a surprising element of *deja vu* and juxtaposition.

The Cork University Perfusion team have kindly provided an interesting insight to the Perfusion team and the development of the unit in Cork from 1985 to the modern centre it is today. In our featured poster section we have the work of Louise White from Birmingham Children's hospital describing Carotid Stenosis. Damian McCann gives a detailed account of the recent 17th European Congress on Extracorporeal Circulation meeting held in Marseilles.

Following the successful launch of the new Masters of Science course in Perfusion Science at the University of Bristol, Tim Pitt reports on the events of the day on behalf of the Education and Training committee. Andy Heggie has provided a report on the recent National Safety Standards for Invasive Procedures (NatSSIPs) committee meeting that he

attended and the work surrounding this group and how engagement with this process may provide further assistance to our mission to enhance both perfusion safety.

Noel Kelleher, society secretary reports on the activity of the recent executive committee meeting. The Meetings and Seminars Committee is in the process of completing their preparations for the 43rd AGM and Perfusion Congress in Leeds and has provided details of the scientific programme and events. I am sure that the delegates will find the programme to be both stimulating and informative.

If anyone wishes to discuss any matters relating to the *Perfusionist* publication either email editor@scps.org.uk or please come and speak with me during the Congress in Leeds, also I will be happy to answer any questions at our AGM.

Executive Committee email addresses

In an effort to standardise e-mail contact for the Executive Committee of the Society and allow smooth transition of contact when positions change following elections, we have introduced some new generic e-mail addresses which we think will make communication much simpler. With immediate effect the following e-mail addresses can be used:

chairman@scps.org.uk

secretary@scps.org.uk

registrar@scps.org.uk

treasurer@scps.org.uk

admin@scps.org.uk (Valerie Campbell)

The Society of Clinical Perfusion Scientists

OF GREAT BRITAIN AND IRELAND

Sub-committees 2016/2017

- ◆ **Finance and General Purposes:**
Andrew Heggie, Simon Anderson
- ◆ **Education and Training:**
Simon Phillips (Chair), Lucy English, Alex Robertson and Tim Pitt
- ◆ **Meetings and Seminars:**
Simon Anderson, Angela Lilley, Sophie Gray and Denise Gonoud
- ◆ **Terms and Conditions:**
Andrew Heggie, Simon Phillips and Noel Kelleher
- ◆ **Safety Committee:**
Noel Kelleher, Angela Lilley

Fàilte, Croeso, Dynnargh, Failt ort, Welcome

John Campbell, Interim Editor

On behalf of the *Perfusionist* publication team I would like to welcome you this September/October 40th anniversary edition. In 1977 a newsletter titled the *Perfusionist* was launched by the Association of Extra-Corporeal Technologists of Great Britain & Ireland. This association would evolve into to our Society that we know today. Forty years of continuous publication of the *Perfusionist* would not have been possible without the remarkable support from our partners in industry and the commercial sector, for which the Society is eternally grateful.

The publication has evolved with the help and support of the Societies committees and its elected Editors and assistants. In the last forty years the *Perfusionist* has generated 41 volumes

with 485 editions containing scientific research, technical information and valuable information and has recorded the history of our profession on these islands.

Many column inches have been consumed by the burning issues and challenges that the profession has faced in the four decades since that inaugural publication. These issues have included the familiar battles to raise standards, the numerous attempts to secure state registration and ongoing advocacy for improvements in Perfusion safety.

Over the years the *Perfusionist* has reported widely on Perfusion education and the progress of the introduction of a specific Perfusion qualification accessible to all Perfusionists in the UK & Ireland. Remarkably we have progressed from

the BTEC qualification system to a specific Perfusion MSc that has coincidentally recently been launched at Bristol University in the midst of the *Perfusionist's* 40th anniversary year.

As the *Perfusionist* prepares to adapt to the challenges of becoming a quadragenarian publication we hope that we can continue to rely on the memberships support together with our partners in the commercial sector to provide the necessary information, scientific research and articles that will enable this publication to raise to the challenges of its next decade.

All that is left for me to say is that I hope that you enjoy this edition and if you have any comments please write in and let us know.



The College of Clinical Perfusion Scientists of Great Britain and Ireland

Due to the resignation of a Society member on the College Council, following this year's Annual General Meeting there will be a vacant position on the Council.

The Executive Committee of the Society is asking for expressions of interest from the membership.

Any perfusionist holding Full membership of the Society and with eight years' post-registration experience who wishes to put themselves forward for this vacancy should contact Valerie Campbell, the College's Administrator, for an outline of the roles and responsibilities of a Council member.

Expressions of interest briefly outlining experience and reasons for wishing to take up a Council seat should be submitted to Valerie by Monday 30th October 2017. The Executive Committee will debate all expressions of interest at the Executive Committee meeting scheduled for Thursday 9th November, and appoint a new member to start their term from November this year.

Andrew Heggie
Society Chairman



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News...

FROM THE EXECUTIVE COMMITTEE

1 Attendance and apologies

- 1.1 Andy Heggie, Noel Kelleher, John Campbell, Lucy English, Denise Gonoud, Simon Anderson, Tim Pitt, Alex Robertson, Simon Phillips, Angela Lilley, Patrick Campbell and Valerie Campbell were in attendance.
- 1.2 Apologies were received from Sophie Gray.

2 Minutes of the 13th March 2017 meeting

- 2.1 The Minutes were accepted as an accurate record of the meeting.

3 Matters arising

- 3.1 Simon Anderson had looked into changing the Society's bank accounts. However, as HSBC had given assurances that the problems experienced would not happen again, the status quo would be maintained.

4 Chairman's report

- 4.1 Andrew Heggie welcomed John Campbell as interim Editor and thanked him for stepping in at short notice.
- 4.2 At the College's request, Andrew Heggie had written to the College about the current state of affairs with regards to statutory regulation. Andrew Heggie said that the Law Commission had recommended to government that statutory regulation be looked at urgently, and a report would be due out soon.

Andrew Heggie said that he would be giving a 20-minute presentation when he attended the NATSSIPs meeting on 4th July 2017.

NHS Protect were considering statutory regulation and had written to the Society in order to learn from our experience.
- 4.3 Anselm Priest had written to resign as the European Board's UK representative. Executive to consider a replacement delegate.

5 Treasurer's report

- 5.1 The bank accounts all showed healthy balances as follows:
Account 1 £26,000+
Account 2 £9,000+
Account 3 £104,000+
- 5.2 The accounts had been sent to the auditors.

6 Report from the Education and Training sub-committee

- 6.1 In considering a number of queries from students based overseas who have been offered bursaries to follow our training programme, E&T looked at the College's rules on self-funding and determined that the rules would not permit overseas-students accessing the course.
- 6.2 Examiners for the practical/viva will be asked to declare if they have worked at a unit during the previous two years, and they would not be sent to a unit to examine a student whom they may have supervised at some point.
- 6.3 A launch event for the Bristol course was being planned for Wednesday 27th September 2017.
- 6.4 Lecturers had been appointed for the Bristol course and each team of lecturers would be responsible for ensuring the delivery of lectures.
- 6.5 The Executive agreed to award the Advanced Certificate to David Walker, Salman Butt, Mark Edwards and Rebecca Richardson.
- 6.6 The Committee applauded the on-going hard work of Simon Phillips, Lucy English, Tim Pitt and Alex Robertson.

7 Report from the Meetings and Seminars sub-committee

- 7.1 Angela Lilley reported that the exhibitor packs had gone out along with the registration booking forms. The Sunday morning session would be on Safety, and a number of suggestions had been made for guest speakers.
- 7.2 In a change from previous years, there would be a poster session on the Friday evening, with the trainees standing by their posters to answer questions.
- 7.3 Simon Phillips said that he would confirm as soon as possible whether an examiners' workshop would be held.

8 Report from the College

- 8.1 Reports from the College President, Treasurer and Secretary were circulated. The Society's Treasurer and Executive agreed the loan repayment

arrangement as outlined in the College Treasurer's report.

- 8.2 The report from the College's Secretary highlighted problems being experienced in carrying out visits to hospitals.

9 Congress awards

- 9.1 The Executive discussed nominees for the Fellowship awards. Noel Kelleher was asked to write to former Society chairmen as per procedure.
- 9.2 The Executive agreed the award to the trainee for the best presentation.

10 Officer and Executive positions – AGM 2017

- 10.1 Valerie Campbell mentioned that the terms of the following would end this year: Chairman (Andrew Heggie), Treasurer (Simon Anderson), Committee (Denise Gonoud, Sophie Gray, Tim Pitt) and Interim Editor (John Campbell). Nomination forms would be sent out in July 2017.
- 10.2 Simon Phillips reported that E&T would discuss the change in the education rules re: the award of the Advanced Certificate.

11 Editor's report

- 11.1 John Campbell highlighted plans for the next few issues of the Perfusionist and asked the Executive members to give him their help and support.

12 Correspondence

- 12.1 Noel Kelleher read out an email from a perfusionist in Harefield about the NIHR masters in clinical research. Noel Kelleher to forward the email to Andrew Heggie.

13 Any other business

- 13.1 In reply to Tim Pitt's query, Patrick Campbell and Andrew Heggie said that there were no objections to the use of College and Society logos on Bristol course slides.
- 13.2 Angela Lilley requested a dedicated email address for the chair of M&S, similar to other @scps.org.uk addresses.

For more information on the above or any other Society matter, please contact Valerie Campbell or an Executive Committee member.

National Safety Standards for Invasive Procedures (NatSSIP's)

(Aka an update on Chairman's activities!)

Andrew Heggie, Chairman

Amongst the many items keeping me busy this year has been the involvement with NatSSIP's, both at local and national level.

For the uninitiated, this document was first published in September 2015 but has taken time to filter down to grass roots level. This committee of individuals was commissioned by NHS England to bring together like minded groups who are highly focussed on improving patient safety. These groups include the Clinical Human Factors Group, the GMC, CQC, the HCPC, AAGBI and the AfPP plus many other influential and respected organisations

Aside from some frank, honest and transparent accounts of previous failings within the NHS, the document is also used as a template for good practice with recommendations on how local

standards could be not only developed and implemented but also measured and audited effectively.

Examples of never events are included together with a number of sections that will be familiar to most of us, the five steps to safer surgery, Governance and Audit, record keeping etc.

A particular word caught my eye when perusing this document, tucked away in the safety briefing section – Perfusionist! Further enquiries led to an invitation to give a presentation on our profession to the NatSSIP's committee in July. This was well received and I fielded a number of questions following this. In turn, we received an offer of a permanent seat at the NatSSIP's table to help share experiences and contribute to a wider audience with no agenda other than that of patient safety. An agreement

was reached to include a reference to our Standards of Monitoring and Safety document in future versions of this document. In turn, we are to include a reference to the NatSSIP's document during the review of our Standards and Safety document next year. Brief discussions ensued on the current status of Healthcare regulation.

The implementation of NatSSIP's still faces many hurdles as does the work of the NatSSIP's committee itself but in the meantime, I urge you all to familiarise yourselves with this refreshing publication. It may change the way you think slightly, it may not but it will definitely give you improved insight on how to help enhance and shape the future of safety in healthcare.

With regards,

Andy

Message to all students completing their NESCOT PGDip/MSc studies this year

Congratulations on finishing your PGDip/MSc and becoming an accredited Perfusion Scientist. If you are attending this year's annual congress in Leeds we hope you enjoy the meeting and the associated celebrations of your achievement, you have earned it.

However...there is a slight change this year. Usually the pathology poster you presented at NESCOT is displayed at the meeting and these are judged and the highest marked receives a prize awarded at the Saturday night dinner. This year to integrate these pieces of work into the meeting more we invite students to present the contents of their poster for a short discussion (less than 5mins) during an informal session to be eligible for this prize.

Two invigilators will be present in the poster area during 5.30-6.30pm on the Friday afternoon, they will ask you to very briefly describe your poster and answer a question or two. This is intended to be a relaxed discussion. As result we ask for all students to assemble in this area at 5.30pm. Non-attended posters will not be eligible for the prize. This system is standard at most academic meetings.

The committee ask all units to encourage their students to support this session which is intended to increase the links between our meeting and education system.

See you in Leeds.

Meeting and Seminars Sub-Committee



Welcome message . . .

The 43rd Annual Perfusion Congress will be held on Friday 10th, Saturday 11th and Sunday 12th November 2017 at The Queens Hotel, Leeds.

It has been several years since Leeds was able to host our annual meeting and I particularly look forward to welcoming you this year to this fabulous city. There are a few changes this year from our traditional format for a variety of reasons. Firstly you may have noticed the extension of the meeting into Sunday. Our half day Sunday session will concentrate on Safety, a subject important to us all. There is an increasing need for us to become more accountable for our practice and share information, this was highlighted by the recent issues surrounding heater coolers. Providing safe, consistent, auditable bypass procedures is paramount and this will be discussed. It is important for all delegates to support this session and 2CPE points are assigned it. The committee feels this will complete our meeting and provide an important discussion platform.

This year's meeting will again be supported by our Congress App. The feedback on this last year was very positive and aspects have been developed further this year. We ask that delegates delete last year's meeting and re-install the App through your devices app store, search SCPS. You will find contained within it lots of information on the programme, the speakers, simulation, reports and industry representatives. If you still need to register for the meeting all forms can be found on the website.

The meeting will officially begin on Friday at 11am with an address from our Chairman Mr Andy Heggie. This will lead straight into the AGM of the College of Perfusion Scientists. The College has had another busy year and continues to provide the infrastructure for the high standards we strive to build our profession upon. An examiners workshop will be held earlier this morning for those interested in becoming Society examiners. The Education and Training sub-committee are always keen to increase their pool of practical examiners,

if you are interested contact Valerie for information. Following the College AGM there will be a presentation on Quality Framework Management. This is a topic which has recently been highlighted in some College unit visits and John Campbell has agreed to describe this aspect of departmental management.

After lunch, the scientific programme starts with a diverse collection of presentations. The Friday and Saturday meeting days will each carry 3 CPE points. Remember to scan in for each session to ensure you are awarded the correct number of points. After a break for tea there will be a session provided by the host city with a variety of presentations from invited speakers within the Leeds NHS Trust.

Immediately following this will be our traditional Manufacturers Forum, held in the Exhibition Hall. This is a great opportunity to visit the trade stands and support our industry colleagues whose continued and vital support allows the meeting to occur as it does. In addition during this time there will be a new interactive poster presentation session (see elsewhere in this edition). There will be a buffet meal available from 6-8pm and then the remainder of your evening is your own to relax or explore Leeds.

The congress programme continues on Saturday morning in the presentation room with presentations on a wide range of topics. In addition Getinge are providing a morning of CPB simulation allowing hands-on experience of various perfusion scenarios, details of these sessions can be found in the app and they need to be pre-booked via Valerie.

The scientific sessions culminate before lunch on Saturday with a presentation by invited speaker Dr Dereck Wheeldon. Dereck has worked in and around the field of perfusion for 36 years and as part of this year's 40th anniversary of publication of the first edition of the *Perfusionist* he has agreed to present a look back at where perfusion came from and the evolution it has gone through to what we know (and love) today. Dereck really has seen and done it all!

Following lunch and a final opportunity to visit the exhibition there will be the Society AGM. This is the primary opportunity for members to hear what has been occurring within this very busy year for the Executive Committee, ask questions and input into the working of our Society body. 2017 has been a highly significant year for our profession with the launch of our new MSc course at Bristol University, a real milestone.

Saturday evening will consist of our traditional awards dinner and presentation of accreditation certificates for our qualifying students, starting at 6.30pm. This is a celebration of their success and hard work, well done all of you. Don't forget our Sunday morning session though starting at 9am!

The Meeting and Seminars Subcommittee and Executive Committee as a whole look forward to welcoming you to Leeds. Within the app there is a small feedback section which we invite everyone to complete at the end of the meeting, so we can continue to develop our congress for the needs of the membership. The meeting relies heavily on Perfusion Scientists coming forward and presenting their research and professional experiences. We would like to thank all those presenters who have submitted to make our meeting the as informative, interesting and successful as it is.

Our meeting is undergoing a period of change due to regulations imposed on how conferences are arranged and funded. SCPS intend for the meeting to be fully compliant with these requirements (the application is currently being processed). This will result in a few differences from our traditional format however working within these guidelines should help to secure the future of this congress.

See you in Leeds.

Angela Beatson, Chair

Simon Anderson, Treasurer

Sophie Gray, Scientific Programme

Denise Gonoud, Exhibition

43rd anniversary Congress 2017



Welcome to Leeds

Leeds is a haven for lovers of culture, shopping, party animals and food buffs, whilst at the same time providing the perfect getaway to the Yorkshire countryside, which was recently voted the third best region in the world to visit in 2014 by Lonely Planet.

Leeds is now the third largest shopping destination in the UK outside London so you are never more than a few steps away from a great shopping experience in Leeds. Fans of the high street can hit Trinity Leeds, or if you're looking for luxury treats head to the Victoria Quarter and Victoria Gate. Vintage goods and boutique shops can be found a plenty in Leeds

Corn Exchange, or stop by Leeds Kirkgate Market, one of Europe's largest covered markets, to browse the vast array of independent stalls.

If culture is your thing, Leeds won't disappoint. It has more than its fair share of stately homes, historic buildings, museums and galleries to keep you occupied – highlights include Harewood House, Temple Newsman, The Henry Moore Institute, Leeds City Museum and the Leeds Art Gallery.

Leeds' heritage as a city of entertainment is a long and illustrious one and continues to flourish today. The city boasts both its own opera –

Opera North – and ballet – Northern Ballet – companies. The new kid on the block is the first direct Arena, a 13,500 capacity venue which is the UK's first purpose-built, fan-shaped 'Super Theatre' arena.

Leeds has always been held in high esteem in the food and drink realm. In recent years the city has come into its own with the opening on a number of independent cafés and restaurants around the city. From Michelin starred restaurants to street food stalls in Leeds Kirkgate Market and Trinity Kitchen serving up an ever changing variety of exciting cuisines, Leeds has something for everyone.

The Queens Hotel – 10th-12th October 2017

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Tourism is blooming in Leeds at the moment. There's been a steady increase in the number of visitors coming into the city to enjoy the diverse and vibrant culture, great art, unrivalled shopping, theatres, music, sport, world class events and a thriving food and drink scene.

Voted by Lonely Planet as one of the top 10 European cities to visit in 2017, there's never been a better time to see why Leeds made this prestigious list.

Leeds is a warm, friendly and welcoming city with something for everyone, no matter what your age or taste. This is a great city to explore with easy access to the breath-taking countryside of The Yorkshire Dales.



Leeds City Museum
– Leeds Museums and Galleries

Art and Culture

With renowned galleries like Leeds Art Gallery and The Henry Moore Institute showcasing work from around the world, independent galleries and Leeds College of Art, there's plenty of opportunity to experience the unique culture of Leeds.

But the creativity of Leeds can't just be seen in an art gallery. Based in the centre of the Yorkshire Sculpture Triangle, there are numerous pieces that give Leeds a unique urban landscape, such as the Black Prince in City Square and the stunning Mandela Gardens in Millennium Square.

A lot of the city's public art is also hidden in plain sight. Look out for junction boxes covered in life's biggest questions by the train station, arm rests shaped like little dogs on Lands Lane and a subway tunnel on Woodhouse Lane decorated with a musical who's who of Leeds.

There's also encouragement to get a new generation interested in the arts. The Tetley, who specialise in contemporary art, host workshops and activities for children of all ages, from finger painting to family orientated projects inspired by their exhibitions.

Leeds is also home to a number of art collectives, charities and organisations that encourage and showcase work from both local and international artists, including East Street Arts, who have studios and spaces all over Leeds

This love of the arts is also prevalent in

the number of festivals and celebrations held in Leeds throughout the year. Light Night is a huge fixture on the calendar, turning the entire city into an art installation, with light shows and events that offer a unique view of the city.



Leeds Corn Exchange © Vagabrothers

Love Arts Festival raises awareness of mental illness through public art, while Thought Bubble celebrates comic book and graphic novel art on Leeds Dock, with some huge names from the industry giving lectures and signing exclusive artwork every single year.

Leeds is proud to be one of the only UK cities outside London to boast both its own Opera House and Ballet Company.

Opera North is England's national opera company in the North and one of Europe's leading arts organisations.

Northern Ballet is a Leeds based touring ballet company who have performed all over the country.

Both companies regularly perform at Leeds' many theatrical venues. Upcoming

shows include Northern Ballet's Swan Lake and Andrea Chenier by Opera North, so you can catch world class shows right here in Leeds City Centre.

Architectural Masterpieces

Leeds is famous for its stunning Victorian arcades – Queens Arcade, Thornton's Arcade, Grand Arcade and the magnificent Victoria Quarter, all awash with history but each with their own unique atmosphere and identity. more Victorian gems take a tour of The Grand Theatre and City Varieties as well as Europe's largest indoor market, Kirkgate Market, and the magnificent Corn Exchange. Both buildings are grade I listed and steeped in the history of Leeds.

Walking about Leeds city centre, you'll also spot the iconic Leeds Town Hall, built more than 150 years ago. Here you can see the Victorian prison cells and climb 203 steps to the clock tower.



Golden Owl, Civic Hall – Andy Tryner



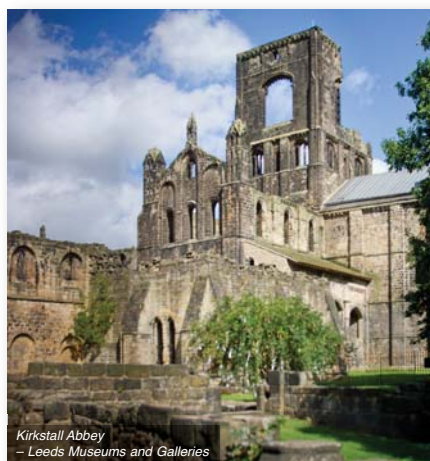
Northern Ballet, Swan Lake – Emma Kauldhar

Another favourite is the gothic masterpiece of Central Library with its spectacular staircases and archways, stone beasts and mosaic tiling.

If you're a lover of beautiful green spaces then a visit to Kirkstall Abbey is a must. Situated only three miles north of the city and set in a luscious green park along the River Aire, Kirkstall Abbey is one of the most complete medieval 12th century Cistercian Abbeys in Britain. It is truly jaw dropping.

For a slice of British History the city has plenty to offer with a number of nearby historical houses, including Harewood House, Lotherton Hall and Temple Newsam. Discover the rare breed farm at Temple Newsam and Lotherton's newly opened bird garden. One of the Treasure Houses of England, Harewood is situated only eight miles from Leeds. The Capability Brown designed landscape provides a magnificent backdrop to where the showstopping ITV drama *Victoria* was filmed.

Leeds has a wealth of museums many within walking distance of the centre. These include Leeds Art Gallery, The Tetley, the Henry Moore Institute the



award winning medical Thackray Museum and the City Museum which takes you from the famed Leeds Tiger to a 3,000 year old Egyptian mummy.

Alternatively, take a water taxi along the River Aire and visit Britain's national museum of arms and armour, The Royal Armouries, one of the most important museums of its type in the world. Based at Leeds Dock, it is home to the UK's largest collection of arms, armour and artillery, including Henry VIII's original armour.

Take your time exploring Leeds' visual



art and head for the recently refurbished Leeds Art Gallery (opening October 2017) which has the best twentieth century collection outside London. Then wander into the adjoining Henry Moore Institute famous for its sculpture, collections and research. You may also enjoy a leisurely few days exploring world-class sculpture across the four venues in the Yorkshire Sculpture Triangle.

If your tastes are a little more cutting-edge then call in to The Tetley – a centre for contemporary art located in the stunning art deco headquarters of the former Tetley Brewery. Whilst there sample a typical Yorkshire menu including a pint of Tetley's in this historic setting.

Another small independent gem is the White Cloth Gallery, which showcases a range of regularly changing exhibitions.

Leeds has some of the finest theatres in the UK and offers a wide range of entertainment, from music hall evenings and pantos at Leeds City Varieties, to West End plays and musicals at West Yorkshire Playhouse and the Leeds Grand Theatre.

Shopping

Leeds is a mecca for shopping, with its compact city centre which is perfectly walkable, the city is a shopper's



paradise. Named the best shopping destination in the UK by the rough guide to Britain, Leeds City Centre has

over 1,000 shops. Wonderfully diverse, Leeds combines quirky boutiques with high-end luxury and the big name high street brands, so there really is something for everyone.

With shops housed in beautiful arcades and listed buildings, and a centre that can be covered on foot in a few hours, Leeds offers a shopping experience like no other UK city.

EXPLORE THE STALLS

Shopping in the city isn't complete without a visit to Leeds' historic Kirkgate Market.

Leeds Kirkgate Market, part of which is a Grade I listed building dating from 1875, is one of the largest covered markets in Europe and is open 6 days a week. There are over 400 stalls inside and a further 200 outside.



Kirkgate Market is also where Marks & Spencer was born - Michael Marks opened his Penny Bazaar there in 1884.

Feed Your Passion

Food lovers rejoice! Leeds is jam packed full of eateries with menus spanning the globe.

Kick start your day with a coffee from one of Leeds Corn Exchange's independent cafes then fuel up with delicious street food at Kirkgate Market.

Enjoy food from around the world at Trinity Kitchen and try luxury taster menus at top quality restaurants.

More of a cocktail connoisseur? Enjoy your mojito with a spectacular view in the sunshine at one of Leeds' rooftop bars.

Be sure to seek out the quirky independents and craft ale houses for a pint from Leeds own Brewery.

The 17th European Congress on Extracorporeal Circulation 2017

Damian McCann, *Senior Perfusionist*, Trent Cardiac Centre

The 17th European Congress on Extracorporeal Circulation 2017 took place in the picturesque city of Marseille, south of France. The following is a short piece on the highlights of the meeting which covered a broad range of topics in Adult and Paediatric Perfusion.

Waking up 04:30 on a Thursday morning to catch the red eye flight to Marseille from Stanstead, I arrived to the sunshine and heat of Marseille rather bleary eyed wondering why I had kindly accepted the offer to attend this meeting.

On scouting out a taxi I made my way to the conference centre expecting a quick 30 minute journey only to come across a traffic accident and the city traffic jams. After 90 minutes of listening to the taxi driver do his best tourist speech in despite what he said, really good English, I arrived at the conference 2 hours later than the opening address of Yves Fromes the host president of the 17th European Congress on ECT.

After a quick coffee I made my way into the auditorium for the second session of the morning where the theme of the presentations was red blood cells and platelets. Roman Hajek from the Czech Republic delivered his presentation on platelet function during platelet rich Sequestration in which he concluded that PRP is safe and a useful method in complex cardiac surgery, helping to preserve platelet count.

This presentation was followed by two Paediatric presentations focusing on the use of donor Red blood cells and its effects on lactate and glucose levels. Guiseppe Squillaci from Italy findings showed that when using donor red cells that were less than 5 days old on neonates weighing 5 to 12Kg, the glucose levels during Cardiopulmonary bypass showed a marked increase compared with Prebypass levels, and remained consistently high. Lactate levels exhibited the same increase but the concentration decreased over the study period. Similar findings were presented by the next speaker, Mirela



Bojan from France. Their findings suggested donor red cells older than 5 days represent a potential source of hyperlactatemia. Their recommendations that the age of donor red blood cells should be restricted to 5 days when used in the prime of neonatal circuits. The floor was then opened to questions. After a slow start the moderators asked the speakers a number of questions which in turn prompted a number of delegates to nicely interrogate the speakers.

A hot topic of this year's FECECT was that on minimally invasive Perfusion techniques with a number of speakers over the two days describing their institutions trials and tribulations. A sponsored presentation by Liva Nova focused on redefining minimally invasive Perfusion solutions. This talk was of particular interest to me as my department plan to commence this approach to mitral valve surgery in the coming year. That speaker stated that a number of ground rules should be in place for the unit to succeed. (1) A team approach, (2) Safety features (3), Appropriate patient/procedure selection. The speaker described 4 different types of MIECC systems and how air volume and handling were a difficult part of the procedure but stated that with experience it should not be seen as a barrier to using these systems in difficult cases.

Lunch followed and this was taken as a good opportunity to discuss the morning's presentations with the other delegates from the UK and Ireland. In the foyer the main companies of Maquet, Liva Nova, Medtronic and Eurosets were there to exhibit their latest products. Liva Nova was show-casing their MIECC system which was advantageous to see after hearing their earlier presentation.



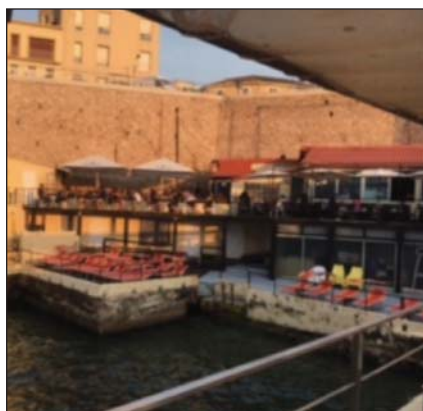


The afternoon session like the morning session was extremely well attended and this is a testament to the excellent high quality program put together by the organisers. The session was kicked off by a presentation by Francesco Canesi of Italy whose research focused on the use of a new approach to septic shock using an adsorption filter during CVVHDF. The mechanism of action it to trap a set of target molecules related to the endotoxin which is responsible for sepsis. The result of using this filter showed a significant reduction in inflammatory mediators, mortality rate at 28 days was reduced by 23% and with a better recovery of renal function.

Each scientific session ended with an interactive section wherein the delegates via the use of an electronic keypad answered questions relating to perfusion techniques. The answers from the previous FECECT Krakow 2015 were used to formulate a presentation by Dick je Long looking at trends in Extracorporeal technology and cardiac surgery in Europe between 2011 and 2015. No doubt the information collected from this meeting will be delivered in a presentation at the next FECECT meeting.

As the first days sessions drew to a close it was time to find the hotel and grab a quick nap before joining a number of my fellow delegates for dinner in a beautiful coastal restaurant. We sampled food traditional to the area and thought how lucky we were to be there at that moment.

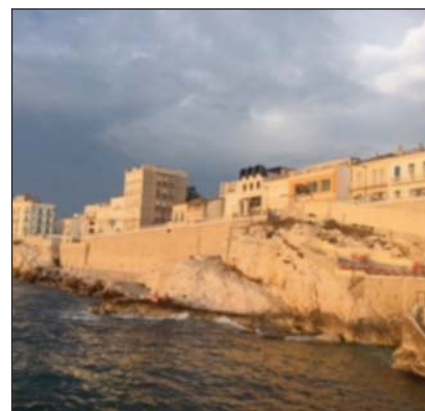
The Friday morning's scientific session commenced with the necessary scan it in order to obtain the all-important certificate of attendance and a strong coffee. Once again the number of delegates in attendance was high. The focus on the morning session was on Aortic valve surgery and the differing methods of cerebral Protection during Aortic dissections and Arch repairs. Vladimir Shmyrev from Russia delivered



an interesting paper investigating the efficacy of DHCA versus Antegrade Cerebral Perfusion (ACP) during dissection of the ascending aorta and Arch. In the single blind randomised study patients were allocated into 2 groups. Group 1 of 29 patients underwent surgery using DHCA at 18°C and 29 patients had surgery under moderate hypothermia (24°C) combined with ACP. His findings showed 39% of patients in the DHCA group exhibited neurological complications compared with 13.8% of those in the ACP group. He concluded that ACP during Aortic surgery was more advantageous over DHCA in terms of cerebral protection.

The day's program showcased a number of interesting case studies from a team who performed a Ross procedure on a 1500 gram premature new-born with bacterial Endocarditis, to a Swiss team who used a MIECC system to rewarm a patient from accidental hypothermia.

These examples highlight the excellent work being performed by Perfusionist's across Europe. And further highlights the importance and need for scientific meetings in which all members of the Perfusion community can attend regardless of the method of funding and no doubt FECECT 2019 will continue the high standards exemplified in Marseille 2017.



Medical Gas Cylinder Colour Coding Changes



New Medical Gas cylinder colour coding is being introduced replacing the current shoulder and cylinder body colours. You may have already noticed that some of the new style cylinders have been appearing in your own departments and areas.

The new colour coding will be a white cylinder body, whilst maintaining the existing product specific shoulder colouration.

Background

In the past the UK gas industry painted medical gas cylinders in accordance with the requirements specified in the British standard, BS 1319C. In 1997, a new European standard was published on cylinder colour coding, BS EN 1089 Part 3. This led to BS 1319C being withdrawn.

Technical Information Sheet 20 Revision 1: 2013 Medical Gas Cylinders BCGA Policy Statement on Colour Coding. The major change with the new European Standard was that only the cylinder shoulder colours were specified, with the colour coding for the body of cylinders not clearly defined.

The main purpose of the new standard was to enable the emergency services to be able to identify the type of risk associated with the contents of cylinders (should they be involved in an incident such as a fire). The shoulder colour coding was developed to identify the type of gas (such as oxidising, flammable, inert, etc.) and did not specify the actual product. However, for cylinders containing medical gases the new standard continued to specify the colour for the common gases (including oxygen, nitrous oxide, carbon dioxide, helium and the various gas mixtures). But, in line with the colour coding for other cylinders, BS EN 1089 Part 3 did not specify the body colour for medical gas cylinders. Apart from some minor changes to shade, the new standard retained the same shoulder colours for medical gas cylinders as that defined in BS 1319C. As BS EN 1089 Part 3 permits the use of any colour for the body of the cylinders, there is now a risk that medical and non-medical cylinders could be painted the same colour. Both medical and industrial oxygen cylinders have white shoulders (as defined in BS EN 1089 Part 3), and some companies had adopted the same colour for industrial and medical oxygen cylinders.

In discussions between the British Compressed Gases Association (BCGA) and the Medicines & Healthcare products Regulatory Agency (MHRA) a proposal for addressing this issue has been agreed.

Proposals for painting cylinders In January 2001, the European Industrial Gas Association (EIGA) published a short position paper (PP-01) on colour coding of cylinders to assist their member companies to interpret the new standard requirements. A part of this position paper was the proposal that medical cylinders should be differentiated from non-medical cylinders by 2 of 4 BCGA TIS 20 Revision 1 Published: 03/10/2013 Produced by: BCGA TSC7 ISSN 0260 – 4809 painting the bodies of all medical cylinders white. This proposal has now been adopted in many EU Member States as the national colour coding requirements for medical gas cylinders. It is proposed that the UK should also formally adopt this requirement to provide the user with a clear distinction between medical and non-medical cylinders.

To assist with the identification of the cylinder product, it is proposed that the product name could be displayed down the length of the cylinder, using large lettering. For cylinders up to 140 mm diameter, the lettering used to display the name should be at least 40 mm high and displayed along the axis of the cylinder. For cylinders up to 240 mm diameter, the lettering used to display the name should be at least 60 mm high and displayed either horizontally around circumference or along the axis of the cylinder. It is permissible to display the company name on the cylinder but the body of the cylinder must not be used for promotional material. 3 of 4 BCGA TIS 20 Revision 1 Published: 03/10/2013 Produced by: BCGA TSC7 ISSN 0260 – 4809 NOTES: 1.

Where two colours are indicated for the shoulder colour it is recommended that they are painted in quarters around the shoulder. Alternatively, banding may be used to colour code the shoulder, ensuring that the white band is uppermost and separated from the body colour with the contrasting band. 2. Where valve guards are fitted, if they are colour coded, they should be in accordance with the shoulder colour.

Alternatively they may be left unpainted or painted a different colour provided that it does not conflict with the colour code specified for the cylinder shoulder.

During this period of change customers may well receive cylinders coloured in the 'old' way as well as cylinders with white bodies in compliance with this policy. After 2025, all supplies of medical gas cylinders will be in cylinders with white bodies. Each supplier will be in contact with their customers to explain how they will carry out this programme of change. It should be noted that cylinder labelling is the prime method of identifying the contents of all gas cylinders. Labelling will always distinguish clearly between medical and nonmedical gases, and this important distinction should be emphasised to all those involved in the use of medical gases. BCGA Technical Information Sheet 6 provides a guide to the colour coding system used to identify gas cylinders and an explanation of some of the content of a gas cylinder label.



















Reference

- BS 1319C. Colours for the identification of the contents of medical gas cylinders
- BS EN 1089 Part 3. Transportable gas container valves. Gas cylinder identification (excluding LPG) - Part 3: Colour coding.
- BCGA TIS 6. Cylinder identification. Colour coding and labelling requirements.
- EIGA PP-01. Gas cylinders. Colour coding.

Information Sources

- Technical Information Sheet 20 Revision 1: 2013 Medical Gas Cylinders BCGA Policy Statement on Colour Coding.
- British Oxygen Company
- Linde

For more information: Medicines & Healthcare products Regulatory Agency (MHRA) www.mhra.gov.uk British Compressed Gases Association (BCGA) www.bcg.co.uk European Industrial Gases Association (EIGA) www.eiga.eu British Standards Institution (BSI).

Medical Gas	Shoulder colour(s) NO CHANGE	Body – small cylinders Old style	Body – small cylinders Future “New style”
Medical oxygen	White 		
Medical air	Black/white quarters 		
Medical nitrous oxide	Blue 		
ENTRONOX (50% oxygen/ 50% nitrous oxide)	Blue/white quarters 		
Medical carbon dioxide	Grey 		
HELIOX 21 (oxygen 21%/ helium 79%)	Brown/white quarters 		

Perfusion Department Profile

Cardiac Renal Centre

Eoin Coleman, Chief Perfusionist, Cork University Hospital

The two cardiothoracic theatres in CUH serve a population of approximately 1 million adults. Currently the Perfusion staff consists of four accredited Perfusionists and two trainees. The students are attending NESCOT/Bristol University in order to obtain their MSc in Perfusion Science and accreditation with the College Of Clinical Perfusion Scientists of Great Britain and Ireland. Our staff have a variety of different backgrounds which has proved useful in bringing new ideas to research projects, problem solving and patient care.

The Cardiothoracic surgical service was first set up in Cork in Nov 1985 in response to the growing demand for Cardiothoracic surgical services nationwide. The Mater hospital in Dublin was the sole adult Cardiac surgical unit in the country at that time

and the large acute Regional hospital in Cork was seen an ideal second site. This new cardiothoracic surgical unit commenced operating in Nov. 1985 in a dedicated theatre in the ground floor theatre complex of CUH. It was staffed by a single Consultant surgeon, Mr Tom Aherne, a single Perfusionist, Martin Hargrove and a small but dedicated team of nursing staff. It is a credit to these early pioneers that this initial unit has survived and prospered to become the extensive team of today. In its first calendar year the unit performed approx. Two hundred cardiac cases and numbers expanded continuously over subsequent years to cope with the ever- increasing demand for cardiac surgery, averaging 460 Cardiac cases per annum at present. The first Trainee Perfusionist in the Department, Eoin Coleman was appointed after a six year

period in 1991. A second dedicated cardiothoracic theatre was added in 1992.

As Chief Perfusionist, Martin led by example. He was very keen on research and he always maintained very high professional standards in the Perfusion Department. He presented original research at many international meetings and published numerous perfusion articles in peer reviewed journals. His first-hand experience of and subsequent publication of a case of "electrical power failure in theatre" being one of his most memorable. He always encouraged new trainees and qualified staff to carry out research and publish in peer reviewed journals and hence kept the Cardiac Surgical and Perfusion Department in CUH on the map. Three of the staff in the department obtained



The CUH Perfusion team – Back row (left to right): Nikki Brennan, Lorraine Browne, Con Marshall, Catherine Collins. Front row: Eoin Coleman, Barbara Roche

their Fellowships of the College of Perfusion as a direct result of this research.

A second Consultant Surgeon (Mr Aonghus O'Donnell) was appointed in 1995, along with further specialised theatre nursing staff. Over subsequent years the Perfusion unit continued to expand with the appointment of the second trainee Perfusionist Catherine O'Mahony and a third cardiothoracic consultant Mr Hinchion. A further qualified Perfusionist Con Marshall and a further Trainee Barbara Roche were added to the growing Perfusion teams over the following years as the service continued to grow.

One point of interest at this time is that the Perfusion staff also assisted the surgical team with permanent pacemaker implantations in adult patients (approximately 200 per annum), which involved measuring the thresholds of the implanted leads. This service which was unusual for a Perfusion department evolved due to the lack of surgical facilities in Cardiology Department. The Perfusionists acquired an in-depth knowledge of pace making technology which did prove to be a very useful area of research in subsequent years in conjunction with CPB. That service has now been passed on to the Cardiology Department. The Perfusionist Team in CUH have also performed and presented many unusual cases over the years such as Hyperthermic Isolated limb perfusions and Heated Intra-peritoneal chemotherapy (for Pseudomyxoma). Other unusual cases included profound hypothermic giant cerebral aneurysm repair and the rewarming of accidental hypothermia cases using CPB.

Mr O'Donnell and his colleagues could see the need for the construction of a new integrated Cardiothoracic/Renal Centre (CRC). He approached the



The Cardiac Renal Centre at Cork University Hospital

Department of Health with a business plan pointing out the necessity and potential benefits of this to cater for the growing demands of the services in CUH. He oversaw the planning, design and equipping of the CRC and it was a very proud day when the opening ceremony finally came to pass after many years of tireless effort.

For the last six years the cardiothoracic theatres have been located in this purpose-built custom-designed Cardiothoracic and Renal Centre on the grounds of Cork University Hospital. The fifth floor incorporates two cardiothoracic theatres and a Cardiac ITU with provision for additional HDU facilities. The other floors include pre/post-surgical wards and renal patient facilities, cardiology ward and diagnostic facilities. The basement incorporates 2 Cath labs, 1 hybrid lab, electro-physiology lab and a dedicated ambulance bay for acute admissions. This is a very modern and well planned facility where important related services are in close proximity to each other. The facility and its dedicated staff provide all elective and emergency adult cardiac and thoracic surgical services along with cardiology and renal services for

this region. In 2012 an additional Cardiothoracic Consultant Mr Doddakula was appointed shortly after the opening of this new facility.

The overall numbers of Cardiac surgical patients is on target to reach 460 adult cases in 2017 including acute and emergency procedures. The increasing age profile and more complex disease profile- mean this workload is very demanding for all involved. Martin retired three years ago and the two new trainees (Lorraine Browne and Nicola Brennan) were subsequently appointed to ensure continuation and future development of the Perfusion service in CUH. Barbara Roche has also been appointed joint Chief/Tutor in recent months in response to the new student appointments. Future developments in CUH may include moves towards minimally invasive cardiac surgery and endoscopic developments with resultant changes in CPB technology and techniques. These developments together with promising new research projects in the department will ensure the profession remains both fascinating and challenging for all involved in the foreseeable future.



University of Bristol MSc Perfusion Science Launch

Tim Pitt, Education and Training

I'm delighted to write this update on the exciting launch of the MSc in Perfusion Science at the University of Bristol. As many of you will know the 2017 intake of perfusion students began their academic lectures on Monday 25th of September. In light of this historic event the university invited the perfusion community to attend a launch event within the atrium of the Bristol Heart Institute.

There were over 75 attendees present made up of University staff, 20 new students, members industry and week one perfusion lecturers such as Michael

Whitehorn who was delivering a well-received "Perfusion History" lecture that day. Additionally as well as being attended by former chairmen Gerry Webb and Steve Robins, both our Society and College of Perfusion executives were able to join the event.

Professor Sarah George gave a short speech welcoming everyone to Bristol and thanking all involved for their dedication and hard work in forming the new MSc.

Simon Phillips, speaking on behalf of the Education and Training Committee, duly thanked the University team for all the effort and time that had been devoted into this partnership. Finally, Professor Astrid Linthorst welcomed the students into the medical faculty and reiterated how pleased she was to have the MSc in Perfusion and the perfusion students joining the faculty. She warmly expressed how



perfusion could feed in with the medical schools' collective knowledge and hoped both partners would benefit from the shared experience.

After the speeches there was a short chance for members of the university, perfusion, trade and students to meet each other before the afternoon lectures began. The common message from all involved was either how delighted they were to be involved or how jealous they felt to not be having the same opportunity.



PERFUSION CALENDAR

2nd to 3rd November, 2017

British and Irish Society for Minimally Invasive Cardiac Surgery Annual Meeting

Glaziers Hall, London

10th to 12th November, 2017

The Society of Clinical Perfusion Scientists of Great Britain and Ireland 43rd Anniversary Congress 2017

Queens Hotel, Leeds, UK

16th to 17th November, 2017

ACTACC Education Meeting 2

Friends House, 173-177 Euston Rd, Kings Cross, London NW1 2BJ

Friday 24th November, 2017

Heart Research UK Masterclass on Aortic Surgery

University of Liverpool
<https://heartresearch.org.uk/grants/masterclass-2017-liverpool-new>

29th November to 2nd December, 2017

12th European Mechanical Circulatory Support Summit (EUMS)

Bad Oeynhausen, Germany

18th to 20th March, 2018

SCTS Annual Meeting

Scottish Event Campus Glasgow

14th to 15th June, 2018

ACTACC Scientific Meeting

Ashton Stadium, Bristol

19th to 21st September, 2018

EACTA Annual Congress 2018

Manchester UK

October 2018

32nd EACTS Annual Meeting – European Association for Cardio-Thoracic Surgery

(Venue & Location TBC)

NHSP

NOT FOR SALE

The Department of Health's (DOH) planned sell off the staffing agency NHS Professionals (NHSP) has now been abandoned by the Government. Health Minister Philip Dunne reported to Parliament on September 7th 2017 that the DOH has announced that NHS Professionals Limited – a company which supplies flexible staffing to the NHS – will now remain wholly in public ownership, after offers to buy a majority stake in the company undervalued its growing potential.

In November 2016, the Government decided to instigate a sale of a majority share in NHS Professionals Limited as a potential path to providing it with the extra expertise, technology and investment it needed to work with more hospitals and drive greater savings for the NHS. However, now after careful consideration, the Government has concluded that none of the offers received for the Company through the open, rigorous bidding process reflected the company's growing potential and improved performance.

NHS Professionals was established as a limited liability company by the last Labour Government in 2010, with a specific intention to give it greater commercial freedoms and

“prepare it for sale” (DOH , Explanatory Memorandum to The NHS Professionals Special Health Authority (Abolition) Order 2010, February 2010). It currently holds a bank of over 90,000 workers filling more than 2 million shifts, saving the NHS £70 million every year. However, it only works with around a quarter of trusts, meaning that many others rely heavily on more expensive agencies to supply additional staff. We would like more trusts to work together to fill shifts via collaborative banks, and there will be opportunities for NHS Professionals Limited and others to support this work.

Since the decision was taken to seek offers for the Company, NHSP has significantly increased its performance such that audited profit before tax for the year ended 31st March 2017 was 44% higher than in the previous year. This improvement in financial performance continues to be built upon in the first quarter of the current year. The company's improved financial and operational performance means it can now invest in improved IT infrastructure, expand its services to the NHS and transform into a world-class provider of flexible staff whilst remaining under public ownership – generating further savings for the NHS, all of which will continue to be reinvested in frontline services.

The statement concluded that “the Government is fully committed to providing world-class NHS services that are free at the point of the use, now and in the future”.



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Friday 10th November

43rd
anniversary
Congress
2017

- 08.00** Examiners Workshop
- 09.00** Registration and Coffee
- 11.00** Chairmans Welcome: Andrew Heggie
- 11.05** College of Clinical Perfusion Scientists AGM
- 12.05** Developing a quality management framework for clinical perfusion services
– John Campbell, Nottingham University Hospitals Trust
- 12.35** Lunch
- 13.35** **SCIENTIFIC SESSION 1** – Chairperson: TBC
A review of the Chemosat delivery system from a perfusion perspective
– Kathryn Chapman, University Hospital Southampton
- 13.50** Could the development of an 'adaptive goal directed perfusion strategy' reduce the incidence of postoperative acute kidney injury in patients with chronic kidney disease and/or anaemia undergoing cardiopulmonary bypass?
– Jack Satchwell, St George's Healthcare NHS Trust, London
- 14.05** Minimising the risk of Mycobacterium Chimaera infection during cardiopulmonary bypass by removal of the heater cooler units from the operating room
– Jacqui Simmons, University Hospitals Coventry & Warwickshire
- 14.20** Save a heart Nigeria
– Simon Anderson, Cambridge Perfusion Service, Papworth Hospital
- 14.35** Left ventricular dilatation, the presence of intra-cardiac thrombus and short-term outcome of primary heart graft failure patients managed with ECMO
– Alister Sutherland, Golden Jubilee National Hospital, Glasgow
- 14.50** Review of hypoxic monitoring strategies in cardiac surgery patients
– Indie Bilkhoo, University Hospital Southampton
- 15.05** Tea and Coffee Break
- 15.35** **SCIENTIFIC SESSION 2** – Chairperson: Steve Robins
GUEST SPEAKER
Current concepts in cardiac anaesthesia and cardiopulmonary bypass
– Dr S Balaji, Consultant Anaesthetist, Leeds Teaching Hospital NHS Trust
- 16.20** Dealing with patient outcome – the unspoken about aspect of being a perfusion scientist
– Jenny Ormerod, Clinical Psychologist, Leeds Teaching Hospital NHS Trust
- 16.35** Q? – D J O'Regan, Network Q Health Foundation and Consultant Surgeon, Leeds Teaching Hospital NHS Trust
- 17.15** Manufacturers Reception with Student Poster Presentation
– Exhibition Area

BREAKOUT SESSIONS

The following Breakout sessions will be available during the Congress. Please register prior to the sessions at the registration desk. Sessions have a limited number of participants. Sessions will be held in the Headingley Suite.

Haemostasis Management

Haemonetics, Haemostasis Management

Friday 10th November

Session 1 – 13.30-14.10

Session 2 – 14.20-15.00

The Calafia Simulator

Maquet Simulation of untoward CPB incidences and their management

Saturday 11th November

Session 1 – 08.15-10.15 Session 2 – 10.45-12.45

N.B. Times above may vary slightly. Delegates are kindly asked to note

Saturday 11th November

- 09.00 SCIENTIFIC SESSION 3** – Chairperson: David Jenkins, *President*
Mechanical assist of the left ventricle – managing the IABP and other assist devices – Kacey Dee, *Clinical Lead, Teleflex*
- 09.15 Oxygen extraction rate: a superior trigger for blood transfusion during cardiopulmonary bypass?** – Nicola Brennan, *Cork University Hospital*
- 09.30 Real time monitoring for early intervention in CPBCDI® Blood Parameter Monitoring System 500 and SenSmart™ Model X-100 Universal Oximetry System**
 – Gernot Miemietz, *European Marketing Manager Monitoring, Terumo Europe N.V., Leuven, Belgium*
- 09.45 A prospective observational study into the use of Mannitol in CPB prime and subsequent survey of UK units to analyse current fluid management trends**
 – Eanan Harkin, *Belfast Health and Social Care Trust*
- 10.00 Temperature management on cardiopulmonary bypass**
 – Lorraine Browne, *Cork University Hospital*
- 10.15 Towards minimally invasive in perfusion: A global perspective**
 – Luca Corazza, *LivaNova*
- 10.30 Overview of the current situation with regards the Paratherm Heater Cooler supplied by Chalice Medical Limited and Microbacterium Chimaera**
 – Richard Hartshorne, *Chalice Medical*
- 10.45 Tea and Coffee Break**
- 11.15 SCIENTIFIC SESSION 4** – Chairperson: TBC
Gastrointestinal complications following ‘on-pump’ cardiac surgery: What are the causal factors and how can they be ameliorated?
 – Richard Sakyi, *St George's University Hospitals NHS Foundation Trust, London*
- 11.30 Elephant trunk, how to solve a challenge**
 – Jose Cañamares, *Cambridge Perfusion Service, Papworth Hospital*
- 11.45 Clinical evaluation of the Cascade® Abrazo c-ACT against the Actalyke® MAX ACT POC devices used for heparin management, preliminary results**
 – Rochelle Wilson, *Nottingham University Hospital*
- 12.00 When two heads are better than one: The ‘branch-first’ technique of aortic arch replacement without circulatory arrest or deep hypothermia**
 – John Fitzgerald, *Wellington Regional Hospital, New Zealand*
- 12.15 Therapeutic monitoring of anticoagulation during extracorporeal membrane oxygenation** – Kate Howson, *Queen Elizabeth Hospital, Birmingham*
- 12.30 Between burnout and boredom** – Basil Henrick, *Mater Misericordiae University Hospital, Dublin*
- GUEST SPEAKER**
- 12.45 40th year of publication of the *Perfusionist***
 – Dereck Wheeldon, *First Editor of the *Perfusionist**
- 13.15 Lunch**
- 14.30 Society of Perfusion Scientists AGM**
- 16.30 Tea**

Sunday 12th November

- 09.00 Safety in Perfusion: Discussion Session** – Noel Kelleher and Angela Beatson
- 12.00 Meeting Close**

Note that the exhibition will be closed during the scientific sessions.

The Birth of the *Perfusionist*

Dereck Wheeldon and Don Bethune, with thanks to Roy Gill

It was early 1977 and the fledgling Society of Extracorporeal Technologists had just been formed in March 1974, under the influence of the enigmatic Mary Slevin and the support she was able to garner from her senior clinicians at the Mater Hospital, Dublin. This eclectic group of technicians who had become known as *Pump Technicians* or *Heart-Lung technicians*, desperately needed to be melded into a

professional organisation with the requisite training, educational standards and associated certification.

In a unique cooperative move, the Society of Thoracic and Cardiovascular Surgeons of Great Britain and Ireland approved the closure of all but a few of the 46 cardiac surgical units operating at the time, in order to allow as many technicians as possible to attend this inaugural meeting. There was much discussion, regarding an appropriate organisational title but it was finally decided to adopt the American model; Association of Extracorporeal Technologists of Great Britain and Ireland, for the time being. A committee was formed and a constitution drafted. A year later the name was changed, at the AGM, to the rather more descriptive and less awkward title of The Society of Perfusionists of Great Britain and Ireland.



We at Papworth, recognised that one of the more important requirements for this organisation to flourish, would be good and effective communication amongst a group which had little normal opportunities to effectively share knowledge and experience in this pre-internet age. It was also essential to provide a vehicle to facilitate the efforts to establish an appropriate educational programme with a view to obtaining professional status within the NHS. These efforts involved many good initiatives such as the formation of the Federated Associations of Medical Technology (FAMT) which comprised Medical Physics, Dental technicians, Electro-physiologists and Respiratory technicians, which was recognised by the NHS as a consultative body with respect to formulating future policies and education. The fledgling School of Perfusion was also established, initially via the St. Thomas' Medical School, by the sterling efforts of Reg Hobbs and with the support of Mark Braimbridge, a pioneering cardiac surgeon and head of cardiac surgery at St. Thomas'. With all this in mind, we set out to produce a bi-monthly newsletter. The first very amateurish edition is reproduced in this journal, from which you will see that we attempted to cover

the issues we hoped would inform and stimulate discussion. One of our major concerns was that of improving

the quality and safety of perfusion and this resulted in a number of initiatives to raise awareness of the major pitfalls, their prevalence and methods for minimising the risks. This culminated in the first ever international conference on this topic – *Towards Safer Cardiac Surgery* – convened by Donald Longmore in 1980.

The mechanics of producing this literary masterpiece of a newsletter, involved

typing out the copy text on an old mechanical typewriter and then literally cutting and pasting items onto an A3 sheet of paper followed by transferring



this onto a *Roneo* sheet¹ which was then used to make the requisite copies. In March 1979 we moved to a two column format, in order to provide space for more copy although, reading issue No. 13 today, it is obvious that my eyesight was a tad better in those days. The production and distribution of these early newsletters was kindly provided Tony Gatland, CEO of Pall Biomedical.

We were fortunate to have the support of a growing number of perfusion companies which later provided the means to produce a high quality professionally printed newsletter under the guidance of Gerry Linley (Chief Perfusionist at Guys) who took over as editor in 1980. Gerry recruited the ever helpful George Prior of GMP, to do the printing in September 1985, following the publication of the 50th edition!

Sourcing copy from the membership, which totalled some 79 Active, 16 Student, 25 Associate and 7 Overseas members from 46 centres in 1980, was difficult and we tried to establish a number of regular columns in order to stimulate discussion. These included; an editorial, a leading article, Society notices

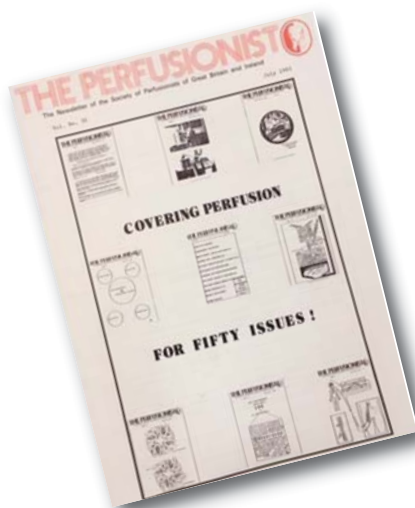
and news, a Bibliography, Letters to the Editor, Product News, Situations Vacant, a Calendar, meeting reports and news from AMSECT. It took time but slowly members started to use this vehicle as a forum for the exchange of experience and opinions – the latter sometimes quite heated! We were now also able to sell back page adverts in order to make the Newsletter self-funding.

Early edition front pages tended to reflect or illustrate the leading article but

we later moved to a number of front page design changes selected from reader competitions (*see illustration*).

It is most gratifying and encouraging, to those of us who were privileged to be involved in the pioneering days of perfusion, to see how the profession has matured into such a worthy organisation with well-established scientific and professional standards.

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¹ Internal testing.

THE PERFUSIONIST

The Newsletter of the Association of Extra-Corporeal Technologists of Great Britain and Ireland



Vol. No: 1.

Date: February, 1977

This is the first issue of what will be a regular bimonthly Newsletter for, and hopefully by, people with an interest in extra-corporeal circulation. Regular features will include: A.E.C.T. news, short technical articles, a bibliography, forthcoming events, new product information, D.H.S.S. Hazard warnings, a correspondence column, and a 'Situations Vacant' column. We hope to provide a forum for the exchange of ideas, and would welcome contributions from all interested parties.

Association of Extra-Corporeal Technologists

Message from the Chairman:

I am taking this opportunity of the publication of our first Newsletter, to send you my belated greetings for the New Year and to solicit your support for these Newsletters.

The success of this venture depends on the support that it receives. Any item which is newsworthy should be sent to the Editor, but I must emphasize the importance of using the correct lines of communication within the Association, and point out that all Association business should be conducted through the Secretary.

Good luck to you all,

George Wiggins.

The Association of Extra-Corporeal Technologists of Great Britain and Ireland was formed in March, 1974. Active membership is open to any individual employing the skills of cardio-pulmonary bypass technology, and Associate membership is open to any individual, subject to Committee approval, with an interest in this technology.

The principal object of the Association is to promote the advancement of the skills and scientific knowledge relating to extra-corporeal technology.

The A.E.C.T. is a founder member of the European Committee of Organisations involved in the Bio-technology of Extra-corporeal Circulation.

Neither the Editors nor the Association is in any way responsible for the statements made or the view expressed by the contributors.

'The Perfusionist' is supplied with the compliments of Pall Biomedical Limited.

-2-

The Association is in the process of setting up a modular educational course in conjunction with the F.A.M.T. (see below). A syllabus for the basic 'core' subjects is nearing completion, and in its final form will be taught through the technical colleges. Some of these subjects may be made available as correspondence units for the benefit of members unable to attend a college. The next stage will involve the building up of a manual on extra-corporeal technology - The Education Committee is at present working on the formulation and content of this. Any thoughts or comments on this topic will be most welcome.

For further details on A.E.C.T. education contact:

Dudley Tipler,
Heart-Lung Unit,
Brompton Hospital,
Fulham Road,
LONDON, SW3 6HP.

All Association business communications to:

The Secretary,
Don Caddy,
Cardiac Perfusion Department,
Bristol Royal Infirmary,
BRISTOL, BS2 8HW.

Federated Associations of Medical Technology

The Federated Associations of Medical Technology was inaugurated in January, 1976. The member organisations are:

1. Association of Extra-Corporeal Technologists of Great Britain and Ireland.
2. The Association for Medical Physics Technology.
3. The Central Council for Health Authority Dental Technology.
4. The Electro-Physiological Technologists' Association.
5. The Society of Cardiological Technicians Ltd.
6. Association of Respiratory Technicians and Physiologists.

There are now about 2,000 people represented by the F.A.M.T. There was general agreement from the beginning that the standard of training of the various groups in the Federation varied considerably, and that one of the first priorities would be to try to standardise courses. The education secretary conducted a survey of all 14 Regional Health Authorities, and visited some of the Regional Scientific Officers, in order to establish present status and future requirements with regard to education.

-3-

Now that the Technician Education Council (which replaced the ONC/HNC system) is initiating its courses, meetings of representatives of the T.E.C. and F.A.M.T., and other interested bodies, are to take place with the D.H.S.S. in March this year. It will obviously take some time to formulate a system which meets with the requirements and the wishes of the members. In the meantime, member associations are preparing their own draft courses in the modular form in which the T.E.C. courses are arranged.

The F.A.M.T. has also sent comments to the Royal Commission set up to investigate the running of the Health Service, and has held informal discussions on Health and Safety at work. It is heartening that the D.H.S.S. has recognised the Federation as a consultative body and has invited it to take part in discussions on future policy and on education.

Further details on F.A.M.T. education from:

Mrs. D. Battye,
EEG Department,
Maudsley Hospital,
Denmark Hill,
LONDON SE5.

The F.A.M.T. Secretary is:

Mr. P. Bennett,
Physics Department,
London Hospital,
LONDON E1 1BB.

Forthcoming Events

March 25th

The use of profound hypothermia for paediatric cardiac surgery. Dr. G.J. Rees. Liverpool Society of Anaesthetists - Liverpool Medical Institution.

Details: Dr. T. Bryson, Liverpool Maternity Hospital, Oxford Street, Liverpool

April 4th-6th

Technical aspects of renal dialysis. Seventh Annual Conference of the Biological Engineering Society, University of Newcastle-upon-Tyne. Details: K. Copeland, Biophysics Department, Faculty of Medical Sciences, University College, London, WC1 6BT.

May 28th

A.E.C.T. One Day Seminar. Addenbrooke's Hospital, Cambridge.

Details: R. Gill, Papworth Hospital, Cambridge, CB3 8RE.

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A Mol. By Any Other Name

Recent correspondence suggests some confusion regarding the strength of calcium chloride solutions for injection. (B.M.J. 1976, 1068 & 1255, and 1977, 102.)

The history of the description of calcium chloride solutions is very strange. Until 1950 the strength was described on a weight/volume basis, related to the anhydrous salt; a 10% solution contained 0.91 m.mols/ml. calcium ions. In 1958 it was decided to express the strength in relation to the Hexahydrate, so a solution containing 0.91 m.mols/ml. became a 20% solution.

A further change was made in 1971 when the Dihydrate became used as the salt; a solution containing 0.91 m.mols/ml. was now called a 13.4% solution! All of these quixotic changes appeared to pass without comment and indeed without impact - many perfusionists referring to the solution with 0.91 m.mols/ml Ca^{++} as a 10% solution even though its designation in the Pharmacopoea had changed.

Hopefully, the final change in the labelling of calcium chloride solutions has just occurred with the adoption of S.I. units. Once established, this should avoid confusion related to the wt./vol. description of a salt which can have different degrees of hydration.

CaCl_2 Anhydrous	$\text{CaCl}_2 \cdot 6\text{H}_2\text{O}$ Hexahydrate	$\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$ Dihydrate	Ca^{++} m.mol/ml	Ca^{++} m.mol/ml.
10%	≡ 20%	≡ 13.4%	≡ 0.91	≡ 1.0

New Product Information

Blood Velocimeter

Sonicaid are introducing a new range of dopler velocimeters. These instruments provide a non invasive method for determining relative blood flow, and direction of flow, in both arteries and veins. The waveforms produced (there is a recorder or a storage scope available) can be used to diagnose valvular lesions, septal defects, and to delineate the sites of obstruction in peripheral vascular disease. The instrument is being adapted for use in coronary artery surgery, both to determine the sites of occlusion and to determine the adequacy of grafts.

Further information from: Sonicaid Ltd, Hook Lane, Nyetimber, Bognor Regis, West Sussex. PO21 3PA Tel: 02432 5511.

Bibliography

1. Continuous detection of microemboli during C.P. bypass in animals and man.
Clark R.E. Circulation Supp. 3. Vol 54, No 6, 111-74, 1976
2. Cardiosynchronised extracorporeal circulation apparatuses.
Belilovskii MA Biomed. Eng. 9, 6, 338-344, 1976
3. Instrumentation for cardiopulmonary bypass -past, present & future.
Bartlett R.H., Medical Instrumentation 10, 11, 423-428 1975
4. Energising a broken heart.
Himmelfarb M. Electro Mechanical Design. 19, 2, 24-29 1975
5. Disc heat exchangers for heart-lung machines.
Brazhnikov E.M. Biomed. Eng. 8, 1, 44-45 1974
6. Development of an automated heart-lung machine for prolonged perfusion.
Weissbach G. Zeitschrift fur Experimentelle Chirurgie 7,4, 240-249 1974
7. Dissection of the aorta complicating intra-aortic balloon counter-pulsation.
Biddle T.L. Am.Heart J. 92, 6, 781- 1976
8. Open heart experience in infants using normothermia & deep hypothermia.
Pooley R.W. Annals Thoracic Surg. 22, 5, 415- 1976
9. Effect of hypothermic anoxic cardioplegia on myocardial contractility.
Takashi Ino. Annals Thoracic Surg. 22, 5, 424- 1976
10. Loading and performance of the heart as muscle and pump.
Brutsaert D.L. Cardiovasc. Res. 11, 1, 1,
11. Myocardial revascularisation surgery since 1945 AD. Its evolution and impact.
Effler D.B. J.Thoracic & Cardiovasc Surg. 72, 6, 823- 1976
12. Individual responses to heparinisation for extracorporeal circulation.
Friesen R.H. J.Thoracic & Cardiovasc. Surg. 72,6, 875- 1976
13. Myocardial protection during bypass & arrest; A possible hazard with lactate containing solutions.
Hearse D.F. J.Thoracic & Cardiovasc. Surg. 72,6, 880- 1976
14. Changes in mental functions after open heart operations.
Gruvstad Matts. Scand. J.Thor. & Cardiovasc. Surg. 3,10,215- 1976
15. Effect of open heart surgery on intellectual function.
Aberg Torkel. Scand. J.Thor. & Cardiovasc. Surg. 3,10, 221- 1976
16. Alterations in cardiovasc. reflexes during artificial circulation.
Fulton R. AMJ,Phys 214, 1460 1968.

-6-

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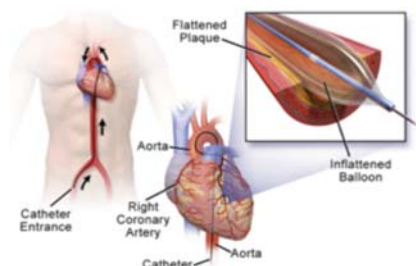
1977 – What Else Was Happening?

John Campbell, Interim Editor

At the inception of The Perfusionist it was 24 years since the first successful utilisation of a heart lung machine to support a patient's circulation for an intra cardiac procedure. We now take a look back at the events, discoveries, innovations and achievements that occurred in 1977.

In the Scientific world

- January – Scientists identify a previously unknown bacterium as the cause of the "Legionnaires' disease".
- July – Dr Raymond Damadian with Larry Minkoff and Michael Goldsmith perform the first magnetic resonance imaging body scan of a human.
- September – The first percutaneous coronary intervention on a patient is performed by cardiologist Andreas Gruentzig in Zurich
- October – The world's last recorded contraction of smallpox was reported in Somalia.



Balloon-tipped Catheter

- December – The first microelectronic multi-channel cochlear implant, developed by Hochmair.

The 1977 Political Scenes

Queen Elizabeth II and the United Kingdom (UK) celebrated the monarch's Silver Jubilee. The NHS celebrated its 29th birthday. Prime Minister of the UK was James Callaghan having inherited the Premiership from Harold Wilson the



previous year. The governing Labour party survived a vote of no confidence by the formation of an alliance with the Liberal party that was known as the Lib-Lab pact. The arrangement allowed the minority government to survive until the spring of 1979. Spain & Portugal applied for membership of the European Union (EU). The UK undertook the EU presidency for the first time. This 40th anniversary of the UK's initial EU presidency coincides contrastingly with the triggering of Article 50 forty years later. Income tax in 1977 was reduced to 33p in the pound



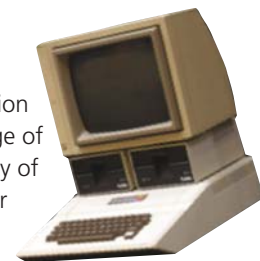
from 35p in the budget and bank interest rates were at 7%. A smaller £1 note was about to be introduced into circulation. The government revealed that inflation had pushed prices up by nearly 70% within the last three years and the UK underlying inflation rate had now fallen to 15.8%.



In the Republic of Ireland, the Uachtarán na hÉireann, (President and Head of State) was Patrick Hillery. Fianna Fáil were victorious in the general election with over 50% of the vote securing the party a 20 seat majority. The 21st Dáil elected Jack Lynch as Taoiseach.

The Royal College of Surgeons in Ireland

was granted recognition as a recognised college of the National University of Ireland. A new smaller Punt note (£1) with a modern design was introduced.



In Nottingham

In Nottingham 1977 was a momentous year for the local population with the Queens Medical Centre being officially opened as the first purpose built teaching hospital in the UK. Nottingham Forest were promoted to the then First division subsequently going on to be crowned Champions 1977/78. They then went on to win the European Cup the following year and become the first team



to retain this trophy in successive seasons. Compared with Nottingham Forest's recent achievement to remain in the now first division the post match celebrations in 2017 were not so dissimilar to those emanating from the success initiated in the 1977/78 season.

At The Movies

Notable films released in 1977 included Close encounters of the third kind, Saturday night fever and the Spy who loved me. A little known director released a science fiction fantasy fairy-tale called Star Wars and the rest is history (or a number of Prequels and sequels and a merchandising industry that could not have been imagined).



Sporting activities

In the sporting fields Virginia Wade was Wimbledon ladies champion and Bjorn Borg won the men's title.

Liverpool were Division one champions and also went on to win the European cup for the first time. The FA cup was won by Manchester United.

In the Grand National Red Rum rode into history as the only three-time winner of the race to date. The race also featured a female jockey in the starting line up for the first time.



France were winner of the five nations rugby tournament.

Australia toured England to play 5 test matches for the ashes resulting in a 3.0 victory to England.

In Formula One Niki Lauda won the Drivers Championship with Ferrari.

In the All-Ireland Senior Hurling Championship of 1977 was the 91st staging of Ireland's premier hurling knock-out competition. Cork won the championship, beating Wexford 1-17 to 3-8 in the final at Croke Park. The All-Ireland Senior Football Championship was won by Dublin.

1976–1977 saw the 104th season of competitive football in Scotland, Celtic finished as the premier league champions.

In golf the 106th Open Championship at Turnberry saw Tom Watson win by one stroke over runner-up Jack Nicklaus.

WHO Health for All Declaration

The World Health Assembly (WHO) in 1977 issued the Health for All by 2000 declaration. The declarations stated that the main social target for governments and of WHO should be the attainment by all the people of the world by the year 2000 of a level of health that would permit them to lead a socially and economically productive life. In

other words, as a minimum, all people in all countries should have at least such a level of health that they are capable of working productively and of participating actively in the social life of the community in which they live. This is an interesting target that has not still being fully achieved 17 years after its target date. Given the efforts of our allies across the ponds elected leader attempting to dismantle the previous administrations landmark healthcare protection legislation for all US citizens.

Given the events both on a national and international level in 2017, 40 years on from 1977 there does appear to be a number of similarities. It could even be said that even maybe an element of history repeating itself?



40 Years and Counting

Colin G. Green, Copenhagen, Denmark



First of all congratulations on the 40th anniversary of *Perfusionist*. It must be one of the longest running European perfusion journals. My active career as a practicing perfusionist (pump tech in those days) ended in 1969 but my active involvement with extracorporeal circulation has continued until today. I was slightly involved in, and aware of the activities in the second half of the 1960's to establish an association and develop training guidelines for perfusionists in the UK and Ireland. It was very déjà vue to see the names of George Wiggins, Dudley Tipler and Don Caddy in the original *Perfusionist* from 1977. It brought back some great memories. The early days were very exciting and my time at Guys Hospital working with the Guys-Ross HLM (with disc oxygenator) and subsequent use of the Polystan Rygg-Kyvsgaard, Travenol

and Bentley Temptrol bubblers, were very happy and gratifying. Didn't know much about the physiology of perfusion but knew how to keep pumps and other equipment running!

My activities at Guys and the contacts I made then, both locally and internationally in those early days, formed the basis for the career that I chose to follow in the perfusion industry. 5 years in Canada and the USA actively involved in product/project management and the setting up and management of two distribution companies, followed by the decision to return to Europe and continue working in an international capacity have made my entire working life very enjoyable. I have been fortunate to be able to advise and assist perfusion and surgical teams worldwide and to meet

some great perfusion and surgical personalities. I have been part of the early perfusion days in China, India and Japan and have very happy memories of my many visits. When I last thought about my travel schedules for the years gone by, I believe that I have worked in some 185 locations in 40 countries and probably more than 1,000 different operating theatres.

So I have a lot to be very thankful for. Extracorporeal circulation has been a very active part of my life for 55 years and it all began for me as a pump tech in the UK.

Once again, congratulations on 40 years of publication and every good wind and good fortune for the Society, its members and its future activities.

fam-green@post.tele.dk

Past Editors and Assistants

John Campbell, *Interim Editor*

In this 40th year it is essential we applaud and acknowledge the hard work of all the individuals who have Edited and assisted the Editors in the last four decades. The generous donation of their time and skills has enabled the *Perfusionist* to reach this momentous milestone. I can testify that vast quantities of midnight oil will have been burned in attempts to meet publication deadlines on more than one occasion by the following esteemed individuals.

Past Editors & Assistants

Dereck Wheeldon & Don Bethune

Gerry Linley

Alison Bashford

David Austin

Nigel Gooby

Keith Phoenix

Nigel Cross

Mark Childs

Richard Mason

Ben Middleton

Simon Colah



It would not be possible to celebrate the 40th year of publication without also mentioning George Prior. To say that George was the backbone of this publication would be an understatement. His care and dedication to his friends in *Perfusion* have ensured that we are marking this milestone. George was ever-present at countless AGMs acting as official photographer, producing all the conference materials and transporting all the required equipment. Whenever things got a little too much for those of us tasked with the responsibility for organising the events George could always be found in a quiet corner to offer support and offer to help in any way possible. Nothing was too much trouble for George in the *Perfusion* world.

For his dedication to the Society and the *Perfusionist* he was honoured with the award of Life Membership 2011.



George is sadly still missed but his efforts are remembered with great appreciation. Les Allen kindly took on this mantle after George's untimely departure.

The Final Word

John Campbell, *Interim Editor*

At the end of this commemorative edition it is essential that I express my gratitude to all those who have helped to enable the production of this 40th edition in one way or another, Namely; Dereck Wheeldon, Don Bethune, Fred Roberts, Neville Martin, Richard Mason, Karen MacDonald, Keith Kincaid, Ian Harvey, Valerie Campbell and of course Les Allen. They have all provided material, information, contributions, assistance with investigations, research and help with the logistics to enable the publication of this 40th anniversary edition.

Thank you also to all the individual contributing authors, letter writers

and advertisers from our *Perfusion* community over the years. So as the *Perfusionist* enters its fourth decade, it began its life in a turbulent economic and political climate not too dissimilar to the present time.

The *Perfusionist* has established itself as a valuable instrument that informs the membership of our professions development whilst maintaining a link with all units and commercial partners throughout Great Britain, Ireland and beyond.

The *Perfusionist* has adapted to the technological advances in communications from the original copy

and paste newsletter through to the digital processed production used today. Moving forward we must also prepare the *Perfusionist* for the challenges of embracing the modern social communication formats. A failure to utilise these tools may inhibit our ability to communicate our message in the coming years. The obligation is on all our members to fully support this publication as it embarks on its journey into the next decade and the challenges that it will arise.

"The future is literally in our hands to mould as we like, but we cannot wait until tomorrow. Tomorrow is now".

Eleanor Roosevelt



The Society of Clinical Perfusion Scientists

OF GREAT BRITAIN AND IRELAND



33

43rd Congress, Leeds – Registration Form

10th to 12th November 2017

Name	Professional title
Hospital/Company	Contact number
SCPSGB&I Member Yes <input type="checkbox"/> No <input type="checkbox"/>	Email

Please tick the appropriate boxes

Member of Society		Non-Member	
By 30/9/17	From 1/10/17	By 30/9/17	From 1/10/17

Full Registration Package

Includes registration and all meals on Friday and Saturday, Sunday a.m.

Note: Bed and Breakfast not included

£360	£380	£430	£450
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Note:

SCPS Membership status will be confirmed at registration to the meeting.

Day Registration

Includes lunch and coffee

£185	£195	£220	£230
Friday <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Saturday <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sunday a.m. (£20 all categories, no lunch incl.) <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Lunch only

£20	£20
Friday <input type="checkbox"/>	<input type="checkbox"/>
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Additional Ticket

£20
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Friday Dinner

£30	£30
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£30
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Saturday Dinner

£70	£70
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	Bank Transfer (please quote reference AGMREG 17) Account No. 61025619 Sort code 40 18 16 IBAN GB61MIDL40181661025619

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The Society of Clinical Perfusion Scientists

OF GREAT BRITAIN AND IRELAND

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10th to 12th November 2017

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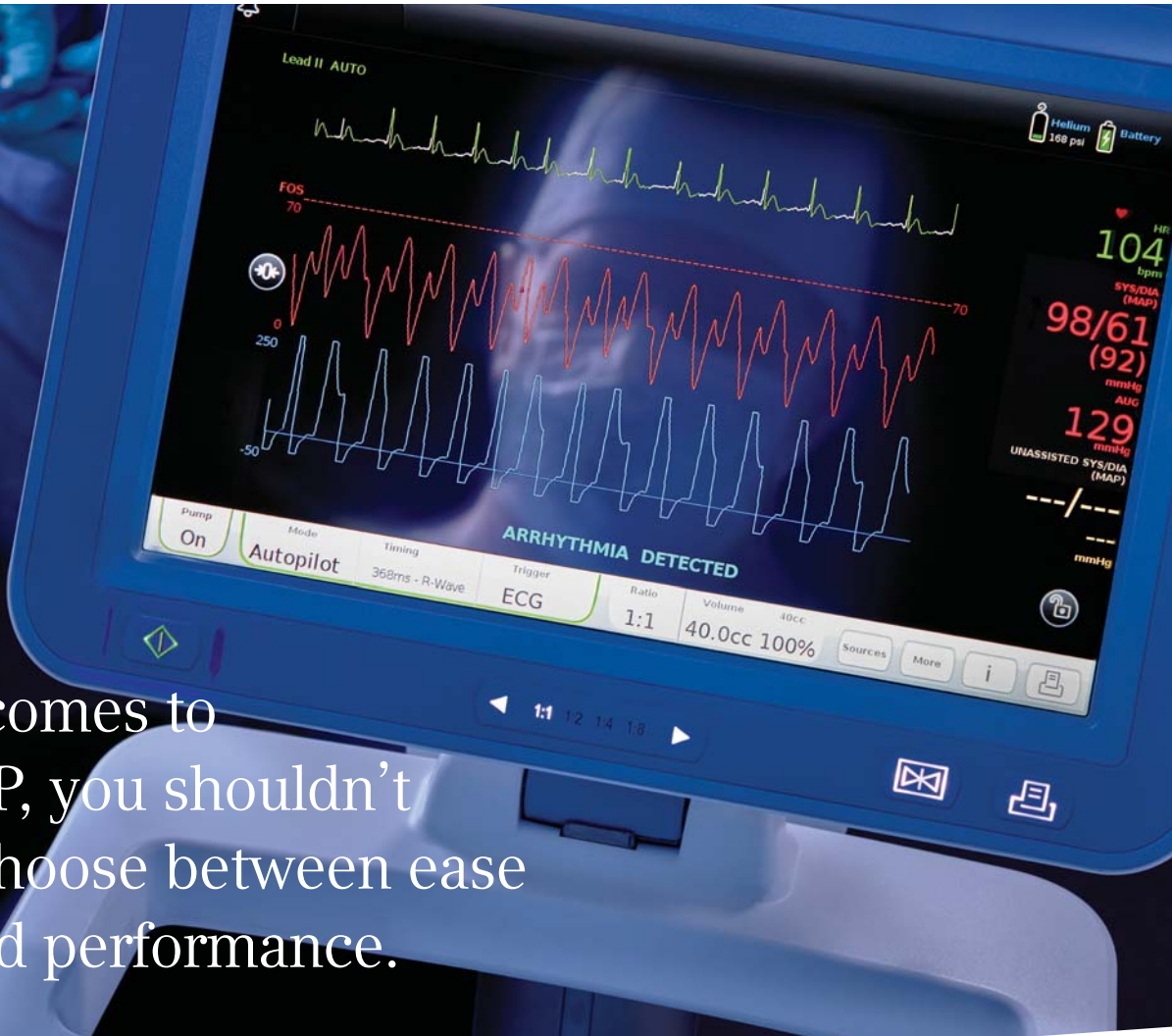
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References: 1. Donelli A, Jansen JRC, Hoeksel B, et al. Performance of a real-time dicrotic notch detection and prediction algorithm in arrhythmic human aortic pressure signals. J Clin Monit. 2002;17(3-4):181-185. Study sponsored by Teleflex.

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10th to 12th November 2017

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Carotid Stenosis

By Louise White

Introduction

Carotid stenosis is caused by disease of the carotid arteries which provide the principle blood supply to the brain. The right common carotid artery is a branch of the brachiocephalic artery whereas the left branches directly off the aortic arch. They divide at the carotid bifurcation into the internal and external branches. The external carotid artery supplies various craniofacial structures. The internal carotid artery, which is supplied by 70% of the common carotid blood flow, delivers oxygenated blood to the brain. The terminal branches of this artery are the anterior and middle cerebral arteries.



Figure 1: Image of carotid stenosis in the internal carotid artery (Naylor 2007)

Pathogenesis

Carotid artery disease is a progressive disease involving plaque formation in the carotid artery lumen, making the artery stenosed, therefore reducing and limiting blood supply to the brain. This fatty build up is caused by atherosclerosis, defined as an inflammatory disease caused by abnormal interactions of circulating cells such as monocytes, lymphocytes and platelets with the endothelial cells and smooth muscle cells of the arterial walls.

Repeated injury to the artery wall attracts monocytes and T lymphocytes due to the secretion of cytokines. This compromises the barrier function and smooth muscle cells also become exposed causing their proliferation and migration to the intima. Monocytes then take up lipid and become lipid laden cells.

As a result, plaques form and the functions of the arterial walls such as the secretion of anti-thrombotic substances and secretion of vasomotor substances is compromised. These plaques can cause the signs and symptoms discussed below either by restriction of blood flow or the passing of debris into the brain.

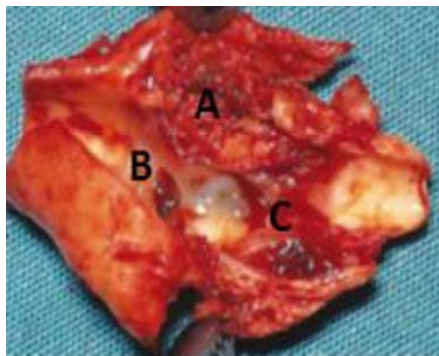


Figure 2: Image showing a resected endarterectomy specimen. A indicates severe stenosis containing atheromatous debris. B indicates an ulcer. C indicates recent thrombus (Naylor 2007).

It has been suggested that plaque molecular composition rather than degree of stenosis is a more important trigger for thromboembolic events. Græbe et al. (2009) found up-regulation of CD68, IL-18, MMP-9 and Cathepsin K gene expression in carotid plaques from patients who suffered a TIA.

Clinical signs and symptoms

The symptoms of carotid stenosis include ipsilateral transient visual obscuration, weakness or numbness of the limbs or face, aphasia, and problems with speech. Many patients may present with general episodes of dizziness, weakness, syncope and blurred vision.

The restriction of blood flow or the passing of debris into the brain can produce transient ischaemic attacks (TIAs). These episodes in definition recover within 24 hours.

When these symptoms are associated with very severe narrowing of the carotid artery there is an increased risk of a major stroke in the days, weeks or months later. In fact, the risk is 20-30% in the following 90 days following a TIA.

Risk factors for stroke include older age, diabetes, smoking, high BMI, increased fibrinogen level, elevated homocysteine level and dyslipidaemia.

Diagnosis

- Carotid auscultation to detect the presence of carotid bruits.
- Doppler ultrasound- The criteria for stenosis of 60% combines a peak systolic velocity of 290cm per second or more or an end diastolic velocity of 80cm per second or more.

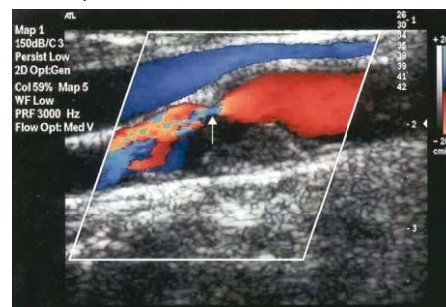


Figure 3: Duplex doppler ultrasound showing severe stenosis (Naylor 2007).

Treatment

- Anti-platelet therapy e.g. Clopidogrel & Aspirin (or aspirin alone in asymptomatic cases).
- Carotid endarterectomy for severe symptomatic stenosis.
- Lipid lowering therapy.
- Statin medicine for those with mild to moderate hypercholesterolaemia.
- A regular programme of aerobic exercise and a diet low in saturated fat.
- Carotid artery stenting.

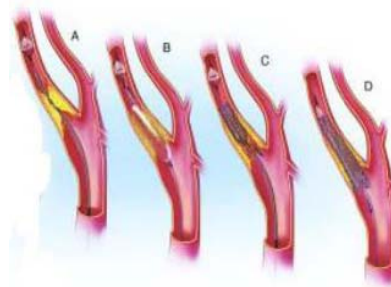


Figure 4: Carotid stenting for carotid stenosis (Lanzino et al. 2009)

Key References

- Chua, HC, Sitoh, YY, Earnest, A & Venkatasubramanian, N (2007). Detection of internal carotid artery stenosis with duplex velocity criteria using receiver operating characteristic analysis. *ANNALS Academy of Medicine Singapore*. 36, pp. 247-252.
- Græbe, M., Pedersen, S.F., Borgwardt, L., Højgaard, L., Sillesen, H. & Kjær, A. (2009) Molecular pathology in vulnerable carotid plaques: correlation with (18)-Fluorodeoxyglucose positron emission tomography (FDG-PET) *European Journal of Vascular and Endovascular Surgery*. 37, pp.714-721.
- Lanzino, G., Rabinstein, A.A., Brown, R.D. (2009) Treatment of carotid artery stenosis: Medical therapy, surgery or stenting? *Mayo Clinic Proceedings*. 84 (4), pp.362-268.
- Maharaj, R. (2008) A review of recent developments in the management of carotid artery stenosis. *Journal of Cardiothoracic and Vascular Anesthesia*. 22 (2), pp.277-289.
- Naylor, R.A. (2007) Carotid Artery Disease. *Surgery*. 25 (8), pp. 350-353

Opportunity for Commercial Companies

The Editor would welcome
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on interesting subjects and
commercial news of relevance
to the membership
of the Society.



Safety Committee

New and important information has been added to the Publications page of the Safety Committee webpage on the Society website:

www.scps.org.uk

Please visit this page and disseminate the information to your department.

Report(s):

SR 2011/02	SR 2011/07
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SN 2011/06	SR 2012/03

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Scientists of Great Britain and Ireland

Executive Committee 2016/17

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Members are reminded that **Valerie Campbell**, the Society's Administrator, can supply information and advice on all administrative matters relating to the Society and the College.

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