Newsletter

The Society for Vascular Technology of Great Britain & Ireland

Issue 91. Winter 2016

In this issue

New Year message from the New President

I am delighted to be writing this welcome message as is the tradition of the incoming President. I would first like to wish you all a very Happy New year.

The year ahead looks exciting with the prospect of several new developments. These include a complete redesign of the website to offer members a better experience of accessing relevant professional information, documents and news as well as improved interactive services for CPD and membership.

The collaboration with the American Registry of Diagnostic Medical Sonography is still in the discussion stage but is moving swiftly forward and it is expected that the last paper SVT theory exams will take place on 6th June 2016. Thereafter, exams will be taken electronically at a testing centre local to the candidate. There is further information about this in a separate article in this issue.

Since the implementation of the Modernising Scientific Careers Scientist Training Pathway (STP) there have been discussions regarding the future of the SVT accreditation. As there are still many trainee clinical vascular scientists who are not STP, the SVT accreditation is still vital in ensuring high standards of vascular ultrasound practice. With the support of the ARDMS collaboration, the SVT hopes in the near future to adapt the accreditation process appropriately to include single modality practitioners, for instance SVT carotid accreditation.

Recently, the SVT has strengthened its links with the Society and College for Radiography (SCoR) who are keen to promote the additional services available to SVT members who purchase indemnity insurance through them. SCoR are able to provide invaluable advice on a range of professional topics including HCPC registration, NHS pensions, social media and reflective practice. The Society also has representatives on a number of other professional bodies including NSHCS, BMUS, NAAASP, Circulation Foundation, VASBI, CASE, VS and VERN and I would like to thank all the current committee members and those stepping down this time, for the donation of their time to represent and support us.

I have been a member of the SVT since 2002 and have enjoyed the time I have spent on the education committee and more recently the executive committee. I feel a great satisfaction in helping shape the future of the Society and ensuring we uphold high standards of practice. My main aim during the next year is to improve benefits and professional experiences for members.

Tracey Gall
SVT President

Dates for the Diary 2016:

SVT Exam Revision Days, Coventry
29th/30th March

CX Symposium, Olympia Grand, London
26th-29th April

SVT Theory Exams, London/Manchester/Ireland
6th June

Venous Forum, Royal Society of Medicine, London
7th-9th July

VASBI AGM, Queens Hotel, Leeds
22nd/23rd September

VS ASM, Manchester Central Conference Centre
30th November - 2nd December

SVT ASM, Manchester Central Conference Centre
1st December

SVT Annual Scientific Meeting, 12th November 2015

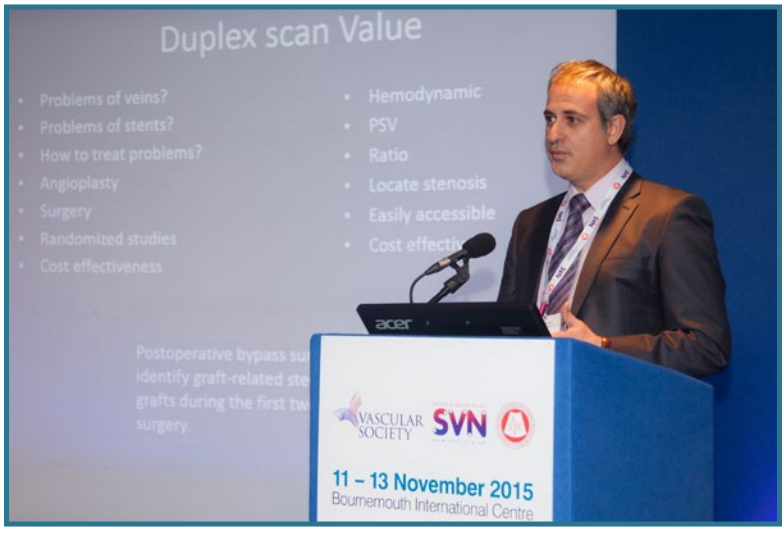
Alexandra Phillips, IVS Ltd

Having worked for Independent Vascular Services Ltd. for a year, I was really looking forward to my first SVT conference.

Being just across the road from the hotel where many of us were staying, the Bournemouth International Centre was the perfect venue for the event. The SVT AGM got started with eight student research proposals. Both informative and thought-provoking, each student evaluated current practice and explored alternative approaches in the vascular field. They then received useful feedback from the audience to help expand their research.

David Becket Consultant Radiologist speaking on pelvic vein imaging and embolisation.

Another personal highlight was the talk 'Life on a Limb' given by guest speaker Tim Randell. Informative and eye-opening, the speaker presented the reality of amputation due to vascular disease and the prosthetic limb options currently available. On a different note, Nicola Sedgwick delivered an extremely interesting talk about practicing vascular science in Abu Dhabi. Being the first licensed AVS to work in this rapidly developing country, it was fascinating to hear about her struggles establishing a service in a multi-cultural and fast-paced environment.



Ioannis Vlachakis, Consultant Vascular Surgeon – Debate on Stent and Graft surveillance.

Conference attendees also had the opportunity to explore the exhibition hall filled with the latest vascular technology. Talking to the representatives and testing the equipment on display was exciting as well as educational.

I particularly enjoyed the stall promoting venous thromboembolism prophylactic devices, which could potentially be widely used within UK hospitals in the near future.

The dinner and drinks reception held at the Bournemouth Pavilion finished the day off nicely. The evening provided the opportunity to dress up, let your hair down and meet other vascular practitioners from all over the country. Following a three-course meal, the band on stage got everyone on to the dance floor.

In summary, the SVT conference provided an essential update into recent developments in the ever-expanding field of vascular science. The event brought together vascular practitioners with various levels of experience from across the UK. Listening to innovative ideas and exploring cutting-edge technology was insightful and inspiring. I greatly look forward to hearing about further vascular technological advances at the next SVT conference.

Note from the Editor...

The SVT ASM will take place in Manchester this year on the Thursday 1st December. We also hope to hold another workshop on the Wednesday. We are currently looking for ideas for a subject for this year's workshop, if you have any suggestions please send them to conference@svtgbi.org.uk.

Abstract submission will start in late Spring.....

Winner of the Prize for Best Student Proposal at the SVT ASM

The assessment of arterial blood flow at the thoracic outlet in and asymptomatic population using duplex ultrasound and magnetic resonance angiography.

John Tallamy, STP, Nottingham University Hospitals NHS Trust / The University of Salford

In this research project we are comparing the imaging modalities of ultrasound and magnetic resonance angiography in the assessment of asymptomatic volunteers for arterial compression at the thoracic outlet. This is to determine the prevalence of arterial compression at the thoracic outlet in the general population.

We intend to observe the arterial blood flow through the subclavian artery at the thoracic outlet, the region at the top of the chest just above the top rib and below the collarbone where the subclavian artery leaves the rib cage to communicate with the arm on both sides. The thoracic outlet can become compressed by rib, collarbone or muscular bands which can result in the restriction or obstruction of blood flow, particularly in manoeuvres involving the arms, shoulders and neck. This phenomenon is observed in some patients who present with symptoms of thoracic outlet syndrome (TOS).

The prevalence of TOS in the asymptomatic population is not well documented however, with only one study looking at anatomical space changes using magnetic resonance imaging in symptomatic TOS and asymptomatic volunteer groups. This information will aid us in improving the diagnostic assessment of patients with TOS by allowing us to compare findings seen in asymptomatic individuals with those findings that represent true TOS pathology.

Through determining the prevalence of arterial compression with these imaging modalities, as well as the inter-rater agreement between the modalities, we can determine which modality is more appropriate in diagnosing TOS. This will help to improve diagnosis and prevent the patient being subjected to unnecessary investigations, saving both time and money and improving patient outcomes.

Circulation Foundation Prize Winner – John Tallamy (Best Student Proposal), presented by Tanyah Ewen, SVT President 2015

Winner of the Prize for Best Scientific Paper at the SVT ASM

Use of radiofrequency ultrasound to calculate central blood pressure in children.

Presenter: Louise Keehn, Research Associate, King's College London.

I was honoured to receive the prize for best scientific presentation at the 2015 Annual Meeting of the Society for Vascular Technology. I have been an AVS since 2008, but have been fortunate enough to work in vascular research for the last few years, which has given me a new insight into a different field of work.

I am part of a research team whose interest is in the correlation between blood pressure and vascular structure and function. One of our current areas of research focusses on children with chronic kidney disease (CKD), and the interplay between blood pressure and vascular health in this population. My presentation, entitled "Use of radiofrequency ultrasound to calculate central blood pressure in children" was based on our ongoing work at the Evelina London Children's Hospital, and St Thomas Hospital in London.

We started the Central Blood Pressure (CBP) in children study in 2011. The aim of this project was to determine what non-invasive methods were could be used to calculate the central blood pressure in children with CKD, and secondly whether these other techniques provided a better explanation of the strain on the heart and arteries seen in these children than routine clinical peripheral blood pressure measurement. Measurements performed on our subjects included central blood pressure by applanation tonometry, peripheral blood pressure by aneroid sphygmanometer, carotid intima-media thickness, cardiac echocardiography and aortic pulse wave velocity, Later, we invested in an Esaote ArtLab system to record more precise measurements of the carotid intima media thickness and distensibility.

Since we started in 2011, 360 children have been enrolled into the CBP study and it is still ongoing.

Circulation Foundation Prize Winner – Louise Keehn (left) (Best Scientific Paper), presented by Gill Green from the Circulation Foundation

We have published several papers from this work already, a couple comparing use of certain devices in children, and another looking at large artery mechanical properties. However, more publications will hopefully follow as the CBP study nears completion.

Since 2012, we have been working on another study in parallel with CBP - the Hypertension Optimal Treatment in Children with Chronic Kidney Disease study (or HOT-KID as it is known). This is a multi-centre study, carried out at hospitals across the UK that specialise in paediatric nephrology.

The HOT-KID study has several aims. Firstly, to determine the association of left ventricular mass and hypertrophy, arterial function and structure with the severity and duration of childhood CKD and to examine the relation of these measures to blood pressure. Secondly, to determine whether aggressive blood pressure reduction (below 40th percentile) compared to standard care (between 50th-75th percentile) is effective in normalising left ventricular hypertrophy and arterial function and structure. This is being achieved through a randomised controlled study design. Lastly, it is hoped that the HOT-KID trial will establish a cohort of children with CKD to be followed prospectively to determine predictors of progression of CKD, subclinical and clinical cardiovascular disease. To date, HOT-KID has enrolled 247 children across the UK, of which 102 are children with CKD who have been randomised into a normal or aggressive treatment of blood pressure. The study is due to run until 2019, and we hope that it will provide a lot of insight into the processes involved in early arterial changes in children with chronic kidney disease. In addition, it should show whether more aggressive blood pressure treatment is beneficial in these children, to reduce future risk of ventricular hypertrophy and adverse vascular changes.

I look forward to updating the SVT in a few years' time with our findings!

Objective:
Measurement of central rather than peripheral systolic blood presssure (cSBP/pSBP) may be more clinically relevant for children, who have significant pressiure amplification through the arterial tree. However, CSBP is also difficult to assess non-invasively. This study aimed to determine if distention waveforms acquired through radiofrequency ultrasoun could be used to provide an estimate of cSBP comparable to a specialist tonometric device in children with chonic kidney disease (CKD).

Methods:
Radiofrequency ultrasound wall-tracking of the carotid artery was performed in 136 children, producing distention waveforms with high temporal resolution. A SphygmoCor device, normally used in adults, was used to calculate cSBP from radial artery pressure waveforms. In a further ten patients, the two devices were compared to a gold standard measurement by an intra-aortic pressure catheter. Peripheral blood pressure was measured by an oscillometric cuff.

Results:
When calibrated by peripheral mean and diastolic pressures, estimates of cSBP from carotid distention wavefoms are highly correlated with values obtained by the SphygmoCor ($r=0.96$, $p<0.001$), with mean difference of 0.56 +/- 3.48mmHg. Estimates of cSBP through carotid artery wall tracking were highly correlated with invasive pressure measurements ($r=0.95$, $p<0.001$), with mean difference 4.7 +/- 3.6mmHg.

Conclusion:
Radiofrequency ultrasound wall-tracking of the carotid artery can be a valuable technique for non-invasive assessment cSBP and can produce an estimation of cSBP close to that acquired by a gold standard measurement. The technique may prove helpful in the management of children with CKD or hypertension as well as improving research into central arterial physiology.

ARDMS Collaboration

Tracey Gall, SVT President

At the annual meeting in Bournemouth recently I gave a presentation about a future collaboration between the American Registry of Diagnostic Medical Sonography (ARDMS) and the SVT. ARDMS is a non-profit organisation offering medical ultrasound theory exams with over 13,000 registrants worldwide. ARDMS have an extensive and complex database called 'EPIC' which they use to develop their exams. EPIC can store questions, be used to develop and redesign questions, develop exam papers from set curriculum parameters and archive questions for future use. The EPIC system also permits post exam scrutiny and psychometric analysis. ARDMS offer the Registered Vascular Scientist (RVT) credential worldwide but the proposed collaboration will be a totally separate entity.

Currently, the SVT accreditation theory exams are paper exams only available to sit on one day per year in London, Dublin or, for the first time in 2016, in Manchester. Exam development is a time consuming process and the duty of the exam officers (one for vascular technology and one for physics). The papers have to be marked and reviewed and certificates issued meaning results are not available for at least a month following the exams.

In the proposed collaboration, ARDMS will provide the infrastructure and the use of EPIC to store our own questions, develop SVT only theory papers and offer electronic exams to candidates at a local UK testing centre (such as those used for theory driving tests). Due to the relatively small number of candidates, the window of exam opportunity will be approximately 90 days each year. There will be no increase in the cost of theory exams, the papers will remain multiple choice and using an electronic format will bring many benefits. Results will be available immediately following the exam at the testing centre with feedback for unsuccessful candidates. The electronic format will allow use of images and 'hotspot' questions which involve clicking on a particular area of an image etc. The exam officers will work closely with ARDMS to develop our theory exams, the SVT will retain the control over the standard and pass level and there will be SVT representation to the ARDMS organisation. I am hopeful that this collaboration will also lead to electronic theory exams for single modality accreditation and bring opportunities to develop networks between clinical vascular scientists in the UK and our counterparts in the USA.

ARDMS
THE AMERICAN REGISTRY FOR DIAGNOSTIC MEDICAL SONOGRAPHY

If anyone would like to comment or make suggestions about this development please do get in touch. I would really appreciate any feedback to tracey.gall@ivs-online.co.uk.

Bubbles

Matt Slater, Addenbrooke's Hospital, Cambridge

Necessity for Routine Pre-operative Ultrasound Mapping before Arteriovenous Fistula Creation: A Meta-analysis.

Georgiadis G.S., Charlampidis, D.G., Argyriou C., Georgakarakos E.I., Lazarides M.K., European Journal of Vascular and Endovascular Surgery (2015). 49, 600-605.

Achieving a functioning AVF in patients with end stage renal disease remains challenging as primary failure rate can be as high has 40%. Pre-operative Colour Doppler Ultrasound examination may result in improved AVF placement and adequacy for Dialysis, however there is no consensus on the role of routine ultrasound mapping prior to AVF creation. Despite the lack of indisputable evidence to support routine pre-operative ultrasound examination, the existing European Best Practice Guidelines suggest its routine use based on level 2 evidence. This is a systematic review and a meta-analysis comparing routine colour ultrasound mapping vs. clinical review and selected ultrasound use.

Eligible studies fulfilled the following criteria: (1)They should be RCTs,(2) they should report on a cohort of patients evaluated pre-operatively only with clinical examination or selective ultrasound use and a cohort evaluated pre-operatively with routine ultrasound evaluation before the creation of an AVF, (3) they should report the post-operative outcome. Outcomes of interest were (1) the immediate failure rate, or inadequate vein found with no subsequent AVF creation; (2) Usability for dialysis at 1 or 6 months post-operatively; (3) the primary patency at a time of interval >1 year. Search identified 468 articles; five RCTs were eligible for inclusion in the metal analysis (total of 574 patients).

In this meta-analysis the pooled immediate failure rate was found to be significantly reduced in the routine ultrasound group and the odds of immediate failure were reduced threefold. There was no statistically significant difference between the two groups regarding the early/midterm AVF adequacy for dialysis but a trend was revealed (p=0.06). Moreover, in subgroup analysis of routine ultrasound vs. selective ultrasound a statistically significant difference was found, with the routine group showing increased early/midterm AVF adequacy for dialysis. This review appears to increase the level of evidence for routine ultrasound use.

There is no generally accepted "standard" for what parameters to use when ultrasound mapping. Most studies suggest an arterial diameter for a successful AVF, vein diameters of 2.0-2.5mm and continuity with the proximal deep veins and no evidence of obstruction. In the included studies, three assessed radial artery and cephalic vein diameters, while in the other two additional parameters such as radial artery volume flow, peak velocities and resistance indices were measured. Only one of the RCTs took into account the outflow vein diameter and maturation rate affecting the adequacy and therefore it is not clear if the groups were comparable in terms of outflow vein diameter.

In conclusion this meta-analysis does appear to suggest that ultrasound should be routine before the creation of an AVF. Routine ultrasound can avoid negative surgical explorations and significantly reduces immediate failure rate. However, the low to moderate quality of the studies involved raises questions as to whether this can be considered level I evidence. Further research of increased quality (greater numbers, protocols designed to minimise confounding variables) is needed.

Incidental Thyroid Abnormalities on Carotid Colour Doppler Ultrasound: Frequency of Clinical Significance.

M.P. Rad, S.R. Zakavi, P. Layegh, Khooei A., Bahadori A., (2015) Journal of medical ultrasound, 23, 25-28.

Duplex ultrasound is a widely accepted method in the examination of the carotid arteries. The thyroid gland is located in close proximity to carotid vessels. Examination of the thyroid gland during carotid ultrasound is not a time consuming process and may have diagnostic benefits. Thyroid malignancies do not usually have local symptoms and in most cases are discovered incidentally during physical examination and neck imaging for other purposes. This study focussed on the incidental thyroid lesions detected during carotid ultrasound and evaluated their importance and suspected malignant features. The main goal was to determine the prevalence of incidental thyroid lesions and their clinical significance during carotid ultrasound.

The patients recruited for the study were referred for carotid ultrasound because: they were candidates for coronary artery bypass grafting, had a history of stroke or TIA, or had vertigo. Patients with known thyroid disease were excluded from this study. Ultrasound examinations were conducted by a board certified radiologist using a G40 Siemens ultrasound machine with a 10MHz probe. Echogenicity of the thyroid, size and echogenicity of any focal abnormality, presence or absence of calcification and border description of all lesions were recorded during ultrasound examinations.

290 patients underwent carotid ultrasound during a 1 year period (September 2011 to September 2012). Of the 290 63(21.8%) had thyroid abnormalities. Six patients (9.5%) had diffuse thyroid disease without distinct nodules and 57 patients had (90.5%) had one or more thyroid nodules.

The female to male ratio was higher in patients with abnormal thyroid ultrasound compared to patents with normal thyroid. In patients with thyroid nodular disease 34 (59.65%) had nodules >10mm. Analysis of echogenicity showed that 20(31.7%) were hypoechoic, 10(15.9%) were hyperechoic and nine (14.3%) were cystic.

The prevalence of incidental thyroid lesions is highly variable and different from each other, depending on difference in demographics of the populations studied. Due to the age of the patients the results in this study cannot be generalised to the entire population. There was a significant relationship between age and nodular thyroid prevalence and as in all studies the incidence of thyroid incidentiloma was higher in elderly patients.

Fine needle aspiration biopsy was carried out in all patients with a thyroid nodule >10mm or any size with micro calcification. A total of 15 patients agreed to undergo biopsy of the nodule. Three Patients with thyroid nodules and suspicious cytology were referred for surgery but none of them underwent surgery due to age, dissatisfaction and associated cardiovascular problems.

Although thyroid carcinomas are a relatively common disorder, patients who are referred for carotid ultrasound are relatively old, have major cardiovascular problems, low survival rates and poor outcomes. Therefore patient co-operation for follow-up is poor and thyroid surgery may be of high risk in these patients. Furthermore, most of the cases referred for surgery do not have a malignancy. In this limited small study, it appears that thyroid evaluation during carotid ultrasound has little benefits.

Overuse of Compression Ultrasound for Patients with Lower Extremity Cellulitis. Gunderson CG. Chang J.J (2014) Thrombosis Research, 134, 846-850.

The occurrence of Deep vein thrombosis is often considered in patients with cellulitis because of the shared presentation of unilateral limb swelling, erythema and pain. Compression ultrasound is often ordered in hospitalised patients with cellulitis in order to rule out DVT. The purpose of this paper was to review a cohort of patients hospitalised with cellulitis to describe the frequency of compression ultrasound and record the rate of positive studies and impact on management. The authors hypothesised that the majority of patient being admitted with cellulitis have compression ultrasound and that the rate of DVT and impact on management is low.

A retrospective cohort study was conducted of adult patients with lower extremity cellulitis hospitalised between October 1st 2008 and September 30th 2013. All patients with documented lower leg cellulitis were included, for patients with multiple hospitalisations for cellulitis during the study period only the first episode was included. Leg cellulitis was defined as any spreading infection involving the leg and was divided into cases with complicating risk factors (abscess, PVD chronic ulcers) and cases without risk factors. Cases meeting inclusion criteria were reviewed for the use of compression ultrasound, the occurrence of DVT and the 3 month follow-up occurrence of DVT after discharge.

239 patients were identified of which 59 were excluded (multiple admissions, abscess without cellulitis etc.) leaving 183 patients for the study. Of the 183 patients 133 (72.7%) had compression ultrasound to exclude DVT. Of the 133, 11 (8.3%) were positive for DVT including 3 (2.3%) new diagnoses and 8 (6%) patients with prior ipsilateral DVTs that were re-imaged. Of the 8 chronic known DVTs 6 were ipsilateral to the side of cellulitis (one of these patients had recurrent bilateral DVT) and of the three new DVTs only one was ipsilateral to the side of cellulitis. The only significant predictor of positive ultrasound for DVT was a prior history of DVT.

The primary finding of this study is that the majority of patients with leg cellulitis at this facility are being screened for DVT by compression ultrasound. Patients were more likely to have ultrasound ordered if they had chronic oedema or cellulitis without a complicating factor. There was a relatively low rate of newly diagnosed DVT with only one newly diagnosed ipsilateral DVT which matched the rate in the contralateral leg. Given the results of this study and another previous systematic review the authors do not believe there is evidence for a relationship between cellulitis and acute DVT and do not support screening for acute DVT in patients with cellulitis. The one exception may be in patients with previously diagnosed ipsilateral DVT as it may change patient management. In the current study, one patient had recurrent DVT and in this instance resumed anticoagulation. Given the retrospective nature of the study it is possible that cases of DVT were missed if they were coded as DVT instead of cellulitis, nevertheless the high rate of chronic DVT indicates that this bias may not have been present. In addition the study was only conducted at one institution and there is likely wide variation in the use of ultrasound in different countries and healthcare systems.

This paper does not support a relationship between hospitalisation for cellulitis and acute DVT. Chronic DVT's (and presumably deep venous reflux) appear to be relatively common for cellulitis. Overall the use of ultrasound to assess for DVT had minimal impact on patient management and appears to be an example of overuse.

CPD Questions

Winter 2016

The following question are taken from the NICE guideline (NG19) on Diabetic foot problems: prevention and management.

Questions

Radiofrequency Ablation of Varicose Veins

1. How many people were diagnosed with diabetes in 2013?
2. What percentage of people with diabetes die of microvascular complications?
3. What defines a diabetic foot ulcer?
4. Name four risk factors that should be assessed when examining the feet of a diabetic patient?
5. What allied healthcare professional should lead the foot protection service?
6. Name three further specialities in the multidisciplinary foot care service?
7. How often should a diabetic foot check take place?
8. Upon referral to the foot protection service, patients identified as high risk for developing diabetic foot problems should be assessed within what time frame?
9. What classification system should the foot protection service NOT use to document the severity of foot ulcers.

Please forward answers, along with **full name and SVT membership number** to: heather@vascularsolutions.co.uk by **1st April 2016.**

Answers: Summer 2015 Newsletter

(NICE pathway for Stroke):

ASSESSMENT

1. >4
2. Specialist assessment within 24 hours from onset of symptoms, including a decision on brain imaging.
3. Specialist assessment within 1 week from onset of symptoms, including a decision on brain imaging.
4. Crescendo TIAs (>2 in a week).
5. Recurrent TIAs, anticoagulation therapy and late presentation of patients.
6. Duplicate of Question 4.
7. Patients with acute stroke have their swallowing screened by a specially trained healthcare professional within 4 hours of admission to hospital, before being given any oral food, fluid or medication.

IMAGING

Question 8:

- indications for thrombolysis or early anticoagulation treatment
- on anticoagulant treatment
- a known bleeding tendency
- a depressed level of consciousness (GCS [Glasgow Coma Score] <13)
- unexplained progressive or fluctuating symptoms
- papilloedema, neck stiffness or fever
- severe headache at onset of stroke symptoms
- Question 9: 'Immediately' is defined as 'ideally the next slot and definitely within 1 hour, whichever is sooner'.

THROMBOLYSIS

Question 10:

1. treatment is started as early as possible within 4.5 hours of onset of stroke symptoms, and
2. intracranial haemorrhage has been excluded by appropriate imaging techniques.

Question 11: Alteplase
Question 12: The cost per course of treatment depends on the body weight of the patient, and can range from £300 to £600 based on a recommended dose of 0.9 mg per kilogram of body weight.

CAROTID ENDARTERECTOMY

Question 13: 1 week

REHABILITATION:

Question 14:

- nurses
- consultant physicians
- physiotherapists
- occupational therapists
- speech and language therapists
- clinical psychologists
- rehabilitation assistants
- social workers.

Trainee Competition Winter 2016

1. How do abdominal aortic aneurysms (AAAs) normally present and what are the methods of detection?
2. Referring to the literature, why was the AAA screening program developed and what population does it target?
3. What are the two main methods of treating a AAA? Discuss the suitability of each.

Please send answers to Naavalah Ngwa-Ndifor, Technology Exams Officer on: Naavalah.Ngwa-Ndifor@bartshealth.nhs.uk.

The winner will receive a £25 book token and have their answers printed in the spring newsletter
Closing date: 1st April 2016

Trainee Competition Winner Summer 2015

Congratulations to Ming Yeung, Trainee Vascular Scientist at Portsmouth Hospital for providing the winning answer, printed below, to the Autumn Trainee Competition who will receive the £25 book token.

As part of a quality assurance programme 4 Vascular Scientists all use the same machine to each take 3 flow volume measurements from a patient with an arterio-venous vascular access graft.

They notice that there is some variation between the 12 measurements.

A. How is volume flow calculated? What measurements does the ultrasound system require the operator to make.

Volume flow is the amount of blood flow through a vessel over a given time. Volume flow is calculated as the product of the mean velocity (V) and the cross sectional area (A) of the vessel. expressed as Q=V x A.

On the ultrasound machine, the operator is required to manually select velocity waveforms over a number of cardiac cycles for the ultrasound system to calculate the time average velocity. The diameter of the blood vessel is also required for the system to calculate the cross sectional area of the vessel (Area = π x radius^2).

Volume flow is then calculated from the formula:

Volume Flow (mL/min)
= time average velocity (cm/sec) (TAV) x cross-sectional area of the vessel (cm^2)
= TAV x 60 seconds x ((π x diameter)^2/4))

B. Name 3 factors (clinical or technical), which may account for the variations in the measurements and how each one would impact on the reported value.

Velocity waveforms.
Patients' mean velocity waveforms can vary and depends on their cardiac output and the average mean velocity in the spectral display only reflects the average velocity at that time. Patients with cardiac arrhythmia can have varied velocity waveforms which can further vary the calculated volume flow measurements.

Inter-observer variability
Subjective manual calliper placements on vessel walls introduces unavoidable variation in measurements between operators. Furthermore, vessels contract and expand during the cardiac cycle and vessel diameter can vary depending on whether the static images were taken during the systolic or diastole phase.

Ultrasound controls
Adjustments of the ultrasound controls can influence the volume flow calculation. A potential source of error in spectral doppler is that the gain can make a substantial difference in the spectral waveform which can alter the mean velocity calculated (Oates et al 2009).

Average velocity measurements rely on accurate angle of insonation, sufficient sample volume size, appropriate gain and optimum scale to produce reliable values and minimise errors in calculation.

C. Explain why volume flow measurements made with ultrasound are always likely to have relatively high error margins, regardless of the patient and of the operator's technique.

A major potential error in the calculation of volume flow comes from the measurement of the vessel diameter used to estimate cross-sectional area. Area is calculated from π x radius^2 thus any errors in the diameter measurement of the vessel would be squared. Inevitable high error margins occur because during the cardiac cycle the vessel slightly contracts and expands so the vessel diameter can change by ~10%. This 10% variation can lead to flow volume calculation errors of up to 20% (Ho et al 2006).

References:

Oates CP, Naylor AR, Hartshorne T, Charles SM, Fail T, Humphries K, Aslam M, Khodabakhsh P. (2009) Joint Recommendations for Reporting Carotid Ultrasound Investigations in the United Kingdom. European Journal of Vascular and Endovascular Surgery, 37(3), 251-261.

Ho SSY, Lam WWM, Wong KS, Leung CSF, Metreweli C (2006) Potential value of post stroke extracranial arterial blood flow volume in the prediction of stroke functional outcome. Cerebrovascular Diseases 21(1-2):54–9.

SVT EXAMS AND REVISION DAYS 2016

SVT Exam Revision Days

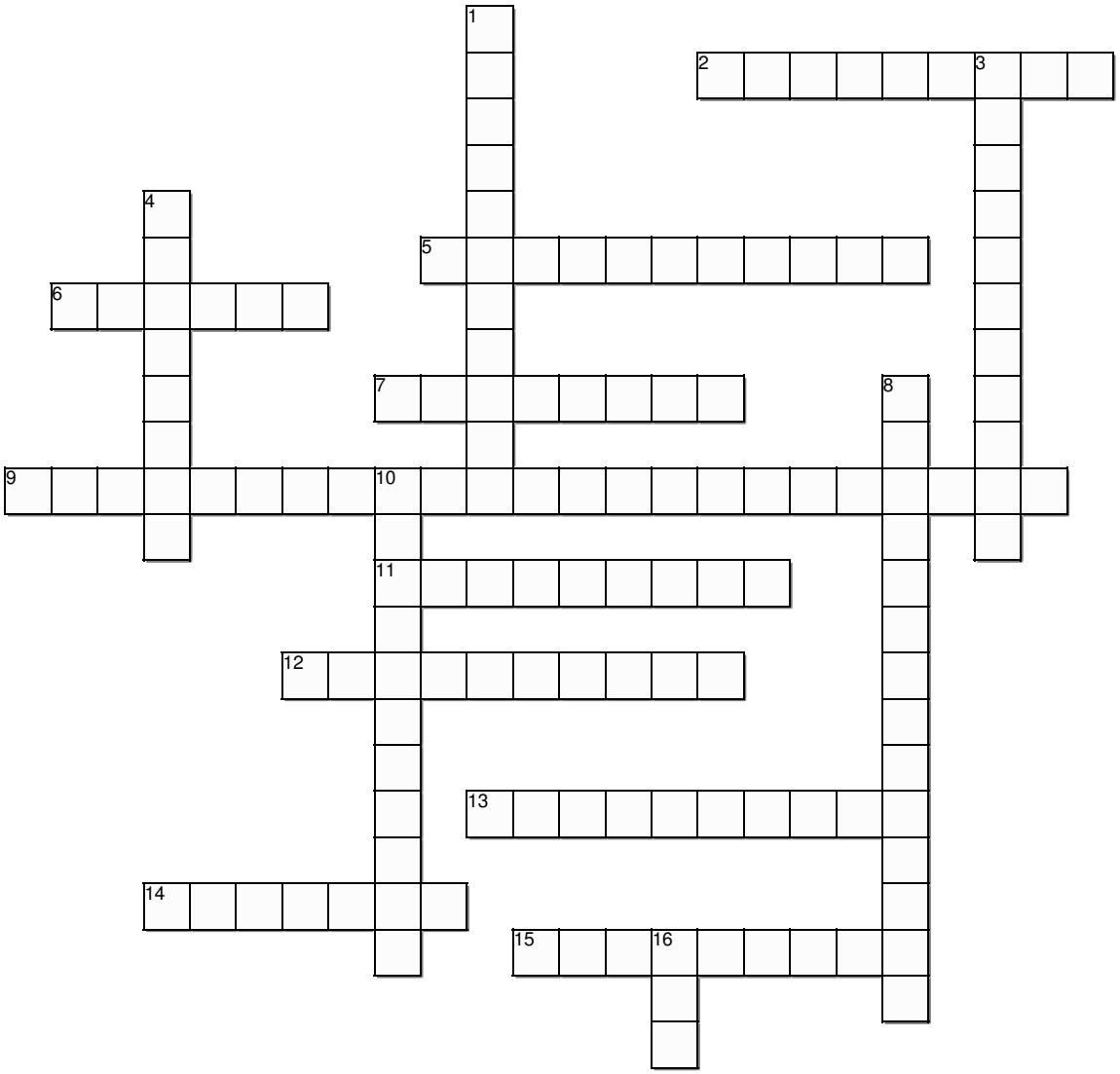
The SVT exam revision days are taking place on Tues 29th March (Physics) and Wed 30th March (Technology). These will be held in Coventry and cost £40 each. Registration for both the revision days and the theory exams will open in mid-January.
Revision day attendees are placed into small groups and rotate round revision sessions with different tutors. There is plenty of opportunity for discussion and practice of sample exam questions.

Theory Exams

The theory exams are being held on Monday 6th June 2016 at three venues: London, Manchester and Ireland and cost £100 each. Preference for location can be made on the registration form.

Please visit the SVT website for further information regarding registration or email theoryexam@svtgbi.org.uk

Crossword!



Across

2. A disease that usually involves the arteries in the head, neck and arms (9)
5. The term used to describe reverse blood flow through the portal vein (11)
6. The name of a manoeuvre to test for thoracic outlet syndrome (6)
7. A disease of occlusions in the vessels of the hands and the feet (8)
9. A non-atherosclerotic and non-inflammatory arterial disease (13, 9)
11. The seventh branch of the external carotid artery (9)
12. Temporal arteritis is also known as _____ arteritis (5,4)
13. An alternative DVT diagnosis (10)
14. A connective tissue disorder, linked to a lack of fibrillin (7)
15. An autoimmune disease resulting in inflamed blood vessels (9)

Down

1. A recessive genetic disease that increases the risk of stroke in the young (6,4)
3. The arteries supplying the bowel (11)
4. A term used to describe the shape of an aortic aneurysm (8)
8. The most common cause of an over active thyroid (6,7)
10. The syndrome of tight bursting pain in the calf muscles after exercise (11)
16. The abbreviation of a vascular condition that is approximately four times more common in men than women (3)

Answers to Autumn 2015 Crossword

Across: 2. Doppler shift, **4.** Mega Hertz, **6.** An astronomical artefact, **10.** Venous incompetence, **11.** Lambda, **12.** Harmonics.

Down: 1. Carotid Stenosis, **3.** Cavitation, **5.** Pulse repetition, 7. Continuous wave, **8.** Damped flow , **9.** Jugular, **10.** Vena Cava

WANTED!

CASE Representative

CASE is the Consortium for the Accreditation of Sonographic Education. There are currently two SVT representatives on CASE council and a third is needed, so that we can ensure there is always good SVT representation (two people preferred at each) at the three CASE council meetings held every year (usually two in London and one in York). This involves looking at courses, and changes to courses, for postgraduate sonographic education around the country. The remit of CASE council continues to evolve with changing practice and education. The SVT representatives on CASE are also CASE accreditors which may involve travelling to educational sites for on-site visits with agreement.

For more information please contact Valda on valda.gazzard@nhs.net, or Ros on Ros.Lea@mcht.nhs.uk

Ann Donald Scientist of the Year 2015

Congratulations to Fabrizio D'Abate, winner of the Ann Donald Scientist of the Year 2015!

Fabrizio was nominated for this award by his colleague John Farrah at St George's Hospital, London. John submitted his nomination for Fabrizio for his passion and commitment to research and his achievements in the past year.

In April 2015, Fabrizio and consultant vascular surgeon Mr Hinchliffe organised a meeting during the Charing Cross Conference to gather together all relevant intentional vascular experts in iliac endofibrosis creating the INSITE group (international group of experts for the diagnosis and treatment of iliac endofibrosis). This group are now writing the first consensus guidelines for the diagnosis and treatment of iliac endofibrosis, Fabrizio is one of the members of the INSITE group and is also completing a paper on diagnosis. St George's is now the reference centre in the UK for iliac endofibrosis diagnosis and they receive referrals from around the country and abroad.

Fabrizio was asked to develop an algorithm for the diagnosis of thoracic aortic aneurysms and gained the necessary skills and knowledge for this with a self funded course. Under the supervision of Prof. Thompson he then performed a study of 40 patients to demonstrate the feasibility of ultrasound in identifying patients at high risk of having a thoracic aortic aneurysm.

Fabrizio is involved as the main investigator in a peripheral arterial disease screening study and is also investigating the use of B-flow technology for the assessment of peripheral arterial disease.

Ann Donald Scientist of the Year Award 2016

Call for Nominations

An annual award for the scientist who has performed the best original research or been the most innovative in the promotion of vascular ultrasound.

The annual prize of £500 will be awarded to 'the scientist who has performed the best original research or been the most innovative in the promotion of vascular ultrasound during the year'.

How to nominate someone for the award: Nominations for this award can be made in writing using the application form on the SVT website.

www.svtgbi.org.uk/resources/anndonald

You may either nominate yourself or another, in recognition of achievements over the past year or so. Applications must be completed in full, with supporting evidence and two others to support your nomination.

The deadline for nominations is 31st October 2016, and the prize will be awarded at the 2016 AGM if we receive an appropriate nomination.

Ultrasound 2015: Review of the 47th ASM of the British Medical Ultrasound Society, 9th-11th December

Helen Dixon AVS, King's College Hospital, London

The 47th annual scientific meeting of the British Medical Ultrasound Society (BMUS) was held in the lovely venue of Cardiff City Hall. The exhibition hall was packed with all the latest ultrasound systems and there was also a stand for MedaPhor, a UK company which has produced an ultrasound skills training simulator. The 'ScanTrainer' does not currently have any vascular capability however the company hope to develop this in the future and may be a very useful tool for teaching in a classroom setting.

Cardiff City Hall

The programme for BMUS is packed and it was difficult to choose which sessions to attend. On Wednesday morning I attended the professional issues session and learned about using the BMUS peer review tool for clinical audit and the importance of regular discrepancy meetings to discuss learning and action points raised from audits.

In the afternoon I attended the physics sessions where Dr Crispian Oates presented an interesting lecture entitled 'What sonographers need to know about physics and technology and why'. He discussed methods for teaching physics at different levels and how to make physics concepts more easily understood. Dr Tony Evans from the University of Leeds provided an entertaining look at how physicists have contributed to developments in ultrasound and stressed how they need to me more involved now giving the example of the STP students whose non-ionising radiation section has a tendency to focus more on MRI. This session was complete by two talks from medical physicists on their research, firstly on the use of texture analysis in diagnosing ovarian masses followed by the design of a miniature transducer for real time guidance during neurosurgical procedures. On day two I attended the vascular stream of the meeting and was also presenting on this day. I had plenty of time to sit nervously awaiting my slot through the carotid and venous sessions…

The carotid session involved a number of talks around the themes of plaque type and plaque grading using different methods. B-mode, elastography and contrast were all presented as techniques for characterisation of plaque and in identifying vulnerable plaques. Steven

Rogers from IVS in Manchester presented an interesting summary of their research on the use of 3D ultrasound to quantify plaque volume. Patients in the study underwent pre-endarterectomy 3D ultrasound and then post-operatively the volume of the endarterectomised plaque was measured using a water immersion technique. There was strong correlation between the volume measured by both techniques. In the study the volume of plaque was significantly higher in those patients with symptomatic compared with asymptomatic patients undergoing CEA.
The venous session started with Raza Alikhan, a haematologist from University Hospital Wales, on the diagnosis and treatment of DVT. Teresa Robinson then gave a useful lesson on scanning for upper limb DVT, which I think would have been extremely useful to any students in the room. Tracey Gall looked at two cases of Klippel-Trenaunay and described different classifications of the condition. A radiologist from Hull and East Yorkshire NHS trust looked at the use of microbubbles for assessment of lower limb veins for difficult DVT scans and demonstrated a gain in visualisation of up to 28cm using this technique. The final presentation in the venous session looked at the use of D-dimer as a screening test. The suitability of the screening test was questioned due to the high positive rate produced. However the main point which was made was that the wait for the D-dimer to be completed, resulting in increased waiting time for the patient, was such that in most cases it is more efficient to proceed straight to ultrasound.

The third session was where I presented my case study of a patient with cystic adventitial disease. Although I was admittedly quite nervous about this I found the BMUS audience to be very friendly. After my talk I received some questions and this resulted in some discussion between myself, a local vascular surgeon and vascular scientists and radiologists in the audience about the assessment and treatment of the condition, which I think added further information on the subject for the rest of the audience (also one of my colleagues tells me this was a good sign that everyone had been listening!).

Mr Williams, a consultant vascular surgeon from Cardiff, presented on the assessment and treatment of popliteal entrapment and cystic adventitial disease and an MSK sonographer from the University of Cumbria presented on the musculature of the popliteal fossa and other common MSK conditions we may identify during a DVT scan.

A really interesting case study on an AVF fistula secondary to a stab wound was presented by Andrew Pellew-Nabbs from IVS in Manchester. The patient in this case had sustained a stab wound to the thigh 10 years previously and had been experiencing claudication symptoms since. The patient presented to his GP on several occasions and was on this occasion referred to the ambulatory care unit as a ?DVT case. During the scan an aneurysmal common and superficial femoral artery, a large calibre common femoral vein with arterialised flow and a wide necked SFA-SFV AVF were identified. The patient in this case was planned for surgical intervention to ligate the AVF. Finally in this session Dr Bartlett from King's College Hospital showed how colour Doppler ultrasound can be used to assess focal testicular lesions to differentiate between malignant and benign lesions.

The talks during all the vascular sessions complimented each other well and I congratulate the organisers for this.

After a last cup of tea and a final look around the exhibition hall I went to the council chamber, an ideal venue for the carotid debate between Dr Crispian Oates and Professor Neil Pugh. Crispian presented the case for the 'joint recommendations' and Neil argued the case for using ICA peak systolic velocity and plaque estimate from direct visualisation (from the consensus document of the American Society of Radiologists in Ultrasound, 2003). Both made excellent cases and it remains clear to me that our clinical skill and judgement to visually grade disease must be used in conjunction with any numerical grading criteria.

I was unable to stay for the Friday as I had to return to work. However the two days I did attend BMUS were very interesting and I would encourage attendance by SVT members in future. Not only for the scientific content but also for catching up with colleagues from other departments and seeing all the latest ultrasound scanners in the exhibition (the close-up magician on the ScanTrainer stand was quite entertaining too!).

Letter to The Editor

STAR LETTER

Dear Editor,

I would like to congratulate BMUS on a very well organised conference with some fantastic scientific presentations. The debates this year were excellent but unfortunately I was not given the opportunity to respond at the time of the debate and I would like to contribute further on the role of outsourcing ultrasound services to independent providers.

As an independent provider of vascular ultrasound to the NHS, with over 15 years' experience, we provide full time services in eight NHS hospitals and outreach clinics to a further two NHS hospitals across the Northwest. We are the largest independent provider of vascular ultrasound in the UK, completing 70,000 examinations each year. As an ethical independent provider, I feel it is important to dispel some of the myths that we are all money grabbers!

Over the last 15 years we have invested over £1.5 million training staff who now account for approximately 20% of the national vascular ultrasound workforce where a significant portion of these staff have left our service to work for the NHS. We are consistently approached by local NHS departments to assist in their training under the NHS scientist training programme (STP) and have trained all AAA screening technicians in Greater Manchester and been involved in training other screeners in the North East and Lancashire. All of our staff undergo 3.5 year postgraduate training at University whist completing their accreditation with the Society of Vascular Technology GB&I. Staff receive in house training from highly experienced vascular scientists led by our training officer who is currently the SVT president. The company pays all training fees for our staff (including professional registration and examination fees) and we do not receive NHS funding to support our training programme.

Independent ultrasound providers are accountable to the same bodies and same levels as the NHS. Being accountable for our actions is crucial for maintaining professional standards and helps provide an 'A' grade service to our clients, the NHS. As a company we are CQC registered and all our full time sites have passed at least two inspections, our results are published on the CQCs website. We were the first and still the only vascular ultrasound laboratory to be accredited by UKAS. In-house protocols are scrutinised by senior NHS employees who act as UKAS inspectors ensuring a high standard. We audit 10% of all investigations by either blind peer-to-peer review or comparison of scans to other modalities (eg CTA, MRA). Our professional standard is of such importance that all our patients are invited to complete a survey on our service after their scan where the quarterly results are displayed in the waiting room. In the last quarter 92% of patients rated our service as good or excellent and 95% would recommend us to friends or family. With independent scrutiny by both UKAS and CQC, I believe our standards of service are amongst some of the highest in the UK. If you were to walk onto our department today, you would not notice that we are an independent provider.

The opinion that independent providers are purely out to make money from the NHS is abhorrently misguided. Although the AQP tariff was set up at £44 (less than 20 minutes) and £56 (more than 20 minutes) to ensure that the NHS was not overcharged for services it is not flexible enough for the role of ultrasound assessments. To put this into context, a simple echocardiogram is paid £74 and takes around 30 minutes. It does not take into account the relative complexity of vascular ultrasound investigations compared to other ultrasound scans nor the fact that we may be asked to perform multiple scans at the same appointment (E.g. carotid, bilateral limb arterial, bilateral limb venous). There is also no option to charge for time taken to report results, a fundamental role of a vascular scientist which adds to the cost per patient that is not covered by the AQP tariff. This clearly demonstrates that the AQP tariff is not fit for purpose either consistently over or under paying for assessments. This may go some way to explaining the £3 billion shortfall presented by those that were against the motion. Based on a full year of activity our charges are typically between 30-50% lower than the AQP tariff, so in effect we subsidise other services by generating a excess income for our NHS partners.

The motion against provided some statistics that demonstrated that £700 million from the NHS budget was spent solely by the CCGs on the tendering, administration and negotiation of contracts with NHS hospitals and independent providers. Indeed we have been successful, as the only capable provider, in OJEC tendering for four large NHS contracts within a 50 mile radius but in all cases found the tender process unnecessarily prolonged and expensive leading to increased charges compared to the existing contract. This clearly demonstrates the fact that there is poor negotiation from the CCGs on contracts for service provision. This may be due to the AQP tariff not being fit for purpose binding the hands of the CCGs to go over budget. Clearly a more flexible tariff with a range of charges is needed.

Although the majority of people after the debate still felt that there was no space for the role of independent providers within the health service a very good argument was given for the motion. Post-debate there was a significant swing from 18% to 42% for the role of independent providers demonstrating that perhaps there are a few too many misguided opinions within the profession about independent providers.

There is a clear role for ethical independent ultrasound providers within the health service but the process for procurement and AQP tariffs are not fit for purpose. Perhaps independent ultrasound providers need to be more transparent and do more to change the opinion that we are all unethical money grabbers. We believe our service has invested significantly in training, capital investment, supporting research and innovation by developing new referral pathways and flexible services which have driven up standards not only in our region but nationally.

Yours sincerely,

Steven K Rogers,
Senior Clinical Vascular Scientist,
On behalf of Independent Vascular Services Ltd.

From The Editor

Dear Steven,

Many thanks for your letter. I have had the experience of working in both an NHS and independent lab so I found this to be a very interesting and well put argument. I would like to invite our members to respond to your letter and hopefully an interesting debate on vascular services both NHS and independent will ensue….

Many thanks,

Helen Dixon, Newsletter Editor

President's Annual Report 2015

I would like to begin by thanking all those on the executive committee and sub committees for their hard work and outstanding dedication during this busy and challenging year. I would also like to thank all those non committee members who have volunteered their time to help out with projects and attend meetings on behalf of the SVT. Without the commitment and hard work of all involved the SVT would not exist.

The SVT work closely with the Vascular Society and I would like to thank Paul Blair and the Vascular Society Council for their continued support of SVT. This year sees the new "Vascular Societies Annual Meeting" with the amalgamation of all the societies into the one meeting, which enables us to become more involved in the meeting as a whole. Thank you to Dominic with the support of Emma for organising this years conference. Fitwise have arranged the conference as a single modality allowing registrants to have access into all the meetings with one registration, so please take advantage of this and go and listen to the VS and SVN. I would also like to thank all the staff in the VS office for their administrative support.

Over the year the Circulation Foundation has undergone a restructure and is now headed by Gill Green. Gill will use her vast experiences within the NHS and large corporates, to drive the foundation forward with a strategic vision to reach and accomplish the new goals of the CF. The roles of the CF are outlined below:

Mrs Gill Green – *Chair*
Louise Allen – *Events coordinator*
Shiva Dindyal – *Rouleaux club president*
James McCaslin – *Legacy Officer*
Vicky Davis – *Website Officer*
Jonathon Refson - *CF Collaborator*
Aaron De Giorgis – *CF Admin*

The CF are now more focussed on fundraising. The role of the SVT within this organisation is to facilitate information onto the CF website. I would like to thank the CF for their continued support and generosity and for once again awarding the prizes for the SVT AGM scientific session. It has again been confirmed that the CF will continue to support the SVT research awards which will be available to SVT members and not just for MSc based projects in the form of a £5000 grant. More information will be provided to members in due course.

The Society of Radiographers have again provided Professional Indemnity Insurance and the SVT are grateful to them for this provision. This is available to all SVT members and NAAASP screening technicians and I would encourage you all to take advantage of this. I would also like to thank the Society of Radiographers for their help and advice with professional issues.

The Consortium for Accreditation of Sonographic Education (CASE) have had a busy year and have close relationships with BMUS and ScOR along with SVT. CASE was formed to ensure a high quality educational experience for students and trainees in ultrasound and to ensure that on completion of a pathway of learning, that they are competent to undertake medical ultrasound examinations. CASE is made up of four groups: The Institute of Physics and Engineering in Medicine (IPEM), the British Medical Ultrasound Society (BMUS), The Society of Radiographers (SCoR) and The Society for Vascular Technology of Great Britain and Ireland (SVT). CASE are currently working on rewriting the CASE handbook, which is expected to be completed in November 2015. I would like to thank the SVT accreditors for CASE, Rosalind Lea, Valda Gazzard, Theresa Fail and Ben Freedman for all their hard work.

Work is being done by Health Education England (HEE) to

try and understand and address the shortage of ultrasound practitioners. This was initially seen as an ante-natal screening problem but they have been made more aware that the problem is much larger and that there is an imbalance of demand and supply across several areas of ultrasound, vascular being one.

Workforce planning is currently done for cardiac technology but not for the rest of Sonography. There are several ways of providing vascular services, either with dedicated vascular scientists with vascular units from the NHS or private sector, or within imaging departments with sonographers increasingly being asked to provide DVT and stroke services. HEE and the Department of Health want to invest and support routes that will provide short (they hope), medium and long term solutions. It is important for us as a society to get involved with this work to improve the provision of vascular ultrasound. We need to look at supply and demand for ultrasound services, how training is provided and try to standardise training. A questionnaire has been sent out to all the heads of departments. However, it has become evident that this questionnaire was difficult to complete, it was confusing as to what information was required, it needed complex information in too short a time to work it out and had missed a large number of ultrasound users in the NHS. This information will be taken on board and an attempt will be made to try and fill the gaps so they do have comprehensive baseline information to work from.

We are now entering the fifth year of STP training programme, with the new cohort of vascular trainees starting in departments across the UK. We have fifteen trainees including our first vascular STP in Scotland. The first two cohorts have now completed the programme and they have all been successful in gaining employment. Up to now we have had a total of fifty one vascular STP trainees. This year we have a number of departments taking on trainees for the first time. Looking at the numbers of vacancies and the difficulties departments are having in filling them, it is clear we need to increase the number of trainees. Some departments have been using the in service STP training route which allows a department to apply for funding to support an existing member of their department through STP. You can find more information about this in the recruitment section on the National School of Healthcare Science (NSHCS) website. Plans for 2016 are well under way and so if you are considering taking an STP trainee next year you should contact your Local Education and Training Board (LETB) healthcare science lead as soon as possible.

The majority of STP trainees are also working towards SVT accreditation and take the theory exams during their STP training. The vascular component of the STP academic curriculum maps to the SVT accreditation syllabus and so many trainees ask why they need to be formally assessed on the same topics twice and ask how this could be streamlined. So this is something for future consideration. Additional scanning modalities are required for the SVT practical exams that aren't currently in the STP work based training. However, most STP trainees already seem to cover these during their STP training. The STP curriculum will be reviewed in the near future and feedback will be taken from as many stakeholders as possible including the SVT, services, the universities and trainees. This will provide an opportunity to review whether the content does meet workforce needs and whether there any elements that need to be added, removed or amended.

The Academy's application to PSA for extending the accredited register to include Higher Specialist Scientists has now officially been approved! No conditions or learning points were received so the register is fully accredited.

The Higher Specialist Scientific Training (HSST) is a five year doctoral level programme for Clinical Scientists leading to eligibility to apply for Consultant Clinical Scientist status. The second cohort of HSST scientists are just starting. A vascular HSST programme is available and we have had many enquiries from people wishing to do it, but as yet no places have been commissioned. Training places are supported and commissioned in the same way as STP, so if you would like to know more about this, there is detailed information on NSHCS website. The HSST programme has a number of specialist vascular modules as well as modules on leadership and innovation. As with STP, HSST is an integrated academic and work based programme. HSST modules also have the potential to be used as standalone ASP programmes, so for example you might want to take the fistula access module which would give both the academic underpinning knowledge as well as the work base training. This would allow staff to access further accredited and recognised specialist training in areas that their labs provide or perhaps are being asked to provide for the first time.

The National Abdominal Aortic Screening Programme (NAAASP) is now in its fifth year and expects to screen its 'one millionth man' in December this year. There will be a lot of publicity surrounding this occasion and NAAASP are hoping to recruit a high profile personality. You may notice a surge in gentlemen self-referring around this time!

A representative of the SVT continues to attend NAAASP Advisory Board meetings. At the most recent meeting the clinical group were discussing guidance for programmes managing gentleman found to have an AAA of greater than 7cm at their first scan, discharging patients from surveillance and managing patients with rapid AAA growth. In the main advisory meeting the group were discussing plans for better training and career progression for screeners by implementing a new training programme with a formal qualification for 2016.

The NAAASP website has now been archived with all information for health professionals being moved to new pages on the gov.uk website. There is no longer a NAAASP newsletter as this has been replaced by a weekly blog with all news and future developments.

In May, earlier this year, myself, Vicky Davis and Tracey Gall were invited to Washington DC to take part in an exam development workshop by the American Registry for Diagnostic Medical Sonography (ARDMS). As well as learning about how ARDMS operates and develops its assessments we were able to share our knowledge and experience, and our American colleagues were particularly interested in learning about our practical examinations. We are now in provisional talks to explore ways in which ARDMS can help the SVT improve its current theory exams including using electronic testing centres instead of having to travel to London for paper exams and being able to take the exam at any time throughout the year. There will be a short presentation during the AGM about this visit and the potential of a future alliance with ARDMS. We have again had issues with the SVT website, not as devastating as the previous one. Therefore, the executive committee have agreed to find another website provider to rebrand our current set-up, in order to make it more modern and user friendly. Hopefully the transition will be relatively smooth, but there may be some glitches along the way. If you experience any problems with the website please get in touch with us as we are not always aware of any problems.

We are continually looking into ways that we can benefit our members and are currently looking into subscribing/buying access to journals. We have had a positive response from BMUS with regards to their journal and are looking into others that may be of interest to our members.

The Executive committee are currently in the process updating the SVT complaints procedure and information governance statement. The constitution was last revised in 2011 and is also due for updating.

Closing Remarks

It has been an honour to be president of our society this past year and I look forward to the further challenges in the coming year. As the profession continues to grow and the work grows I would like to thank again the entire executive committee for their dedication and commitment. I look forward to handing over the baton to Tracey Gall who I know will do a fantastic job as your new president and I am very pleased to leave the leadership of our profession in such capable hands.

The SVT executive continually strive to work with and for our members, without which there would not be a society. So I would like to take this opportunity to thank you all for your continued support.

I cannot draw this report to a close without acknowledging the tireless dedication and hard work of our past president Vicky Davis, who has given both me and the society great support as conference secretary through to president and past president. Vicky is now stepping down from the SVT executive. I will personally miss Vicky and wish her well in her "retirement".

Tanyah Ewen
SVT President 2015

2015 Education Committee Report

It has been a busy year for the Education Committee. The year began with the Fundamental Vascular Ultrasound study days which were held in January 2015. These are two day courses designed to give a basic overview of vascular technology, suitable for trainees preparing for the SVT exams and anyone interested in vascular ultrasound. The days are taught as a mixture of lectures and hands-on ultrasound workshops. Following on from these, the annual exam preparation tutorial days took place at the end of March 2015. This year the days took place at the University Hospital in Coventry. It was a great venue with good facilities and great transport links. The days as usual took place over two days, and the concurrent themes for these days are small tutor group sessions with lots of practice questions and opportunities to discuss answers and exam technique.

The theory exams took place on the 11th of May. Due to the large number of registrants for the theory exams, we had three venues running the exams concurrently; two venues in London at Charing Cross and at the Faraday Building at Denmark Hill with the third venue at Connolly Hospital in Dublin. 45 registrants sat the physics and instrumentation exam, with a pass rate of 55% and 34 registrants sat the technology exam, with a pass rate of 70%. I would like to thank all the invigilators across the three venues, Naavalah Ngwa-Ndfor, Emma Waldegrave, Alison Charig and Kate Sommerville who were our invigilators at the London venues and Joanne Boyce and Lisa Donlon who kindly invigilated in Dublin. A special thanks to Mary Ellis for helping to coordinate the venue at Charing Cross. The resit exams took place in September with 5 members retaking their technology exam and 12 members retaking their physics and instrumentation exam with a pass rate of 40% and 33% respectively. This year we hope to have three venues for the Theory exams with one based centrally in London, one in Manchester and the final venue in Dublin.

There have been 8 successful practical examinations over the past year and 1 fail with a further 6 examinations pending.

For the upcoming year, the Education committee hopes to the run the fundamental days again in January 2016, with registration opening mid-November. The tutorial days will be held at the end of March with the registration for the theory exams and tutorial days opening mid January 2016. An advanced Contrast Enhanced Ultrasound study day will hopefully run early next year at University Hospital Manchester

The SVT have been working to implement a reflective based CPD system that is similar to the HCPC. The reflective based system is broader in its scope of activities and essentially allows you to include CPD activities specific to your role and situation rather than the existing points-based system. More details of this new reflective practice based system can be found on the SVT website. Of the 10% of members who where audited for CPD purposes all have responded and their evidence is been processed. Currently we have approximately 28 members who have lapsed CPD. The CPD officers are working with members to resolve these issues.

I would like to take this opportunity to thank all the members of the Education committee who work extremely hard, organising study days, exams (theory and practical), newsletter submissions and questions, and the members who represents our trainees bringing us their feedback and queries. I would also like to thank the CPD officers for all their work on implementing reflective practice CPD.

We are sorry to be losing two valuable education committee members this year, Tom Cranfield and Matt Bartlett who are stepping down as exam officers. We also had Ria Sharpe step down as trainee representative early this year. On behalf of the Committee and all our members we would like to thank them for all of their hard work and donated time.

Siobhan Meagher
Chair of the Education Commitee

Professional Standards Committee Review 2014/2015

This is my second year as chair of the professional standards committee, and it has been a rewarding year. This year we added one member, with Alison Charig coming in to add her experience and professional standards committee. Alison is an IQIPS assessor and is a very welcome addition to our team.

Georgina Fenwick has stepped down from her role as SVT representative on the IQIPS accreditation advisory group (as she becomes SVT treasurer) and I have taken on this role. The professional standards committee has therefore also become the IQIPS working group to help with IQIPS related activities. We will be developing the level A standards for IQIPS (aspirational levels for continued service improvement, accreditation is currently set at Level B) and generally developing ideas to increase IQIPS registration from labs. In the New Year, we hope to produce an example business case for IQIPS to help vascular labs persuade operations managers to release all important funds for IQIPS self-assessment and future accreditation. As a group we have continued to work on the professional performance guidelines, many more of which have now been uploaded onto the website. This year we have added the Mesenteric ultrasound guidance (Richard has produced a very extensive and interesting document), Lila has written the ABPI and treadmill document, Mel has been developing TCD guidance (with expert outside help) and we have also been developing Temporal Arteritis guidance (again with some expert outside help).

Bubbles articles have been provided by the committee for the newsletter each term and hopefully you have enjoyed reading the wide range of scientific articles reviewed; look out for more instalments next year!

On the NICE front, it has been a relatively quiet year from a vascular point of view. I have recently been appointed as a vascular scientist on the NICE AAA diagnosis and treatment guideline development group. This process which will take 2 years, keep an eye on the NICE website for this document in the future.

In November Mel Williams and I representing the SVT and the Professional standards committee were invited to a trust radiology department who had problems with discrepancies on Carotid Ultrasound reports. We produced an honest and frank assessment of the standards of carotid ultrasound and produced a document advising the trust on the way forward. I think from the trusts point of view having an independent view on the workings of the department in relation to carotid ultrasound was invaluable. Personally and professionally I think it was an interesting and rewarding experience for Mel and I.

Matthew Slater
Chair of the PSC

Treasurers Report 2015

Funds:

Year end 2014/2015

Current Account:	£70 832.62
Reserve Account:	£86 601.38

Expenditure Year End 2014/2015

Account Audit	£276.00
AGM 14	£9,407.71
AHCS/NSHCS	£550.32
Ann Donald Prize	£500.00
CASE	£1705.50
Catering	£934.56
Education Committee	£6,688.56
Executive Committee	£4,486.87
Membership	£210.00
MSC	£489.50
Newsletter	£5,520.00
PSC	£1,590.08
Stationary	£547.78
Streamline	£1,170.05
VS	£139.50
Website	£1116.00
Worldpay	£327.60
Total	**£35,660.03**

Income Year end 2014/2015

Advertisement	£8,193.00
AGM 13	£330.00
AGM 14	£19,450.00
Education Committee	£19,679.08
Membership	£15,151.20
Total	**£62,803.28**

Funds:

Year to date 2015/2016

Current Account:	£76,645.38
Reserve Account:	£76,675.38

Expenditure Year to date

Account Audit	£282.00
AGM 14	£399.00
AHCS/NSHCS	£216.50
Education Committee	£4,085.49
Executive Committee	£4,124.11
Membership	£170.00
Newsletter	£950.00
PSC	£359.90
Stationary	£251.93
Streamline	£417.15
VS	£108.60
Website	£582.50
Worldpay	£106.34
Total	£12,053.52

Income Year to date

Advertisement	£2900.00
Education Committee	£2490.00
Membership	£13,663.65
Total	**£19,053.65**

Georgie Fenwick
SVT Treasurer

Membership Secretary Year End Report 2014-2015

The society has continued to grow steadily and at the end of the membership there were 475 active members. So far this membership year we have had 14 new members of which 10 are trainees.

We have a small number of overseas members and the feedback has been that they have enjoyed reading our newsletter and are fascinated to see how we work in this country.

Online new member applications and renewals have been working well and for this reason we will be removing paper applications and renewal forms from the website after the AGM. Members will still be able to pay by cheque should they wish to by selecting this option at the checkout. Members can log into their accounts online to update their personal details without going through the membership secretary. Username and password reminders are available by submitting the email address you use for the society.

I would like to take this opportunity to remind you that the membership year runs from the 1st September to 31st August. However any new member joining after the 1st June will get those first three months free and will not need to renew until the following year. They should select a membership for the following year when applying online.

Membership renewal fees and CPD records (if appropriate) should be submitted by the 1st September. Renewal payments can be made online for the new membership year from the 1st June by selecting the appropriately dated subscription. Membership fees not received by the 30th September will incur a £5 or 7€ penalty charge. A £15 or 21€ charge will be applied if not received by the 31st December.

In addition, Accredited Vascular Scientists will lapse their qualification if they either have not submitted their CPD, paid their membership fee or both. Hospitals are more commonly now requiring proof that their staff are maintaining their competency. Therefore additional fines of £100 will be charged for failing to submit the correct number of CPD points required by 30th September and if this has not been rectified by 31st December the penalty increases to £250.

Finally I would just like to remind you that there are a number of specific roles undertaken by committee members. We endeavour to answer your questions as quickly as possible, by directing your query to the appropriate person rather than the main office we will be able to respond to you more promptly.

The email addresses to use are:
membership@svtgbi.org.uk
cpd.avs@svtgbi.org.uk
theoryexam@svtgbi.org.uk
treasurer@svtgbi.org.uk
conference.secretary@svtgbi.org.uk
website@svtgbi.org.uk
newsletter@svtgbi.org.uk
Most information can be found on the website but please don't hesitate to contact us if needed. We continually strive to work with and for our members. Without you there would not be a society. We would like to take this opportunity to thank you all for your continued support.

Sara Causley
Membership Secretary

Executive Committee Meeting Summary

January 2016

Matters arising
Due to the upcoming changes to an external company running the VS office the need to remove and store SVT paperwork stored in the office was discussed. Committee members will arrange to have the documentation couriered out and then relevant items should be scanned for electronic storage.

An alternative venue for future committee meetings was discussed due to problems booking a room at the RCS. Future exec and education committee meetings may be held at a venue in Birmingham, TBC. The PSC will continue to hold meetings in London.

Conference
DF suggested an earlier call for abstracts this year and an acknowledgment of receipt of abstracts plus formal notification if the abstract has been accepted. The new website could potentially do this automatically. It was suggested by the committee that the student proposals be moved to the student break-out session and that more complete research be included in the main session (previous years student proposal).

Ideas for the 2016 study afternoon are needed, committee members suggested mesenteric vessels and MS mentioned the new guidelines which have just been released written by RC (this was not well known and raised the issue of better advertisement of new guidelines as they are added to the website). DF was looking for feedback on the ASM booking process and committee members said this was not straightforward as details had to be repeatedly entered for registration for different events. Financial information from Fitwise will be available next month.

The 2016 ASM is at Manchester Central from Wednesday 30th November to Friday 2nd December.

Website
TG, TE, HD, SC and LS all attended a meeting with Capability Cloud on 19th January. The current website developer will no longer be able to commit to the SVT website and as such we have approached Capability Cloud to develop a new website. They are specialists in websites for societies and are involved with the BMUS website. The website is created by a system of 'modules' which are suitable for the SVT including, online CPD, membership data, meeting bookings etc. TG will contact Steve at Capability Cloud to organise a date for the design brief stage.

Education committee report
Fundamental Study days:
Held at the end of January at Addenbrooke's Hospital, Cambridge. 16 trainees registered.
Revision days:
Will be held in Coventry on 29th and 30th March, £40/day.
Theory exams:
Registration now open, closing date 1st March. Exams will be held in London, Manchester and Ireland. £100/exam.
Resit exams:
Will be held on 5th September.
Venous forum:
SM has been in touch with Ian Franklin and has expressed our interest in taking part in the venous forum this year (7th-9th July). This year the venous forum is holding a joint meeting with the European venous forum. Ian will be in touch to confirm the number of speakers we may need to recruit.
Advanced study day:
CEUS study day will be held in Manchester on 7th April. Bracco is giving an Education grant towards the day.
CPD:
There are currently 8 members with lapsed CPD and 2 with lapsed CPD and membership. Members have expressed concern that the reinstatement fee is too high, this was discussed at the education committee meeting and it was felt that the penalties were having the desired effect with only 8 lapsed members (less than previous years) and that they should remain as they are.

Newsletter
The newsletter may be sent out in future with a bulk email newsletter service which would allow us to monitor use of the website and use of any live links in the newsletter.

Treasurers report
TE suggested a new account be opened which would allow BACS payments of expenses.
Professional Standards Committee report
The January PSC meeting had to be cancelled as no meeting room could be booked.
The PSC require an extra member.
IQIPS:
The PSC are awaiting the level A cardiac standards as a framework to develop the vascular standards. MS fed back to ACAG group about a potential template business case for IQIPS. Thsi was felt to be a good idea by the IQIPS board and ideas for this have been discussed. MS to draft this for the next PSC meeting.
Performance guidelines:
Feedback on the TCD document has been received from Colin Deane and Carl Tiivas and the document now requires review and completion.
The temporal arteritis guideline is complete and ready for submission.
The service specifications require review and to be changed to PDF format.
NICE:
MS is working on the AAA guideline development group.
VASBI:
RC could not attend the VASBI AGM in September. VASBI did not ask for any support for any workshops etc. MS awaiting feedback from members who were able to attend.
Bubbles:
Members of the PSC continue to submit this item for the newsletter.

Membership
Total membership number 470 .
The majority of members renewed online and the daily reminders worked well. All paper forms have now been removed from the website as stated at the AGM. Members are to be encouraged to log in and keep their details up to date.
An increase in membership fees was discussed and a £40 renewal and £60 new member charge were thought to be reasonable.
SC suggested that the system of requiring approval for new members is no longer required, it was agreed by the committee that this could be removed from the application process.

BMUS
TG in discussion with BMUS regarding journal access for SVT members.
The next BMUS meeting is on 28th January. EW is taking over as SVT BMUS rep this year and will report back to the executive committee.

CF
The CF research awards are still available and need to be advertised this year. HD to attend the next CF meeting in March.

ScoR
TG and HD attended a meeting with representatives from ScoR in December. They would like to increase the uptake of PII amoungst SVT members and Warren Town offered to write an article for an upcoming newletter to bolster membership.
We also discussed documentation which is avaibale to the SVT to help develop our own documents including complaints and disciplinary procedures. ScoR also offered to provide a speaker on the NHS pension provision and assist with new reflective practice CPD systems. This was felt to be a very positive meeting and helped to improve links between the 2 organisations.

VERN
TG was approached by the Vascular ands Endovascular Research Network regarding muticentre research. TG to generate a survey for vascular labs to generate ideas for research.

Welcome to the Winter 2016 edition of the SVT Newsletter...

Happy new year to you all!!

As always I would like to extend thanks to all contributors who sent in articles for this season's issue.

I am also extremely honoured to have been asked to be the new SVT vice president and as such I am now looking for my own replacement as newsletter editor! This is a great role on the executive committee which I would thoroughly recommend. The newsletter receives great contributions from our members and you also have the opportunity to suggest and generate new content or commission articles from other affiliated areas and members who have contributed to conferences etc. The content has to be checked and organised and then you collaborate with a great graphic designer to complete the finished article! Please email me if you think you would like to take this on. (NB: committee members need to have at least completed the AVS written exams)

Remember the Newsletter is continually looking for original contributions, so please email me any case studies, reviews, your experiences or any comments that you think would be of interest to members of the society. I would also welcome any comments on articles published in this edition.

As always a £25 prize is offered to the individual chosen for sending in the article or letter of the month. The prize this issue is awarded to Steven Rogers.

The next Newsletter will be the Spring Issue, and the closing date for receiving articles will be 8th April 2016.

Helen Dixon
Newsletter Editor
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