7 Minute Presentation & 3 Minute Discussion

1. **9.00 Analysis of blood transfusion practices for vascular bypass surgeries using the maximum surgical blood ordering schedule**
   
   Rosaleen Louise Lyons¹, Ms Martina O'Connor², Martina O'Connor², Margaret Tarpey², Sean Naughton¹, Donal Courtney², Muhammad Tubassam², Stewart Walsh², Sherif Sultan², Wael Tawfick²
   
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2. **9.10 Closing the loop – A re-audit of best medical management in vascular patients**
   
   Cillian Mahony, Lameese Alhaddag, David Power, Tony Moloney
   
   Department of Vascular Surgery, University Hospital Limerick, St Nessan’s Road, Dooradoyle, Limerick, V94 F858, Ireland

   
   Aisling Kelly, Eamon Kavanagh, Yasir Abdeldaim, Paul Burke, Michael Anthony Moloney
   
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4. **9.30 The assessment of Emergency Care and Transfer of patients with Ruptured Abdominal Aortic**
   
   Amr Nour, Stephen Keelan, Seamus McHugh, Daragh Moneley, Peter Naughton
   
   Department of vascular surgery, Beaumont hospital, Beaumont Road, Beaumont, Dublin 9, Ireland

5. **9.40 Temporal arteritis: Can duplex ultrasound replace temporal artery biopsy?**
   
   Aisling Kelly, Thomas Aherne
   
   Department of Vascular Surgery, Tallaght University Hospital, Tallaght, Dublin 24, Ireland

6. **9.50 A 15-year review of pacemaker requirement following isolated or concomitant tricuspid valve surgery**
   
   Aine Catherine McKendry, Katie O’Sullivan, Lara Armstrong, Alistair Graham
   
   Department of Cardiothoracic Surgery, Royal Victoria Hospital, Belfast, Northern Ireland

7. **10.00 Eversion endarterectomy in iliac occlusive artery disease**
   
   Megan Power Foley, Thomas Aherne, Conor Dooley, Mekki Medani, Edward Mulkern, Ciaran McDonnell, Martin O'Donohoe
   
   Department of Surgery, Mater Misericordiae University Hospital, Eccles Street, Dublin 7, D07 R2WY, Ireland
8. **10.10** Poor patient awareness of peripheral arterial disease
Stephen Keelan, Niamh Foley, Donagh Healy, Peter Naughton, Seamus McHugh, Daragh Moneley
Department of Surgery, Beaumont Hospital, Beaumont Road, Dublin 9, Ireland

9. **10.20** Compliance with instructions for use in endovascular abdominal infrarenal aortic aneurysm repair in those aged over 80 years of age
James Clarke, Michael Bourke, Kunal Mohan, Mary Paula Colgan, Catriona Canning, Sean O’Neill, Adrian O’Callaghan, Prakash Madhavan, Zelia Martin
Vascular Surgery Department, St. James Hospital, James Street, Dublin, D03 VX82, Ireland

10. **10.30** Want not, waste not: excessive preoperative crossmatch requests for vascular peripheral bypass surgery
Megan Power Foley1, Imelda Keane2, Michael Fay3, Ciaran McDonnell1, Martin O’Donohoe1, Edward Mulkern1
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AB024. 52. Analysis of blood transfusion practices for vascular bypass surgeries using the maximum surgical blood ordering schedule

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Background: The maximum surgical blood ordering schedule (MSBOS) provides procedure specific recommendations for cross matching of red cells concentrate (RCC). Our MSBOS recommends to cross-match 4-unit of RCC for Aorto-iliac/femoral bypasses, 2-unit for femoro-distal bypasses, with a group-screen and hold (GSH) for femoro-popliteal/femoral bypasses. The internationally recommended cross-match to transfusion ratio (CTR) is <2:1.

Methods: Clinical audit; with data collection on all bypass surgeries performed in our institution from August 2017 to August 2018. Procedures were assessed for compliance against MSBOS guidelines from the APEX database.

Results: A total of 42 bypasses were performed with four excluded, as they were performed in combination with aortic aneurysm repair. Seventeen femoro-popliteal bypasses should have had a GSH. However, sixteen were cross-matched 2-unit of RCC, resulting in 32-unit being cross-matched, with 3-unit transfused (CTR =10.6). Seven aorto-bifemoral bypasses were cross-matched 4-unit as per MSBOS. In total 28-unit were cross-matched, with one transfused (CTR =28). Of seven femoro-distal bypasses, four requested the recommended 2-unit, two cross-matched 4-unit and one requested 3-unit. A total of 19-unit were requested, with 8-unit transfused (CTR =2.37). Two axillo-bifemoral bypasses requested 4-unit each, with 5-unit transfused (CTR =1.6). One axillary-brachial bypass requested 4-unit, with none transfused. Two ilio-femoral bypasses cross-matched 6-unit, with three transfused (CTR =2). One aorto-superior mesenteric artery (SMA) bypass cross-matched 4-unit, with none transfused. One iliac-SMA bypass cross-matched 4-unit, transfusing 2-unit.

Conclusions: We recommend reducing cross-matching for aorto-iliac/femoral bypasses from 4 to 2 units. Improved compliance with MSBOS guidelines is required, especially for GSH procedures. Unnecessary cross-matching is wasteful of blood bank resources.

Keywords: Blood transfusion; bypass surgery; maximum surgical blood ordering schedule (MSBOS); vascular surgery

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AB025. 109. Closing the loop—a re-audit of best medical management in vascular patients

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Background: The electronic discharge (e-discharge) was first implemented in the Vascular Surgery Department in July 2017. An audit was performed that same year reviewing the discharges for the first four months. A total of 450 e-discharges were evaluated, and atherosclerotic patients were identified (n=126). This audit revealed that 66.7% of patients with proven atherosclerotic disease were discharged on best medical management (aspirin or equivalent, and a statin). In order to improve the service, a number of steps were taken. All new members to the team have been educated to the requirements of Vascular patients, in particular those with atherosclerotic disease, warranting medical management. A vascular clinical nurse specialist (CNS) has been employed, who carries out a risk assessment clinic. Risk is also assessed for each patient using an online tool and each patient is provided with a risk assessment personal card to carry. To evaluate the benefits of these changes, the e-discharges were re-audited in the same 4-month period in 2018; 329 e-discharges were evaluated, and atherosclerotic patients were again identified (n=100). The results revealed improvements in almost all aspects. From this we can conclude that 69% of atherosclerotic patients were on best medical management.

Methods: We reviewed 329 e-discharges over a 4-month period (July to October 2018). Patients with non-arterial disease (cellulitis, leg ulcers, osteomyelitis, and general surgical issues) were excluded. The e-discharge for each patient with arterial disease was examined, looking primarily at discharging medication (n=100). Best medical management is defined as: lipid-lowering agent and an anti-coagulant [direct oral anticoagulant (DOAC), warfarin]/anti-platelet (aspirin, clopidogrel). Prescriptions were confirmed by contacting each patient’s general practitioner and/or pharmacy. This data was then compared to the original audit results in 2017, where 450 e-discharges were reviewed (n=126).

Results: A total of 88 (88%) of these patients were discharged on aspirin, or an equivalent medication, which significantly improved from 75.4% previously; 70 patients (70%) were discharged on a statin, which failed to improve from 73% previously; 69 (69%) of atherosclerotic patients were on best medical management, which improved from 66.7% previously; 12 (12%) of atherosclerotic patients were on neither agent, which significantly improved from 28.98% previously.

Conclusions: In closing the loop of this audit, we can conclude that the Vascular Surgery Department has effectively improved the best medical management of atherosclerotic patients, from 66.7% to 69%, in a 1-year period, however, there remains room for further improvement.

Keywords: Vascular surgery; audit; atherosclerosis; aspirin; statin

AB026. 151. Review of communication methods in a vascular surgery clinic

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Background: Communication is key to any successful relationship with the patient-physician partnership being no different. Recent advances in technology have provided us with an array of new communication tools such as the mobile phone, the computer, the internet and email. This new technology has revolutionised communications, however, limitations to their widespread use include access, literacy and willingness for both the physician and patient to change.

Methods: A literature review was conducted to identify meta-analyses and randomised control trials that assess information communication tools as a way to provide and support the delivery of patient care. To gather Irish data, questionnaires were handed out to patients attending vascular surgery outpatient clinics.

Results: There were 336 participants. 72.6% of patients were over the age of 55 years. 56.5% of patients selected post as a preferred method of communication and this increased with increasing age; 93.7% of patients, overall, had a mobile phone but just 66.4% use text message. Only 44.2% of patients over 65 use text message, 23.0% use email, 27.9% have a computer and 45.5% have access to the internet with decreasing use with increasing age.

Conclusions: Within this patient population, the use of technologies decreases with increasing age of the patients. This demonstrates a large population of service users who are content with conventional methods of communication. Change within healthcare ICT is inevitable and therefore, these patients need to be guided and educated to allow a smooth transition from the old to the new.

Keywords: Communication; information; technology; vascular
AB027. 241. The assessment of emergency care and transfer of patients with ruptured abdominal aortic aneurysm (rAAA)

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Background: Ruptured abdominal aortic aneurysm (rAAA) is a surgical catastrophe. Surgical outcome is poor. There is controversy whether rAAA should be treated by open or endovascular repair (rEVAR). rEVAR is very resource demanding. Team training and protocols of treatment have been advocated to optimise performance and outcome. In this study, we look at improving awareness and performance involving all stakeholders involved in the treatment of rAAA in our hospital group.

Methods: A surgical skills training program involving lectures, bench models and virtual reality simulators for rAAA was completed in all the referring hospitals in our hospital group. Recruits included emergency department (ED) staff, general surgeons, anaesthesia, vascular trainees and surgical nurses. A questionnaire of 19 questions covering adequacy of training, knowledge, management of rAAA and transfer was completed by attendants.

Results: A total of 61 participants completed the questionnaire, Beaumont Hospital (n=24), Connolly Hospital (n=14), our Lady of Lords Drogheda Hospital (n=10) and Cavan Hospital (n=13). Only 15 (24.6%) participants received a training in rAAA management; 27 (44.3%) participants stated that there is a protocol of management in ED and perform Focused Assessment with Sonography for Trauma (FAST) scan; 42 (68.9%) of referring doctors will contact vascular surgeon prior to performing computed tomography angiography; 41 (67.2%) doctors were happy about the accessibility of vascular surgeon on call. Of the 61 participants, 59 (96.7%) agreed about importance to have protocols in management patients with rAAA.

Conclusions: To improve outcome and team performance resources are needed to raise awareness, expedite hospital transfer and develop protocols for patients with rAAA.

Keywords: Ruptured abdominal aortic aneurysm (rAAA); team training; simulator

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AB028. 195. Temporal arteritis: can duplex ultrasound replace temporal artery biopsy?

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Background: The diagnosis of temporal arteritis remains controversial. Despite its poor sensitivity and invasive nature, temporal artery biopsy is still considered the gold standard investigation for diagnosis. This has led to many recent efforts to find a more appropriate alternative.

Methods: A retrospective review was carried out on all patients referred to the vascular service with queried temporal arteritis from February 2010 to July 2017. Where possible, American College of Rheumatology (ACR) scores were calculated for each patient based on clinical details provided in online referrals. For patients that had both biopsy and duplex ultrasound scan, the results of each were compared.

Results: A total of 90 patients were referred to the vascular service with a possible diagnosis of temporal arteritis. Of these, 71 had temporal artery biopsies, 8 of which were positive (11.27%); 51 patients had duplex ultrasound scan, of which 11 were positive (21.57%); 32 patients had both investigations carried out; 4 of these patients had a positive duplex and a positive biopsy. In 21 patients, both tests were negative. The seven remaining cases yielded inconsistency between both results.

Conclusions: Duplex ultrasound, with its increased sensitivity compared to temporal artery biopsy, may aid in the diagnosis of temporal arteritis and reduce the need for invasive temporal artery biopsy.

Keywords: Artery; biopsy; duplex; giant; temporal

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AB029. 200. A 15-year review of pacemaker requirement following isolated or concomitant tricuspid valve surgery

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Background: Tricuspid surgery has a risk of post-operative rhythm problems due to the proximity of the heart's conduction system to the tricuspid valve. This may require insertion of a permanent pacemaker (PPM).

Methods: A retrospective review of all patients undergoing tricuspid surgery between 2003 and 2018 in our institution was undertaken. Data was retrieved by database review and patient follow-up attained from up to date regional electronic care records.

Results: A total of 261 patients underwent tricuspid surgery during the study period. Replacement was required in 29, with the remainder having repair. Of the patients undergoing replacement 16 (55.1%) had no PPM requirement throughout the follow-up period. Three (10.3%) had had a transvenous PPM placed prior to surgery and, in each case, this was replaced with an epicardial system intraoperatively. Eight (27.6%) had a de novo epicardial PPM at the time of surgery and, at most recent follow up, 5 (62.5%) of these patients remained pacing dependent. Two patients (6.9%) require post-operative PPM; one via coronary sinus and one epicardial via redo sternotomy. Regarding tricuspid repair (n=229), 5 (2.2%) patients had an AICD and 19 (8.3%) had a PPM in situ prior to surgery, with 1 changed to an epicardial system intraoperatively. One patient was upgraded to a biventricular ICD and one had a PPM removed due to infected leads. A total of 20 patients (8.7%) required a post-operative pacing system. The requirement for a pacemaker intra or post-operatively in all patients did not seem to influence long-term survival (P=0.7).

Conclusions: De novo pacemaker requirement after tricuspid valve replacement and repair was 27.5% and 8.7%, respectively. There was a 6.9% incidence of complex pacemaker requirement in the post-operative period although this was not frequent enough to mandate routine PPM in all patients.

Keywords: Pacemaker; surgery; tricuspid

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AB030. 219. Eversion endarterectomy in iliac occlusive artery disease

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Background: Iliac eversion endarterectomy (IEE) offers an underutilised alternative to endovascular or prosthetic reconstruction in iliac occlusive disease.

Methods: All IEEs performed in a university hospital vascular centre over 17 years (from 2000 to 2017) were reviewed. Demographic, risk factors, operative and follow-up data was recorded.

Results: Forty-three patients underwent IEE, 24 for Trans-Atlantic Inter-Society Consensus (TASC) C (57.1%) and 18 for TASC D (42.9%) lesions. Over two-thirds of patients were male (67.4%, n=29), with a mean age of 64.79 years (range, 46–82 years). Documented risk factors included hypertension (89.7%), hyperlipidaemia (75%), diabetes mellitus (28.6%), and 81% had a smoking history. Over 85% were on best medical therapy for peripheral vascular disease pre-operatively. The majority (69%) were classified American Society of Anaesthesiology Grade 3. Indications for intervention were symptomatic claudication (97%), critical limb ischaemia (79.1%) and objective tissue loss (16.3%). There were no technical failures. Twelve patients had adjunctive procedures. There was one perioperative death from multi-organ failure. Two patients had a post-operative complication, one epidural haematoma and one wound infection. The mean follow-up was 35.19 months (range, 1–132 months). Five patients required secondary revascularisation, either by iliac artery stenting (n=2) or aortobifemoral bypass (n=3). One patient required a major ipsilateral amputation. Primary patency at 1 and 5 years were 96.77% and 83%, respectively. Secondary patency at 5 years was 94.4%. Ten patients died during the study period and seven were lost to follow up.

Conclusions: IEE is an effective alternative treatment for iliac occlusive disease. This study reports acceptable short-term outcomes and a low perioperative complication rate in a comorbid cohort.

Keywords: Iliac occlusive disease; eversion; endarterectomy

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AB031. 223. Poor patient awareness of peripheral arterial disease

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Background: Patient knowledge of peripheral arterial disease (PAD) is poor, even among those with symptomatic disease. To date there has been no national awareness campaign, like those in place in other jurisdictions.

Methods: Patients with PAD attending the vascular clinic were invited to complete a validated questionnaire assessing familiarity with peripheral arterial disease. A total of 50 patients were recruited over a 4-week period in October and November 2018. Institutional ethical approval was obtained to distribute the questionnaire.

Results: A total of 50 patients completed the questionnaire. The average age was 66 years. There was a male preponderance (female: 18, male: 32); 48 patients (96%) were either current or ex-smokers. Women were statistically more likely to have attained third level education (P=0.001). Despite their attendance at a vascular clinic 24 patients (48%) responded that they were not familiar with PAD; 72% stated that increased BMI was associated with PVD. Most accepted that cigarette smoking was associated with PAD, though 12% responded that they didn’t know; 60% thought alcohol contributed a lot or a moderate amount to PAD; 60% stated there was a correlation between PAD and myocardial infarction/cerebral vascular accident.

Conclusions: These results highlight room for improvement in patient awareness of PAD and the risk factors that can predispose to its development. A national patient awareness campaign is prudent, particularly given that 1 in 10 patients stated that they didn’t know smoking was associated with PAD. Targeting this, and other modifiable disease factors could impact on the development and severity of PAD.

Keywords: Peripheral arterial disease (PAD); intermittent claudication; patient awareness

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AB032. 240. Compliance with instructions for use in endovascular abdominal infrarenal aortic aneurysm repair in those aged over 80 years of age

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Background: The endovascular aneurysm repair (EVAR) 2 trial advocated not intervening in those deemed unfit for open abdominal aortic aneurysm repair. In the 14 years since EVAR 2 finished recruiting, there have been advances in endovascular technology and expertise, in addition to improvements in anaesthetic and critical care outcomes. These, in concert with an aging population, have led to greater numbers of elderly patients being treated with EVAR. We sought to determine our outcomes when treating this population.

Methods: A locally-maintained database was analysed to determine the number of patients aged greater than 80 years treated with EVAR between 2006 and 2015. Patients that underwent fenestrated or branched repairs were excluded. Preoperative imaging was reviewed and compared against graft-specific instructions for use (IFU). Outcomes of interest were compliance with IFU, procedural complications, re-intervention rates, morbidity and mortality.

Results: A total of 104 patients were included, with an average abdominal aortic aneurysm size of 6.6 cm. The re-intervention rate was 8.7%. Adherence to all instructions for use was approximately 40%. In those treated outside IFUs, the greatest number failed to comply with guidelines regarding neck configuration and iliac angulation. Nonetheless, there was no significant difference in rates of re-intervention, morbidity or mortality between those treated outside IFUs and those that met IFUs.

Conclusions: A significant number of patients treated with EVAR aged over 80 years had anatomical characteristics outside the manufacturer's instructions for use. Nonetheless, there was no apparent increase in procedural complications, morbidity or mortality. We suggest that in this cohort, endovascular repair may be appropriate even when all IFUs are not met.

Keywords: Endovascular aneurysm repair (EVAR); instructions for use (IFU)

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想要，不要浪费：血管外周血管重建术中不必要的术前交叉配血请求

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背景：血液产品对于安全手术至关重要，然而，术前过量请求血液浪费了医院资源。最大手术血液订购计划（MSBOS）指导术前订单，提高效率并减少成本。随着外科技术的改变，对术中输血的需求也可能改变。需要定期MSBOS审查，以确保输血指南反映了外科实践。

方法：回顾性分析外周血管重建术中术前血液订单和使用情况。从手术日志和输血实验室记录收集数据。标准是Mater Misericordiae University Hospital (MMUH) MSBOS：股动脉-远端动脉吻合（FDB）2单位和股动脉-胫动脉吻合（FPB）类型和筛查。

结果：10个月内，13名患者有FDB，21名有FPB（n=34）。所有患者术前血液检测；7名患者（20%）在手术中获得血液，5名在FDB期间，2名在FPB期间。总共备有49个单位，82%被退回未使用。总交叉配血-输血比率（CTR）为5.444:1。MSBOS的符合率为92%，CTR为4.16:1；13名患者中有12名有可用的单位，76%未使用。MSBOS的符合率为52%，CTR为8:1；21名患者中有10名有可用的单位，87.5%未使用。

结论：MSBOS的符合率和整体输血需求在更广泛的FDB手术中较高，相比较短的FPB手术。数据表明目前的FPB MSBOS指南反映了术中输血需求，而术前请求是不必要的。对于FDB，应考虑当前MSBOS的建议可能超过术中需求。

关键词：血液输注；血管手术；审查

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