Arterioureteral fistulas: an appraisal of current management

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Introduction
Arterioureteral fistula (AUF) is an uncommon but life-threatening disease. Its non specific clinical presentation leads frequently to delayed diagnose and treatment. There is little data on its current management especially since the advent of endovascular approaches.

The objective of this study was to describe: risk factors of AUF development, treatment and its complications, recurrences and mortality related to AUF.

Material and Method
- Retrospective multicenter observational study
- In 10 University Hospitals.
- Inclusions: patients treated for AUF from January 2010 to December 2018
- We collected:
  - known risk factors of AUF (pelvic surgery, pelvic radiotherapy, ureteric stenting)
  - surgical (urological and/or vascular) management and its complications and death.

Results
- We included 29 patients (12 women) of median age 67 years [45 ;92].
- Macroscopic hematuria was the inaugural symptom in all patients.
- One patient had no previous risk factor and 26 patients (90%) had a first history of pelvic surgery. All but one patient received a CT scan that diagnosed the AUF in 19 patients (66%). (Figure 1)
- Management was vascular for all but one patient. (Figure 2) Urological management was performed in 12 patients (41%) with 8 ureteric stenting and 4 nephrostomy.
- The median follow-up was 13 months with 7 deaths (24%) related to the AUF and 13 patients (45%) experienced complications including 6 bleeding recurrences (21%).

Conclusion
Hematuria, especially with first pelvic surgery, irradiation or ureteric stenting, should make think first to AUF, leading to a CT scan. Global prognosis remains poor even with the endovascular approaches growth.
A 70-years-old patient was admitted in our hospital with pain in the left lower abdomen for a period of four weeks (January 2018). The patient had undergone an EVAR (Medtronic, Endurant) in 2016 (also in our Department), because of an infrarenal AAA with a diameter of 6 cm. In the follow-up examinations there were no signs of AAA growth, endoleak or migration.

Medical History: Hypertension, DVTs in both legs with LE and PTS, V-Leiden mutation (therapy with VKA), Stroke without neurologic residues in 1997.

The CT-scan showed a newly developed ruptured aneurysm of the I. ext. iliac artery. This was treated by a Nellix Stent (prolongation of the left limb of the Endurant stent-graft). The intervention was successful.

We considered that the cause was an infection and administered antibiotics. The CT-scan in March 2018 showed a growth of the AAA with an assumably inflammatory halo around the infrarenal aorta. The stent-grafts were explanted (open conversion). The microbiology was negativ.

07/2018: Aneurysm of the right EIA. 10/2018: Aneurysm of the right popliteal artery. 12/2018: Aneurysm of the right CFA. All were surgical treated. Antibiotics were further administered.

The histologic examination of the exsised CFA revealed an intravascular B-cell lymphoma. The retrospective examination of all previous specimens showed also this finding, which had not been recognized earlier.

The 1st image shows the B-cells in the thrombus. The 2nd shows the CD20 dye which recognizes the cells as B-cells. The 3rd (Ki67) shows a proliferation rate of 98%.

In the two images below PET scan (aorta and iliac arteries).

An oncologic treatment was initiated (immunochemotherapy) with rituximab, doxorubicin, prednisolone, vincristine, MESNA and cyclophosphamide.

Intravascular large cell lymphoma (LLCL) is a rare subtype of large cell lymphoma. In the most of cases it has to do with the small vessels and the capillaries. When it has to do with great vessels, occures a formation of aneurysms with ruptures (a few case reports in the literature). PET scan or blind skin biopsy can help in the diagnosis. In the recent years the immunotheapery (rituximab) was added to the chemotherapy.

However we have to treat a systemic disease. In our case thrombi in the pelvis and new aneurysm of the right IIA in September 2019 (despite medical treatment).
Introduction/Objective:
CBT are rare neoplasms from the neck. Risk factors like hypoxia and altitude have been associated to this tumors. Surgical treatment is the gold standard. One of the major concern in Carotid Body Tumor (CBT) patients is their decrease in Quality of Life in spite of asymptomatic disease.

- The primary aim of this study was to compare HRQOL in preoperative patients with CBT and a control paired group. The secondary outcome was to compare HRQoL between CBT patients depending on their volume and Shamblin classification.

Methods
Twenty-three patients diagnosed with CBT prior to resection and 23 control patients paired by age and gender from January 2017 to December 2018.

- The SF-36 was applied to every patient.
- Volume of tumors was calculated by Three-dimensional volumetric reconstruction (3DVR) was obtained from a preoperative Computed Tomography (CTA).
- HRQoL score was compared between both paired groups
- 3DVR values were stratified in quartiles to be compared by SF-36 domains.
- SF-36 was compared by Shamblin type
- Differences between medians were analyzed with the Mann-Whitney U test, and all statistical test were 2-sided.

Results
In the study group: mean age was 55 years, females were more frequently affected 19 (83%). Shamblin I was identified in 9% of patients, Shamblin II in 52% and Shamblin III in 39%. CBT laterality was 57% right, 34% left and 9% bilateral tumors. The eight domains that comprise the SF-36 questionnaire were statistically significant when compared to the control group.

Volume tumor was not related to HRQOL. However, Shamblin II and III patients had worse HRQOL.

The mean volume obtained in the 3DVR was 27cm³. No statistical difference was found in HRQOL comparing groups by 3DVR nor by Shamblin grade.

Conclusions
Significant differences were found in all SF-36 domains comparing CBT patients and control subjects, supporting the fact that CBT patients have adverse effects in general HRQOL and treatment must be considered in asymptomatic patients.

References
- Hinojosa CA, Anaya-Ayala JE, Olivarres-Cruz S, et al. Malignant Shamblin III carotid body tumors resected with use of the retrocarotid dissection technique in 2 patients. Tex Heart Inst J 2018
Does mental fatigue affect surgical performance?
Differences between real-life surgery and simulator studies

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Conclusions

• There are differences in the effect of fatigue on surgical performance between real-life and simulator surgery
• We need more direct outcome measures to establish effects on real surgeries

Background of systematic review

- Long hours and overnight calls are still common in the surgical profession
- Human Factors research has shown negative effects of mental fatigue on performance
- Previous research on effects of mental fatigue in surgery has shown mixed results

General research on mental fatigue suggests that the negative effect on performance is moderated by motivational factors
- Many studies show that with sufficient motivation there is no negative effect of mental fatigue
- ... but other researchers disagree about the cause

Research on surgery has shown mixed results
- Maybe motivation is a factor here?
  - In surgery, patients’ lives are at stake
  - Some studies on fatigue use simulators
  - Controlled environment
  - Others used real-life surgery outcomes

Research questions
- What is known about effects of mental fatigue on surgical performance?
- Do simulator studies and real-life surgery studies show similar results?

Methods
A systematic review was performed.
- Inclusion criteria: surgical outcome potentially affected by mental fatigue
- Exclusion criteria: stress; muscle fatigue; learning; work hour restrictions or regulations; medical students; non-surgical professions
From 1492 studies screened, a total of 31 studies were included

Main results

The effects of mental fatigue on surgical outcome
- are absent in real-life surgery
- are present in most (but not all) simulator studies

<table>
<thead>
<tr>
<th>Simulator studies (n=18)</th>
<th>Real-life studies (n=13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants</td>
<td></td>
</tr>
<tr>
<td>17% surgeon</td>
<td>77% surgeon</td>
</tr>
<tr>
<td>83% surgical-resident</td>
<td>23% surgical-resident</td>
</tr>
<tr>
<td>Procedure studied</td>
<td></td>
</tr>
<tr>
<td>n=15: singular manual skills test in laparoscopic simulator</td>
<td>Diverse types of surgery:</td>
</tr>
<tr>
<td>n=3: simulated operation</td>
<td>n=5: cardiothoracic</td>
</tr>
<tr>
<td></td>
<td>n=3: urology; orthopaedic</td>
</tr>
<tr>
<td></td>
<td>n=2: colorectal; general; gynaecologic</td>
</tr>
<tr>
<td></td>
<td>n=1: neurologic; pediatric; vascular; oncologic; trauma; transplantation</td>
</tr>
<tr>
<td>Correlations between fatigue and performance</td>
<td></td>
</tr>
<tr>
<td>negative correlation: 50% (n=9)</td>
<td>negative correlation: 0% (n=0)</td>
</tr>
<tr>
<td>33% no correlation: 33% (n=6)</td>
<td>no correlation: 100% (n=13)</td>
</tr>
<tr>
<td>positive correlation: 17% (n=3)</td>
<td>positive correlation: 0% (n=0)</td>
</tr>
</tbody>
</table>

Real-life studies
- Crude performance measures
  - determined after the operation
  - eg: #complications; # re-admissions
- High stakes
  - More effort to protect performance against the effects of fatigue?
  - Cannot control for confounding factors
    - individual patient characteristics
    - variations between surgical teams

Simulator studies
- Detailed performance measures
  - Look directly at surgeon action
  - eg: cognitive/psychomotor performance; time-to-complete task
- Lower motivation to perform well?
  - Stakes are lower
  - More controlled environment

Discussion

Why this difference between real-life surgery and simulator studies?
- In real-life surgery the effects of fatigue may be compensated by more effort of the surgeon
  - increased stress and workload >> health effects?
- Outcome measures in real-life surgery may lack sensitivity
  - more sensitive measure may be needed

We’d like to hear from you!
- What are your experiences with fatigue and surgery?
- Do you think the effects are there?
Please share your stories on http://tinyurl.com/y49bn9yo
Role of adipose tissue and skeletal muscle in atherosclerotic occlusive disease (peripheral arterial disease and carotid arterial disease) and in central hemodynamics


This preliminary data suggests that CLI patients could have a SM dysfunction, inferred from hand grip strength and SM density (lipid rich muscle). Lower handgrip strength predicts cardiovascular mortality, coronary heart disease and stroke\(^3\,\,^4\). SM density is a measure of muscle quality and is associated with mortality\(^5\).

Peripheral arterial disease (PAD) is a manifestation of atherosclerotic disease. Adipose tissue (AT) and skeletal muscle (SM) are endocrine organs producing polypeptides with vascular effects (adipokines and myokines)\(^1\) (Fig. 1).

Objective

Compare the quantity and function of AT and SM between: intermittent claudication (IC) and critical limb ischemia (CLI).

Methods

Quantity and function of SM and AT

- CT scan (third lumbar vertebra) (Fig. 2).
- Hand strength- Jamar\(^*\) hydraulic dynamometer (Fig. 3).

Prospective study (ongoing): December 2018 to August 2019

<table>
<thead>
<tr>
<th>Parameter</th>
<th>IC (n=33)</th>
<th>CLI (n=14)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (mean ± SD)</td>
<td>67.24 ± 9.97</td>
<td>69.21 ± 8.33</td>
<td>0.525</td>
</tr>
<tr>
<td>Gender (male) % (n)</td>
<td>78.79 (28)</td>
<td>50 (7)</td>
<td>0.080</td>
</tr>
<tr>
<td>Hypertension % (n)</td>
<td>84.85 (28)</td>
<td>85.71 (12)</td>
<td>1.00</td>
</tr>
<tr>
<td>Active smoking % (n)</td>
<td>51.51 (17)</td>
<td>7.14 (1)</td>
<td>0.04*</td>
</tr>
<tr>
<td>Smoking pack years</td>
<td>49.30 ± 25.51</td>
<td>36.25 ± 11.09</td>
<td>0.33</td>
</tr>
<tr>
<td>Diabetes mellitus % (n)</td>
<td>36.36 (12)</td>
<td>85.71 (12)</td>
<td>0.02*</td>
</tr>
<tr>
<td>Coronary artery disease % (n)</td>
<td>21.21 (7)</td>
<td>7.14 (1)</td>
<td>0.40</td>
</tr>
<tr>
<td>Cerebrovascular disease % (n)</td>
<td>12.12 (4)</td>
<td>0 (0)</td>
<td>0.30</td>
</tr>
<tr>
<td>Carotid stenosis &gt;50 % (n)</td>
<td>21.21 (7)</td>
<td>7.14 (1)</td>
<td>0.54</td>
</tr>
<tr>
<td>Antiplatelet therapy % (n)</td>
<td>87.88 (29)</td>
<td>64.29 (9)</td>
<td>0.74</td>
</tr>
<tr>
<td>Statin % (n)</td>
<td>90.90 (30)</td>
<td>92.86 (13)</td>
<td>0.66</td>
</tr>
<tr>
<td>ECA % (n)</td>
<td>41.42 (14)</td>
<td>42.86 (6)</td>
<td>0.08</td>
</tr>
<tr>
<td>HBA1C %</td>
<td>6.37 ± 1.16</td>
<td>8.41 ± 1.72</td>
<td>0.007*</td>
</tr>
<tr>
<td>Total cholesterol (mg/dL)</td>
<td>165.67 ± 36.20</td>
<td>143.83 ± 49.46</td>
<td>0.12</td>
</tr>
<tr>
<td>HDL cholesterol (mg/dL)</td>
<td>53.45 ± 13.53</td>
<td>45.50 ± 12.95</td>
<td>0.09</td>
</tr>
<tr>
<td>LDL cholesterol (mg/dL)</td>
<td>86.45 ± 29.07</td>
<td>73.58 ± 42.86</td>
<td>0.27</td>
</tr>
<tr>
<td>Triglycerides (mg/dL)</td>
<td>123.62 ± 63.78</td>
<td>134.67 ± 54.08</td>
<td>0.45</td>
</tr>
<tr>
<td>C-reactive protein (mg/L)</td>
<td>4.55 ± 2.60</td>
<td>23.23 ± 29.54</td>
<td>0.16</td>
</tr>
</tbody>
</table>

Analyzing the anthropometric measures, there is no statistic meaningful differences between the two groups, except for suprailiac skinfold (IC: 9.74; CLI: 12.3 mm)

Results

Graph. 2

Density of SM

Graph. 3

Hand grip strength in PAD patients

P<0.05

Graph. 1

Area of AT and SM (mm2)

Higher visceral and subcutaneous AT and lower SM area.

Conclusion

This preliminary data suggests that CLI patients could have a SM dysfunction, inferred from hand grip strength and SM density (lipid rich muscle). Lower handgrip strength predicts cardiovascular mortality, coronary heart disease and stroke\(^3\,\,^4\). SM density is a measure of muscle quality and is associated with mortality\(^5\).

References:
Negative Pressure Wound Therapy (PICO) as a means to decrease surgical site infection.

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1: HEELKUNDE FRIESLAND, LOKATIE NIJ SMELLINGHE ZIEKENHUIS DRACHTEN
2: SMITH&NEPHEW, UK HEALTHCARE

Introduction
Post-operative wound complications such as surgical site infections (SSI) and surgical wound dehiscence are a key concern to clinicians and healthcare administrators due to their impact on the patient and the healthcare provider. Such complications are associated with excess morbidity for the patient and increased treatment costs arising from excess hospital stays.

Methods
A cohort of 88 patients were eligible for analysis, 63 patients treated with standard care and 25 treated with the single-use NPWT device. There was no significant differences observed in the cofounding factors of the two patient groups.

Accountability
The current study reports the outcomes associated with the introduction of single-use NPWT system in a single centre in the Netherlands (Nij Smelinge Ziekenhuis) for the treatment of patients undergoing femoral endarterectomy surgery, considering both the clinical and economic impact of the new intervention.

The necessity to reduce surgical site complications was driven by a general burden present in groin incisions; despite them being dominant incision sites for vascular surgeons they are also most commonly associated with post-operative complications. This burden was substantiated by the facility via a primary record review and this case series provided the standard care dataset analysed herein.

Results
PICO was shown to provide both clinical and economic benefits over standard care in the treatment of patient undergoing groin incision.

Overall complication rates reduced significantly with a large reduction in proportions of wounds to dehisce. The introduction of sNPWT lowered primary length of stay, readmitted length of stay and visits to outpatient appointments following discharge.

The average cost per patient in the standard care group was €3,150 compared to €2,562 in the sNPWT group. This shows a reduction of €588 per patient.

The data show a bed occupancy of 7.73 days in the standard care group and 6.11 in the sNPWT group. If we were to consider the implications of treating a cohort of 100 patients, bed days saved would be 162 days.

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Standard Care</th>
<th>sNPWT</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anemia</td>
<td>4 (6%)</td>
<td>3 (12%)</td>
<td>0.40</td>
</tr>
<tr>
<td>Anti Coagulation Therapy</td>
<td>4 (6%)</td>
<td>0 (0%)</td>
<td>0.57</td>
</tr>
<tr>
<td>COPD/Asthma</td>
<td>11 (17%)</td>
<td>3 (12%)</td>
<td>0.75</td>
</tr>
<tr>
<td>Diabetes</td>
<td>14 (22%)</td>
<td>5 (20%)</td>
<td>1.00</td>
</tr>
<tr>
<td>Early Povi</td>
<td>0 (0%)</td>
<td>1 (4%)</td>
<td>0.28</td>
</tr>
<tr>
<td>Hypertension</td>
<td>51 (81%)</td>
<td>16 (64%)</td>
<td>0.10</td>
</tr>
<tr>
<td>Kidney Insufficiency</td>
<td>6 (10%)</td>
<td>1 (4%)</td>
<td>0.67</td>
</tr>
<tr>
<td>Previous Chemotherapy</td>
<td>1 (2%)</td>
<td>0 (0%)</td>
<td>1.00</td>
</tr>
<tr>
<td>Previous Radiotherapy</td>
<td>1 (2%)</td>
<td>0 (0%)</td>
<td>1.00</td>
</tr>
<tr>
<td>Smoker</td>
<td>26 (41%)</td>
<td>12 (48%)</td>
<td>0.64</td>
</tr>
<tr>
<td>Steroids</td>
<td>2 (3%)</td>
<td>0 (0%)</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Table 1: Risk factors

<table>
<thead>
<tr>
<th>Risk</th>
<th>Standard Care</th>
<th>sNPWT</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wound Dehiscence</td>
<td>21 (33%)</td>
<td>1 (4%)</td>
<td></td>
</tr>
<tr>
<td>Hematoma</td>
<td>16 (25%)</td>
<td>1 (4%)</td>
<td></td>
</tr>
<tr>
<td>Seroma</td>
<td>7 (11%)</td>
<td>0 (0%)</td>
<td></td>
</tr>
<tr>
<td>Surgical site infection (SSI)</td>
<td>3 (4.7%)</td>
<td>1 (4%)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>2 (3%)</td>
<td>0 (0%)</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Reported complications by stage and sNPWT use

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Standard Care</th>
<th>sNPWT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Length of Stay</td>
<td>6.79</td>
<td>5.83</td>
</tr>
<tr>
<td>% Patients readmitted</td>
<td>9.5%</td>
<td>4%</td>
</tr>
<tr>
<td>Readmitted Length of Stay</td>
<td>0.94</td>
<td>0.28</td>
</tr>
<tr>
<td>Post Discharge outpatient visits</td>
<td>1.0</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Table 3: Overall complication by type by PICO use
INTRODUCTION:
- Anemia is associated with increased adverse outcomes during the early postoperative period because of high physiologic stress and increased cardiac demand.
- Blood transfusions have been widely used as first option to treat anemic patients despite the lack of scientific support of clear benefit for patients.
- Recently, there has been a paradigm shift to start optimizing the patient preoperatively with a Blood Management program.

OBJECTIVE:
ASSESS THE RELATIONSHIP BETWEEN PRE-OPERATIVE ANEMIA AND MORBI-MORTALITY OUTCOMES IN PATIENTS UNDERGOING ELECTIVE VASCULAR SURGERY

METHODS:
- Retrospective analysis (2016-2018)
- Elective procedures (n=275): CEA (n=67), Open Aortic Repair (n=26), EVAR (n=74) and Infrainguinal Bypass Surgery for CLI (n=90)
- Hemoglobin levels were categorized according to the WHO definition for anemia
- Exclusion Criteria: emergency procedures, transfusion ≥4 units RBC

RESULTS:
- Our study population comprised 257 patients who underwent EVAR (n = 74), OAR (n = 26), CEA (n = 67) and infrainguinal bypass (n = 90).
- ANEMIA was identified in 37.4% (n=96) patients
- TRANSFUSION was required in a total of 27.6% (n=71) patients

DISCUSSION:
- Patients with pre-operative anemia and requiring blood transfusions are more prone to post-operative adverse events, increased length of stay and re-intervention.
- This study supports previous evidence stating that pre-operative anemia increases post-operative morbidity2,3, and therefore anemia evaluation should be incorporated in the preoperative risk assessment4.
- This situation urges the application of a well-structured protocol to optimize pre-operative hemoglobin, reduce intra-operative blood loss and improve anemic patients’ status in an effort to reach better outcomes.

PATIENT BLOOD MANAGEMENT PROTOCOL

INTRODUCTION

Acute upper limb ischemia annual incidence has been reported as 1.3 cases per 100,000 and patients should receive lifelong anticoagulation unless contraindicated to prevent recurrence of thromboembolic disease. The proportion of long-term maintenance of anticoagulation following thrombembolectomy of the upper extremity is not known.

- Objectives: To evaluate short- and long-term anticoagulation following thrombembolectomy of the upper extremity and to calculate relation between long-term anticoagulation and recurrence of acute limb ischemia.

METHODS

- Retrospective study;
- Included all patients with diagnosis of acute upper limb ischemia undergoing thrombembolectomy with Fogarty catheter in our institution from 1st January 2013 until 31st March 2018;
- Statistical analysis using SPSS software – Chi-Square, Kaplan-Meier and Log-rank tests.

RESULTS

- n = 172 patients
- 73% ♀, 27% ♂
- Median age = 74; Range = 43-104 years.
- 5.8% 30-day mortality;
- 41.3% of the patients were dead at the time of the study;
- Mean survival time = 42.9 months (38.4-47.3 with 95%CI).

CONCLUSION

- It was more probable that patients with acute upper limb ischemia that are followed by Vascular Surgery/Cardiology after discharge were correctly long-term anticoagulated at discharge.
- There was a correlation among NOACs prescription at discharge and long-term anticoagulated.
- Long-term correct anticoagulation was related with a lower recurrence rate of acute limb ischemia.

75% of the patients had indication for long-term anticoagulation at discharge.

Follow-up doctor: 60% family doctor vs 40% Vascular Surgeon/Cardiologist.
Introduction
The aim of our investigation is to analyse the results of treatment of the patients suffering from Takayasu’s arteritis with brachiocephalic arteries lesion.

Methodology
72 reconstructions of aortic arch branches were performed in patients suffering from Takayasu’s arteritis in the A.V.Vishnevsky National Medical Scientific Center for the period from November 1983 till August 2019. The total male/female ratio was 1:5.5. The laboratory signs of the inflammation activity were discovered in 55.5% of cases. For these patients we used the intravenous injections of corticosteroids and cyclophosphan. We used methotrexate and steroids as maintenance therapy for minimum 3 months before surgery in these cases. Occlusion or critical stenosis of common carotid arteries, arm ischemia due to subclavian arteries stenosis were indications to surgery.

Methodology
Acute inflammatory, terminal organ failure were considered to be contraindications to surgery. Extrathoracic procedures (total 45 cases) seemed to be the surgery of choice in cases of brachiocephalic arteries reconstructions. The transthoracic procedures were carried out in 27 cases if there were no suitable inflow artery.

STAGED SURGERY
1. BIFURCATED ASCENDO-CAROTID-SUBCLAVIAN BYPASS
2. SUBCLAVIAN-CAROTID BYPASS

Results
We had no postsurgical lethality after extrathoracic operations. 1 patient had an ischemic stroke. We had four hemorrhagic strokes after bifurcated aorta-carotid graft replacement done in 12 patients, three of them were lethal. We had one lethal outcome due to acute heart failure after all other types of transthoracic operations.

Conclusion
1. The surgery for Takayasu’s arteritis patients should be performed in the remission stage.
2. The inflammatory activity should be under medical control for long-term period after surgery.
3. Staged reconstruction of carotid arteries is indicated for patients with bilateral lesion.
Outcomes of Vascular Interventions in Nonagenarians at a Tertiary Institution
Ayoni Medagoda, Ali Ezzarghani, Mandy Burrows, Wissam Al-Jundi, Nadeem A Mughal
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1 – INTRODUCTION
• The number of nonagenarians in the UK has increased by 60% between 2000-2017
• This has resulted in an increased representation of patients in their 90’s requiring emergency and elective vascular surgical intervention
• Increased age is often accompanied by co-morbidities thus making management strategies challenging for the MDT

2 – AIM AND METHODS
• This study aims to evaluate the short and mid-term outcomes of all vascular interventions undertaken on nonagenarians in a single institution
• Retrospective study over an 8 year period (2010-2017)
• Consecutive patients of 90 years or older undergoing elective or emergency vascular or endovascular procedures in this time period were considered. Patients deemed unfit for intervention were excluded
• Demographics and outcomes were collected retrospectively from notes and electronic records
• All cause mortality at 30 days, 90 days and 1 year were recorded.
• Effect of procedure type (open vs. endovascular) and mode of presentation (elective vs. emergency) was examined

3 – RESULTS
• 188 patients were included in the study, 88 males (46.8%) and 100 females (53.2%), median age 92 (IQR 90-94)
• 117 (62.2%) cases were endovascular and 71 (37.8%) were open procedures
• 62 (33%) procedures were elective and 126 (67%) were emergency

4 – DISCUSSION
• 1 year mortality after all vascular procedures in nonagenarians is almost 50%, with approximately half of this occurring in the first 90 days
• Outcomes are significantly poorer after open surgery and emergency procedures
• These factors should be considered in the decision making process and used in discussions with patients and relatives

Figure 1: Kaplan-Meier survival curves demonstrate combined mortality to 1 year plus (A) mortality after open or endovascular surgical intervention and (B) mortality after emergency or elective surgical intervention

5 – CONCLUSIONS
• Mortality rates for nonagenarians undergoing vascular interventions are expectedly high
• Endovascular and elective procedures mitigate much of this risk
• Robust data on outcomes can help to guide shared decision making in these groups
Introduction

➢ Social media is an everyday part of modern life and medicine.
➢ Increasing numbers of healthcare professionals and institutions use social media in their clinical and academic practice1.
➢ In 2011, Modahl et al showed that 90% of doctors used social media personally and 65% professionally.2
➢ Twitter provides a platform for signposting users to the most current and useful material and provide scope for alternative metrics.
➢ Historically, the journal impact factor (JIF) was used to select the most appropriate journal to subscribe to and read.
➢ Today, Twitter provides the ability to see updates across a range of journals and for the clinician to select what is most relevant for them.
➢ We therefore performed an observational study to assess whether there was a correlation between Twitter follower numbers (TFN) and JIF.

Methods

➢ The 2017 JIF stated on their website as of 4th April 2019 was recorded.
➢ 7 cited 2017 Journal Citation Reports3 as the source.
➢ The JVS and CVIR both stated a JIF that matched 2017 Journal Citation Reports3 but did not cite the source on website.
➢ The BMJ had a published 2017 JIF that did (23.562) not match the Journal Citation Reports (23.259)3 [Table 1].
➢ A search of the journals on Twitter was made and the number of followers as of 15:15 GMT on 5 April 2019 noted.

Bivariate regression analysis of the TFN as a function of the JIF was undertaken using Minitab 18 statistical software. For the purpose of the analyses the JIF as per the journal website was used, as the minor variations indicated would be likely to have an major impact on the outcomes.

Results

1) There was a visible impression that the higher the JIF the higher the TFN [Table 1].
2) There was however low correlation between the JIF and number of followers (adjusted R-sq= 20.76%, p=104; Graph 1), with occasional low JIF journals also having a large number of followers as noted in the graph outliers.
3) The journal that fit the regression model most accurately was the BMJ.

Conclusion

➢ Journals with high JIF clearly had higher TFN.
➢ We could find no causal link to suggest that social media following indeed impacted upon the impact factor (IF) directly.
➢ Confounding factors particularly the number of followers who will be from a varied background (and much higher than the number of actual directly contributing authors who are also journal followers which then via individual and subsequently journal citation impact may possibly have a more direct correlation) affect the results, but that is outside of the scope of the current analysis.
➢ Further analyses needed with the continued uptake of social media.

References