COMUNICAÇÕES ORAIS E POSTERS
ORAL COMMUNICATIONS AND POSTERS

SESSÃO PRÉMIO 1 - COMUNICAÇÕES ORAIS
PRIZE SESSION 1 – ORAL COMMUNICATIONS

CO01 GLASS OF THE FOOT: IS THE PEDAL ARCH MODIFIER AN USEFUL TOOL OR A CONFOUNDING FACTOR?

Beatriz Guimarães, Luís Fernandes, Andreia Coelho, Vitor Martins, Marta Machado, Francisco Basílio, Patrícia Carvalho, Ana Margarida Rocha, Alexandra Canedo

ULS Gaia e Espinho

INTRODUCTION: The Global Limb Anatomic Staging System (GLASS) has become a widely adopted tool for guiding treatment planning and prediction of revascularization success in chronic limb-threatening ischemia (CLTI). However, the proposed pedal modifier was not included in the initial validation studies and information on its value as an adjunct of the classification remains scarce.
Our aim was to evaluate the pedal modifier as a predictor for wound healing and major adverse limb events (MALE) after primary endovascular CLTI revascularization.

METHODS: We conducted a retrospective analysis of patients who underwent their first endovascular revascularization for CLTI at a tertiary center between 2020 and 2021. Patients with no available diagnostic angiography were excluded. Electronic medical records were reviewed and angiographic imaging was used to classify each procedure according to their GLASS score including the pedal modifier. Adverse limb events were documented at 30-days, 3, 6 and 12 months.

RESULTS: A total of 123 patients were included in the study. Most patients (72.6%) presented with Rutherford 5 chronic limb ischemia and evenly distributed GLASS severity score (I 20.2%, II 41.7%, III 35.7%). Concerning pedal arch anatomy, 80.9% had at least one artery crossing the ankle to the foot with varying degrees of arch disease-burden. A fully intact arch with minimal disease (P0) was observed in 36.9% of cases, while 44.0% had a diseased or absent arch (P1). Only 15,5% of patients had no named artery crossing the ankle (P2). The median follow-up was 12 months (IQR 6) with a MALE incidence of 32.1% (7.1% major amputation, 29.8% reintervention due to primary revascularization failure). Fifty-seven percent (57%) of patients achieved adequate wound healing during follow-up. After stratification based on the pedal modifier, the three groups (P0, P1 and P2) were comparable concerning demographic and clinical variables. The outcome-related variables did not show any significant difference either isolated or on a sub-analysis after grouping for pedal GLASS severity.

DISCUSSION: Despite growing recognition of the role of anatomic disease burden in CLTI management, the predictive value of the GLASS pedal modifier remains unclear. Our findings suggest that pedal arch patency may not significantly influence revascularization success or amputation-free survival and confirmation of our results in a large data multicentric studies could lead to a paradigm shift.

CO02 BELOW-KNEE AMPUTATION: OUTCOMES AND PREDICTORS OF PROSTHETIC USE, MOBILITY, AND SURVIVAL IN A TERTIARY CENTER COHORT

Paulo Pereira[1], Joana Ferreira[2], Lara Dias[2], Armando Mansilha[2]

[1]Department of Angiology and Vascular Surgery, ULS São João, Porto, Portugal
[2]Department of Angiology and Vascular Surgery, ULS São João, Porto, Portugal; Department of Surgery and Physiology, Faculdade de Medicina da Universidade do Porto, Portugal

INTRODUCTION: Despite advancements in prevention and revascularization, many patients still require major lower extremity amputation. Below-knee amputation (BKA), by preserving the knee joint, enhances prosthetic use, mobility, independence and overall quality of life.

AIM: To assess the natural progression of BKA patients regarding independence, mobility, prosthetic use and survival, and the impact of patient characteristics and comorbidities on these outcomes.

METHODS: Retrospective cohort study of BKA patients in a tertiary hospital between January 2021 and August 2024. Data were collected from electronic medical records.

RESULTS: Were included 121 patients (mean age: 67.0 years; 78.5% male). Chronic limb threatening ischemia (CLTI) was the leading indication for BKA (83.5%). Previous amputation was recorded in 58.7%, 39,7% with prior minor ipsilateral amputation. Preoperative revascularization was performed in 61.9% (38.0% endovascular, 9.9% bypass, 14.0% both). Mortality was 14.1% at 1 month and 19.0% at 1 year. Prosthetic fitting was achieved in 32.5% (mean age: 64.3 years, mean time to fitting: 10.81 months). At 6 months, 62.8% were ambulatory (with assistive devices) and 27.7% were autonomous; at 1 year, 57.0% were ambulatory and 43.1% autonomous, increasing to 69.1% and 59.5% at 2 years.
Chronic kidney disease (CKD) was linked to lower prosthetic fitting rates (p=0.039), higher mortality (p=0.028), and reduced ambulation at 6 months (p=0.017). Prosthetic fitting was more frequent in previously autonomous (p=0.004) and revascularized patients (p=0.047). Mortality was lower in previously autonomous individuals (p<0.001). Ambulation at 6 months was reduced in those with stump dehiscence (p=0.034) but higher in previously autonomous patients (p=0.028). At 1 year, ambulation was lower in reoperated patients (p=0.034). At 2 years, cerebrovascular disease (CVD) (p=0.045) and surgical revision (p=0.023) were associated with

lower autonomy. Younger patients were more frequently fitted with prostheses (p=0.007) and had greater autonomy at 6 months (p=0.017) and 1 year (p=0.011), but age did not significantly impact ambulation at 2 years.

CONCLUSION: Younger patients, with better preoperative functional status and fewer comorbidities, namely CKD and CVD, achieve higher rates of prosthetic fitting, mobility, independence and overall survival. A comprehensive preoperative assessment of this factors could allow to identify those with better outcome potential.

CO03 OUTCOMES OF BYPASS VERSUS ENDOVASCULAR PROCEDURES IN LONG CHRONIC TOTAL OCCLUSIONS OF THE SUPERFICIAL FEMORAL ARTERY – A 10-YEAR COHORT STUDY

Inês Gueifão, Anita Quintas, Ricardo Correia, Helena Fidalgo, Joana Cardoso, Adriana Figueiredo, Maria Emília Ferreira

Hospital de Santa Marta, ULS São José; NOVA Medical School – Universidade Nova de Lisboa

INTRODUCTION: WWith the development of advanced endovascular technologies to treat chronic total occlusions (CTO) of the superficial femoral artery (SFA), endovascular procedures have become progressively more common, reserving femoro-supragenicular popliteal artery bypasses for a specific reduced subset of patients. We aim to compare outcomes of SFA CTOs treated by surgical bypass versus an endovascular procedure.

METHODS: Single-center retrospective cohort study in a tertiary Vascular Surgery center including all patients with long SFA CTOs (femoropopliteal GLASS grade 4) submitted to a femoro-supragenicular popliteal artery bypass (OR group) or endovascular revascularization procedure (EVT group) from February 2015 to January 2025. Patients undergoing revascularization of other anatomical sectors (aortoiliac or tibioperoneal) were excluded. Baseline characteristics, peri-procedural and follow-up data were obtained. The primary endpoint is major adverse limb events (MALE). The secondary endpoints are MALE-free survival and reintervention, amputation and mortality rates.

RESULTS: A total of 119 patients were included (71 in the OR group vs. 48 in the EVT group). Median age was 68 years (IQR 63-74) and 75 patients (63%) had chronic limb-threatening ischemia. Men most commonly underwent bypass surgery (64%) whereas women were most frequently submitted to an endovascular procedure (63%) – p=.027. Median duration of hospital stay was lower in the EVT group (2 vs. 9 days – p<.001). Other characteristics such as age, risk factors and Leriche-Fontaine classification did not differ between groups. During a median follow-up period of 51 months (IQR 26-78), MALE were higher in the OR group (44% vs. 25% - p=.038) despite no significant differences in MALE-free survival. Similarly, a higher rate of reintervention was also found in the OR group (39% vs. 21%, p=.033), which is associated with a higher reintervention-free survival in the EVT group (p=0.49). There were no significant differences in amputation or mortality rates between groups.

CONCLUSION: In this study, patients with long SFA CTOs had similar rates of limb salvage and mortality after bypass or endovascular interventions. However, despite similar comorbidity burden in both groups, MALE and reintervention rates were higher after bypass, which may support an endovascular-first approach for these lesions.

Figure 1. Cumulative Kaplan-Meier estimate of freedom from MALE in patients who underwent bypass and endovascular procedures

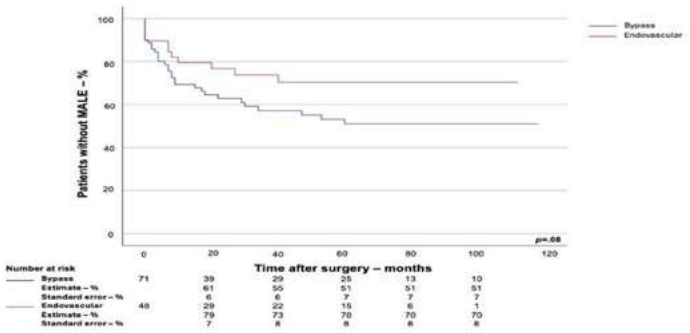
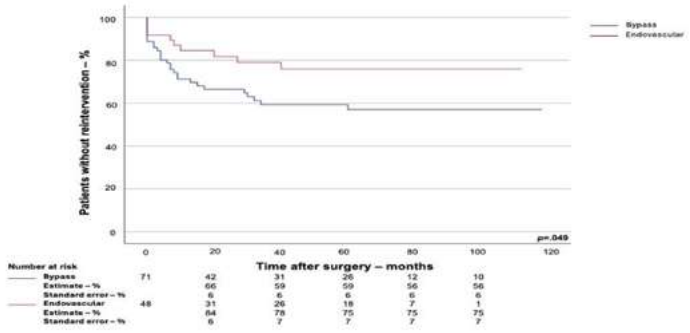


Figure 2. Cumulative Kaplan-Meier estimate of freedom from reintervention in patients who underwent bypass and endovascular procedures



CO04 HEMOGLOBIN AND ALBUMIN AS PREDICTORS OF SURVIVAL IN PATIENTS UNDERGOING MAJOR AMPUTATION

João Marcelo Cabral, Mónica Bandeira, Samuel Cardoso, Miguel Queirós, Henrique Almeida, Andreia Pinelo, Daniel Mendes, Ivone Silva, Rui Machado

Unidade Local de Saúde de Santo António

INTRODUCTION: Major amputation is typically a procedure of last resort for patients with severe peripheral artery disease. These patients often present with multiple comorbidities and a fragile clinical status, placing them at a high risk of

mortality. Optimizing surgical outcomes requires thorough preoperative assessment and targeted interventions to improve the patient's physiological reserve. Hemoglobin and albumin levels have been identified as potential prognostic markers in surgical patients, reflecting nutritional status, overall health, and the body's ability to recover. This study aims to evaluate the association between preoperative hemoglobin and albumin levels and survival outcomes in patients undergoing major lower limb amputation.

METHODS: A retrospective analysis was conducted on patients who underwent major lower limb amputation at a tertiary vascular surgery center. Patients were stratified into two groups based on survival status. Independent samples t-tests were used to compare mean hemoglobin and albumin levels between survivors and non-survivors. Logistic regression analysis was performed to adjust for potential confounders and determine the independent impact of these variables.

DISCUSSION: A total of 585 patients were included in the study. The independent samples t-test revealed a statistically significant difference in hemoglobin levels between survivors and non-survivors (p=0.01), with survivors having higher mean hemoglobin levels. However, after adjusting for confounders using logistic regression, this association fell just short of statistical significance (p=0.09). In contrast, albumin levels also showed a significant difference between the two groups (p=0.02), and this association remained significant even after adjustment (p=0.04). These findings highlight the importance of preoperative optimization, particularly in terms of nutritional support and hematological correction, to improve survival outcomes in this patient population.

CONCLUSION: Preoperative hemoglobin and albumin levels appear to be significant predictors of survival in patients undergoing major lower limb amputation. Enhancing perioperative care through targeted nutritional and hematological optimization may contribute to improved outcomes in this high-risk group. Further prospective studies are needed to better understand the long-term impact of these biomarkers and to evaluate the effectiveness of specific interventions aimed at improving survival rates.

CO05 TEN YEARS OF CERAB FOR COMPLEX AORTOILIAC OCCLUSIVE DISEASE

Tiago Magalhães, Ruy Fernandes e Fernandes, Ryan Gouveia e Melo, Carolina Passos, Luís Mendes Pedro

Serviço de Cirurgia Vascular, Unidade Local De Saúde Santa Maria

INTRODUCTION: Covered Endovascular Aortic Repair (CERAB) has been previously showed to be a viable treatment option in patients with aorto-iliac occlusive disease. However, data reporting on the technique is still scarce and durability remains a concern. The aim of this study was to perform a descriptive analysis of our experience and evaluated the outcomes of CERAB in the last 10 years.

METHODS: A retrospective, single-center cohort study was conducted. From April 2015 to February 2025, we included all consecutive patients who underwent covered endovascular reconstruction of the aortic bifurcation (CERAB) for aortoiliac occlusive disease. Outcomes were defined as the primary patency rate (loss of patency was considered as occlusion of either one iliac branch or the entire CERAB configuration), freedom from clinically driven target lesion revascularization, and amputation-free survival at 12 and 24 months. Major adverse events were defined as a composite of myocardial infarction, stroke, bowel ischemia, respiratory insufficiency, acute limb ischemia or access related complications.

RESULTS: A total of 24 patients (66.7% male) were included, with a mean age of 60.7 years (± 9.9). The most common clinical presentation was Rutherford classification grade 5 chronic ischemia (45.5%), and the majority (87.5%) had TransAtlantic Inter-Society Consensus II (TASC II) D lesions. Technical success was achieved in 100% of cases. Major adverse events at 30-days were observed in 37.5%, with access-related complications being the most common (16.7%). Early re-intervention (<30-days) occurred in 25% of the cases. The median hospital stay was 5.5 days (3.0–14.75), and 30-day mortality occurred in one case. The median follow-up was 29.1 months (5.2–49.9). The primary patency rate was 85.0% and 78.9% at 12 and 36 months, respectively. The target lesion revascularization freedom rate was 90.0% and 77.9% at 12 and 36 months, while the major amputation-free survival rate was 88.1% and 78.4% at same points.

CONCLUSION: The CERAB technique appears to be a feasible option for patients with extensive aortoiliac occlusive disease, including TASC II D lesions, demonstrating high technical success. Despite the small sample size, good mid-term outcomes were observed in a clinical and anatomic complex group of patients.

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CO06 THE IMPACT OF SUBINTIMAL CROSSLESION ON FEMORO POPLITEAL ENDOVASCULAR TREATMENT OUTCOMES

Gonçalo Araújo, Ricardo Correia, Helena Fidalgo, Adriana Figueiredo, Carolina Tavares, Inês Gueifão, Ana Loureiro, Maria Emília Ferreira

Hospital de Santa Marta

INTRODUCTION: Subintimal angioplasty is an endovascular technique used to recanalize occluded segments in arterial bed that cannot be crossed via the intra-luminal pathway. However, there is still limited data regarding the clinical impact of subintimal angioplasty. The aim of this study is to

evaluate the impact of subintimal angioplasty compared to intra-luminal angioplasty in femoro popliteal lesions.

METHODS: Retrospective, single-center, comparative study. From January 2023 to Feburary 2025 all patients with chronic lower limb ischemia due to femoro popliteal arterial lesions who underwent endovascular treatment (EVT) as a first limb revascularization procedure were considered. Patients were grouped according to the cross-lesion pathway: the subintimal cross-lesion group (S group) and the intra-luminal cross-lesion group (L group). Both groups were compared regarding the PAD pattern and the primary endpoints were the rates of reintervention and amputation.

RESULTS: The study included 95 patients, of which 10% (N=9) presented with intermittent claudication, 25% (N=24) with rest pain and 64% (N=61) with ulcers or gangrene in the foot. The median follow-up time was 9 months. The S group included 30% (N=28) of the patients and L group included 70% (N=67). The median femoropopliteal (FP) GLASS classification was 4 in both groups, but this FP GLASS stage was more common in S group (p=0.004). Severe calcification was more common (p<0.001) and bailout stenting was more frequently used in in the S group (p<.001). Regarding the primary endpoints, no statistically significant differences were found between groups in rates of reintervention (p=.95) and amputation (p=.26) at 12 months of follow-up.

CONCLUSION: In this study we found that the subintimal approach required a higher frequency of bailout stenting and it was used more frequently to cross more complex and calcified lesions. Our results suggest that the clinical outcomes of subintimal angioplasty are similar to those of intra-luminal angioplasty with comparable limb outcomes in patients with femoro popliteal lesions. These findings may support adopting a lower threshold for subintimal crossing in calcified and complex lesions as it can achieve good results with comparable outcomes to the intra-luminal angioplasty

CO07 REAMPUTATION RATES AND RISK FACTORS FOR REAMPUTATION IN CHRONIC LIMB-THREATENING ISCHEMIA: A PORTUGUESE TERTIARY CARE CENTER STUDY

José Miguel Vilas Boas, Rita Piedade, Emílio Silva, Tiago Costa Pereira, Tiago Moura, Diogo Domingues Monteiro, Joana Ferreira, Armando Mansilha

ULS São João

BACKGROUND: Limited studies exist on reamputation rates and risk factors for reamputation. This study aims to provide an update on reamputation rates at a Portuguese tertiary center and identify patient- and limb-specific risk factors for higher-level reamputation.

METHODS: A single-center retrospective study of patients who underwent initial minor or below-knee (BK) amputation for CLTI between January and June of 2024 was performed. The primary outcome was the rate of ipsilateral reamputation. Bivariate analyses and logistic regression models were used to assess associations between risk factors and reamputation.

RESULTS: A total of 83 patients (mean age 69.1 years; 74.7% males) underwent initial minor or BK amputation for CLTI between January and June 2024, including 55 (66.3%) toe, 23 (27.7%) transmetatarsal, and 5 (6.0%) BK amputations. In the first six months following initial amputation, 39 patients (47.0%) experienced reamputation. The average time to reamputation was 55.9 days. Reamputation rates were as follows: minor to minor (28.2%), minor to major (66.7%), and BK to above-the-knee (5.1%). A higher "Foot Infection" score in the WIfI classification was associated with a 2.3-fold increased risk of reamputation (p<0.05). The pre-intervention ankle-brachial index (ABI) was significantly lower in reamputation patients (0.78 vs. 0.87 in no reamputation group, p<0.05). Multilevel or crural arteries disease were significant predictors for reamputation (p<0.05), with ORs of 12.0 and 15.3, respectively. Cardiovascular risk factors and the use of protective cardiovascular medications did not predict reamputation risk. Prior successful revascularization did not prevent patients from undergoing reamputation. There were no significant differences in six-month mortality rates between those who underwent reamputation (7.7%) and those who did not (9.1%; p>0.05).

CONCLUSION: Despite efforts to predict wound healing after amputation, reamputation rates remain high (47% in our cohort). Identifying risk factors is crucial for targeting patients who may benefit from a higher-level initial amputation, potentially reducing reamputation rates, expediting rehabilitation, and enhancing quality of life. Our study found key predictors of reamputation risk: a higher “Foot Infection” WIfI score, a lower ABI, and multilevel or crural arteries disease. These predictors can help decide initial level of amputation and aid in developing predictive models for reamputation.

SESSÃO PRÉMIO 2 - COMUNICAÇÕES ORAIS
PRIZE SESSION 2 – ORAL COMMUNICATIONS

CO08 MALE-FEMALE DIFFERENCES IN ACUTE TYPE B AORTIC DISSECTIONS: A SYSTEMATIC REVIEW AND META-ANALYSIS

Adriana Ferreira, Alice Lopes, Ryan Gouveia e Melo, Emanuel Silva, Daniel Caldeira, Luís Mendes Pedro

Unidade Local de Saúde de Santa Maria

INTRODUCTION: Male-female differences have been observed in acute aortic dissections (AD). Nevertheless, the literature on type B AD is still scarce. This study aims to perform a systematic and meta-analysis of studies reporting on male–female differences in patients with acute type B AD.

METHODS: We search MEDLINE, EMBASE, CENTRAL, and Open Grey databases from inception to January 2024 for studies reporting sex differences in acute type B aortic dissection. A systematic review was conducted following the PRISMA guidelines. Data were pooled using a random-effects model and patient and treatment characteristics were compared with odds ratios and standardized mean differences. We analysed differences regarding demographics, treatment and peri-operative outcomes.

RESULTS: A total of 13 501 patients (61% male) from 6 studies were included. Women were older than men (mean age 66.3 years [69-76] in women versus 63 years [58-68] in men). Women had a significant higher rate of hyperlipidemia and congestive heart failure (42.8% versus 27.40%, P=0.010; 1.99% versus 1.80%, P=0.001; respectively). Men presented more with type IIIB (71.38% versus 1.44%, P<0.001) and with a higher proportion of complicated AD, namely with limb ischemia (15.33% versus 9.08%, P<0.001). Women were more frequently treated with medical therapy (77.97% versus 75.00%, P=0.02) and men were more frequently treated with both open and endovascular therapy (5.83% versus 7.67%, P<0.001; 64.77% versus 67.77%, P=0.01; respectively). Men had a higher risk of acute kidney injury, spinal cord ischemia and visceral/renal malperfusion (OR 1.68 [95% CI 1.46-1.94], P<0.001); (OR 1.98 [95% CI 1.39-2.81], P<0.001); (OR 2.98 [95% CI 1.53-5.82], P<0.001), respectively). Despite a trend towards higher in-hospital mortality in female sex, this difference did not reach statistical significance (OR 0.80 [CI 95% 0.56-1.13], P=0.20).

CONCLUSIONS: Women with acute TBAD had a higher incidence of type IIIA dissections, less end-organ malperfusion and were more medically managed. Men had higher rates of surgical treatment, with both open and endovascular surgery. Despite that, there is a trend for a higher in-hospital female mortality and although this difference did not reach statistical significance, more accurate information is crucial to help shape optimal individualized care for both male and female patients.

Key Words: type B aortic dissection; acute aortic dissection; sex difference; meta-analysis.

CO09 NATIONWIDE PRACTICE PATTERNS AND OUTCOMES FOR THE TREATMENT OF COMPLEX ABDOMINAL AORTIC ANEURYSMS

Tiago Ribeiro, Anita Quintas, Rita Soares Ferreira, Frederico Bastos Gonçalves, Maria Emília Ferreira

ULS Sao José

OBJECTIVE: Data on complex abdominal aortic aneurysms (cAAA) is scarce in Portugal. The authors aim to assess the outcomes of endovascular and open surgical repair (OSR) for cAAA using the Portuguese National Registry of Vascular Procedures, a prospective population-based registry covering most of Portugal's vascular centres.

DESIGN: Retrospective cohort study (2019-2023) of patients treated for intact cAAA (juxtarenal, pararenal or complex infrarenal necks outside instructions for use [IFU] for standard EVAR).

METHODS: Patients were stratified by surgical technique (OSR vs. endovascular repair: fenestrated/branched [f/b] EVAR or EVAR [with adjuncts or outside-IFU]). Primary endpoints were 30-day adverse events (AE) and major adverse events (MAE). Secondary endpoints were practice patterns, mortality and failure-to-rescue. Outcomes were assessed using inverse probability-weighting.

RESULTS: From 293 patients identified, endovascular strategies were performed in 67.9% (32.7% f/bEVAR; 35.2% EVAR) vs. 32.1% OSR. Sixteen centres performed repair, with a caseload ranging from 1-93 cases. The endovascular group was older, with more frequent pulmonary comorbidities. f/bEVAR patients (vs. EVAR) were younger and more likely to have prior aortic repair.
EVAR (vs. OSR) had a lower risk of AE and MAE (adjusted odds ratio [aOR] 0.17 [0.08-0.40]; aOR 0.10 [0.04-0.29], respectively). Similarly, f/bEVAR had lower risk of AE and MAE (aOR 0.44 [0.21-0.91]; aOR 0.42 [0.19-0.91], respectively). Non-significant differences in mortality (aOR 0.40 [0.11-1.25]) and failure-to-rescue (aOR 1.70 [0.33-8.87]) were observed. Increased morbidity was noted in low-volume practice f/bEVAR (33.3% vs. 12.3%, P=.04). One-year survival and secondary interventions (available in 45.5%) were comparable between strategies.

CONCLUSION: Nationwide data from Portugal reveals significant variability in practice and suggest endovascular strategies for the treatment of cAAA seem less morbid than OSR. Although non-significant, a signal for increased short-term mortality in OSR was observed. Mid-term outcomes were comparable between techniques. This should be interpreted with caution, considering the selection bias for each treatment strategy.

CO10 OUTCOMES AND EVOLUTION OF FENESTRATED-BRANCHED EVAR: A 10-YEAR SINGLE-CENTER LEARNING CURVE ANALYSIS

Lara R. Dias, Tiago Costa-Pereira, Pedro Henrique Almeida, José Fernando Teixeira, Armando Mansilha

ULS São João

AIMS: Fenestrated and branched endovascular aneurysm repair (f/bEVAR) represents an advanced technique for treating complex aortic aneurysms that extend to or involve visceral and renal vessels. This technically demanding procedure requires specialized skills and has a steep learning

curve. This study aimed to analyze a single-centre 10-year experience with f/bEVAR, focusing on the learning curve effect on technical success, mortality, and complications.

METHODS: A retrospective analysis was conducted on all F/BEVAR cases performed between 2016 and the present day. Patients without follow-up were excluded. Cases were stratified by study quartile to account for unequal case distribution between years. Primary outcomes included technical success (defined as successful incorporation of target vessels), 30-day mortality, major adverse events (MAE), and one-year reintervention rates. Procedural characteristics and outcomes were compared across quartiles.

RESULTS: A total of 53 cases were included, with a median age of 71 years and 49 (92.5%) male patients. Six (11.3%) were symptomatic aneurysms, and one patient presented with a ruptured aneurysm. Twenty-one (39.6%) cases had thoracoabdominal aneurysms, followed by juxta-renal (19 cases, 35.8%). Five patients (9.4%) had a history of aortic dissection. Six patients (11.3%) underwent arch procedures. Most cases (44 cases, 83%) had 4 target vessels incorporated, with 24 (45.3%) FEVAR, 19 (35.8%) BEVAR, and 10 (18.9%) customized endoprostheses with combinations of fenestrations and branches. Technical success of visceral vessel incorporation was 90.6%. Thirty-day mortality was 11.3%, and 30-day MAE was 13.2%. When analyzing by study quartile, the 4th study quartile demonstrated higher proportions of arch procedures, higher numbers of vessels incorporated, increased use of femoral-only access, higher implementation of fusion imaging, and lower 30-day mortality and MAE rates. A proctor was present in 34% of cases, primarily in the first 2 study quartiles.

CONCLUSIONS: This 10-year experience with F/BEVAR demonstrates a significant learning curve effect, with improved outcomes observed in the most recent quartile despite increasing case complexity. These findings highlight the importance of specialized training, proctorship in early experience, and the value of cumulative institutional expertise in managing complex aortic pathologies with F/BEVAR.

CO11 PARALLEL GRAFT TECHNIQUES VERSUS CUSTOM-MADE DEVICES FOR TOTAL ENDOVASCULAR AORTIC ARCH RECONSTRUCTION – SYSTEMATIC REVIEW AND META-ANALYSIS

Patrícia Carvalho, Andreia Coelho, Daniel Brandão, Luís Fernandes, Marta Machado, Francisco Basílio, Beatriz Guimarães, Ana Margarida Rocha, Alexandra Canedo

Unidade Local de Saúde de Gaia e Espinho

INTRODUCTION: Endovascular approaches have emerged as a promising alternative for the treatment of aortic arch pathology, particularly in high surgical risk patients. Although parallel graft techniques (PGTs) have been mostly favoured in urgent settings due to wider availability, we hypothesize that they may also provide a cost-effective option for elective cases. This study aims to compare the outcomes of PGTs and custom-made devices (CMDs) in total aortic arch reconstruction.

METHODS: A systematic review and meta-analysis was performed according to the recommendations of the PRISMA statement. A thorough literature search was conducted using PubMed and Scopus databases. Only studies involving zone 0 TEVAR were considered. Primary endpoints were the 30-day, aorta-related and overall mortality, stroke and reintervention rates. Secondary outcomes included technical success, target vessel patency, occurrence of type I/III endoleaks, myocardial infarction, spinal cord and upper extremity ischemia. The length of ICU/hospital stay was also analysed.

RESULTS: Thirty-eight out of 3134 articles screened were included, with a total of 871 patients (214 in PGT group, and 657 in CMD group). Mean age ranged from 52.5 to 78.2 years old and hypertension was the most frequent cardiovascular risk factor. More than half of the patients were male in the vast majority of studies. The most frequently reported etiologies were degenerative aneurysms, aortic dissections and post-dissection aneurysms. The pooled thirty-day mortality was 5.5% (95% CI: 1.1-9.9) in PGT group, and 5.2% (95% CI: 3.3-7.0) in CMD group. Aorta-related and overall mortality were 3.0% (95% CI: 0.0-6.4) vs 1.8% (95% CI: 0.6-2.9), and 11.4% (95% CI: 0.8-21.9) vs 15.1% (95% CI: 7.7-22.5) in PGTs vs CMDs, respectively. Stroke rate seemed to be higher in CMD group (15.2%; 95% CI: 9.0-21.5) compared to PGT (10.6%; 95% CI: 2.4-18.8). Both groups had high pooled estimates for target vessel patency - 98.2% (95% CI: 95.2-100) for PGT, and 94.2% (95% CI: 85.6-100) for CMD. Although the occurrence of type I/III endoleaks was higher in PGTs (20.5%; 95% CI:12.2-28.8 vs 8.8%; 95% CI: 4.0-13.7), reintervention rate was similar in both groups.

CONCLUSION: PGTs appear to have non-inferior results in comparison with CMDs in terms of mortality, stroke and reintervention rates, and should be considered to treat complex aortic arch pathology, particularly in fragile patients, adverse anatomies or emergent situations.

CO12 UNVEILING HIDDEN RISKS: HOW AORTIC DIAMETER AND PREOPERATIVE HAEMOGLOBIN PREDICT 1-YEAR MAJOR CARDIOVASCULAR EVENTS AFTER ELECTIVE TEVAR

Samuel Cardoso[1], Tomás Calisto[2], Andreia Pinelo[3], Henrique Almeida[3], Miguel Queirós[3], João Marcelo Cabral[3], Mónica Bandeira[4], Carlos Pereira[5], Rui Machado[6], Ivone Silva[7]

[1]Department of Angiology and Vascular Surgery, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António; Unit for Multidisciplinary Research in Biomedicine (UMIB), School of Medicine and Biomedical Sciences (ICBAS), University of Porto; ITR -

Laboratory for Integrative and Translational Research in Population Health
[2] School of Medicine and Biomedical Sciences (ICBAS), University of Porto
[3] Department of Angiology and Vascular Surgery, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António,
[4] Department of Angiology and Vascular Surgery, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António
[5] Department of Angiology and Vascular Surgery, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António; Department of Renal Transplantation, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António
[6] Department of Angiology and Vascular Surgery, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António; Department of Renal Transplantation, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António; School of Medicine and Biomedical Sciences (ICBAS), University of Porto
[7] Department of Angiology and Vascular Surgery, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António; Department of Renal Transplantation, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António; Unit for Multidisciplinary Research in Biomedicine (UMIB), School of Medicine and Biomedical Sciences (ICBAS), University of Porto; ITR - Laboratory for Integrative and Translational Research in Population Health

INTRODUCTION: Elective thoracic endovascular aortic repair (TEVAR) is a widely adopted intervention for descending thoracic aortic aneurysms. Over recent years, this endovascular technique has surpassed open surgery due to its reduced complications and mortality rates. However, certain preoperative and periprocedural clinical and analytical factors may significantly impact one-year mortality and the incidence of major adverse cardiovascular events (MACE) in patients. Identifying these predictors is essential for optimizing patient selection and improving postoperative outcomes. This study aims to evaluate the impact of these factors on one-year MACE following elective TEVAR.

METHODS: This retrospective, single-centre study included 41 patients with degenerative descending thoracic aneurysm who underwent elective TEVAR between January 2010 and December 2023. Procedures with emergent or urgent indications and patients with a prior history of aortic surgical intervention were excluded. Preoperative variables, including baseline comorbidities, laboratory values, anatomical characteristics, and procedure-specific planning details, were recorded. The primary endpoint was MACE at 1-year after TEVAR. MACE included acute myocardial infarction, cardiorespiratory arrest, stroke or death. Logistic regression analysis was used to identify predictors of one-year MACE.

RESULTS: The 30-day mortality and MACE rates was 4.9% (n=2) and 7.3% (n=3), respectively. At one year, the mortality and MACE rates was 22.0% (n=9) and 24.4% (n=10), respectively. Patients who experienced MACE at one year had a significantly larger descending aorta diameter (74.2±24.7 mm vs. 51.7±17.4 mm; p=0.003) and lower preoperative haemoglobin levels (11.4±2.0 g/dL vs. 13.2±2.2 g/dL; p=0.036) compared to those without MACE. Multivariable analysis identified descending aortic diameter as an independent predictor of one-year MACE.

CONCLUSION: Larger descending aortic diameter and lower preoperative haemoglobin levels were significantly associated with an increased risk of MACE at one-year post-TEVAR. These findings underscore the critical importance of incorporating these parameters into preoperative risk stratification to optimize patient selection and improve long-term outcomes. By emphasizing careful preoperative assessment, we can enhance patient safety and surgical success, ultimately guiding clinical decision-making towards more personalized and effective therapeutic strategies.

CO13 5-YEAR RESULTS ON ABDOMINAL AORTIC ANEURYSM REPAIR IN A TERTIARY CENTER: A BENCHMARK ANALYSIS FROM THE PORTUGUESE REGISTRY

António Duarte, Alice Lopes, Ana Silva, Mickael Henriques, João Ferreira Pires, Ruy Fernandes, Pedro Amorim, Luís Mendes Pedro

ULS Santa Maria

INTRODUCTION: Solid registries are crucial to audit and improve short and long-term results on aortic aneurysm repair. Since 2019, the Portuguese Society for Vascular Surgery developed a national registry, with recent results on the first 1000 reported infra-renal cases. We aim to benchmark our results with the national registry to identify discrepancies and ways to improve practice.

METHODS: We reviewed data collected in our center from November 2019 to December 2024 on consecutive patients subjected to aortic surgery and reported to the SPACV registry. Data was collected on demographics and preoperative comorbidities. We assessed the aneurysm extent, its diameter and the mode of admission. The primary outcome was 30-day mortality. Secondary outcomes included postoperative stroke, cardiac events or bowel ischemia. Our results (cohort A) were benchmarked with the ones from the national registry (cohort B).

RESULTS: 2000 consecutive patients were reported in Portugal from November 2019 to December 2024. 402 were treated in our center (20.1%). Mean age at admission for group A was 73.7 ± 8.5 years and most patients were male (92.8%), as in cohort B (73.9 ± 11.5 years, 93.22% male). 16.7% of all patients were diabetic and 30.1% had a cardiac condition, of which 52.8% reported myocardial infarction. 58.2% of all aneurysms were infrarenal. Most procedures were elective (79.9% for cohort A vs. 80.9% in cohort B) and endovascular (75.1% for cohort A vs. 72.95% in cohort B). Preoperative diameter was 63.5±16 mm, with significantly larger diameters in urgent cases (74.7±21.8 vs. 60.7±12.8, p < 0.001). 30-day mortality in cohort A was 8.59%, significantly higher in urgent cases (31.25% vs 2.85%, p < 0.001). 30-day mortality rates in both cohorts were similar (table 1). In cohort A, we reported a 30-day stroke rate at 1.52%, myocardial infarction rate of 4.80% and bowel ischemia at 4.04%. In a multivariate analysis, 30-day mortality was correlated with age (OR 1.01, p <0.001), urgent setting (OR 1.24, p <0.001) and preoperative creatinine (OR 1.001, p 0.006). Endovascular repair conferred reduced mortality risk (OR 0.87, p <0.001).

CONCLUSIONS: Auditing national registries helps improving outcomes in aortic aneurysm repair. With a caseload of over

20% of all patients in Portugal, endovascular rates and 30-day mortality rates remain in line with current practices. Moreover, real-world experience helps identifying potential predictors of mortality.

Table 1. 30-day mortality rates from 2019-2024

	Center (cohort A)	Overall (cohort B)
Elective open surgery	5.45%	5%
Elective EVAR	2.3%	2.02%
Urgent open surgery	40.91%	41.79%
Urgent EVAR	19.44%	18.65%

CO14 SPINAL CORD ISCHEMIA PREDICTORS AND OUTCOMES IN COMPLEX ENDOVASCULAR AORTIC REPAIR – A SINGLE CENTER RETROSPECTIVE STUDY

Inês Gueifão[1], Anita Quintas[2], Gonçalo Alves[2], Helena Fidalgo[2], Joana Cardoso[2], Adriana Figueiredo[2], Maria Emília Ferreira[2]

[1] Hospital de Santa Marta,
[2] Hospital de Santa Marta - ULS São José; NOVA Medical School - Universidade Nova de Lisboa

INTRODUCTION: Spinal cord ischemia (SCI) is an infrequent but distressing complication following thoracoabdominal (TAAA) and complex abdominal aortic aneurysm (CAAA) repair. Prior studies showed controversial results regarding risk factors and preventive measures to avert this problem. We aim to analyze the incidence of SCI after the endovascular treatment of complex aortic aneurysms in our center and perform a descriptive analysis.

METHODS: Single-center retrospective study conducted in a tertiary care center including all patients with a TAAA or CAAA who underwent endovascular repair using a fenestrated/branched endograft from June 2010 to February 2025. Patient characteristics, peri-procedural and follow-up data were obtained. SCI was defined and classified according to the Society for Vascular Surgery reporting standards as new-onset motor or sensitive deficits after endovascular treatment.

RESULTS: A total of 145 patients (91% male, mean age 71±6 years) were included, of which 59 (41%) had degenerative TAAAs (types I-V), 57 (39%) CAAs and 15 (10%) post dissection thoraco-abdominal aneurysms. Mean aneurysm diameter was 66±14mm. Half of the patients had previous history of aortic surgery. A prophylactic cerebrospinal fluid drainage (CSFD) was preoperatively placed in 61 patients (42%). The total incidence of SCI was 8% (12/145): minimal sensory deficits in 33% (4/12), paraparesis in 8% (1/12) and paraplegia in 59% (7/12). The majority of patients (83%, 10/12) presented with delayed SCI (after a first normal postoperative examination). After symptom onset, 7 patients (58%) required a rescue CSFD. Regarding patients with grade 3 SCI (paraparesis, n=7), a complete recovery was observed in 3 patients, 1 patient experienced partial recovery and 3 did not recover. No differences concerning prior aortic surgery, hypogastric artery patency, procedural staging, intentional temporary sac perfusion or preoperative CSFD placement were found between SCI and no-SCI patients. However, all SCI patients who had a preprocedural CSFD placed had complete recovery of symptoms.

CONCLUSION: In this study, SCI manifested mostly as a delayed event. Preoperative CSFD may prevent permanent injury. The small sample size could hinder the investigation of more robust findings. Despite a number of risk factors and preventive measures having already been identified, the best preventive approach is still lacking. Further studies are required in order to prevent this devastating complication.

COMUNICAÇÕES *RAPID PACE* 1
RAPID PACE COMMUNICATIONS 1

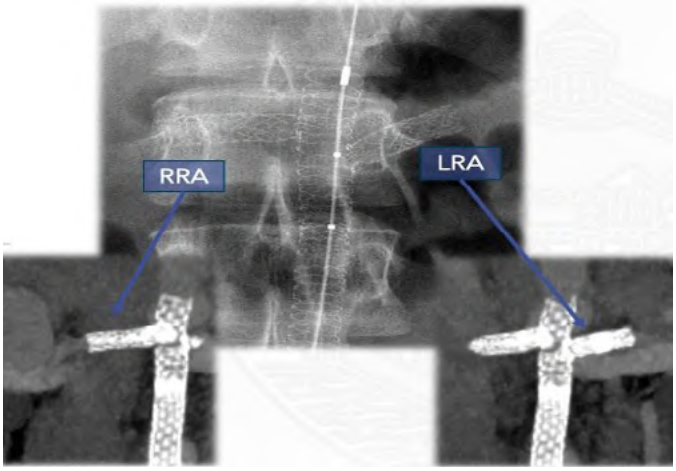
CR01 AORTO-GASTRIC FISTULA IN A PREVIOUS BOVINE AORTIC THORACO-ABDOMINAL GRAFT FOR AORTIC STENTS INFECTION IN A MID-AORTIC SYNDROME

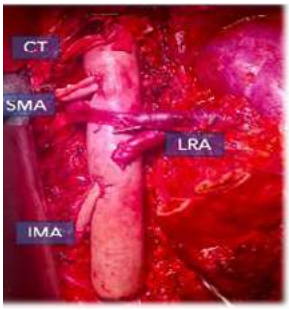
Francesco Maiorano, Emma Musso, Fabio Verzini

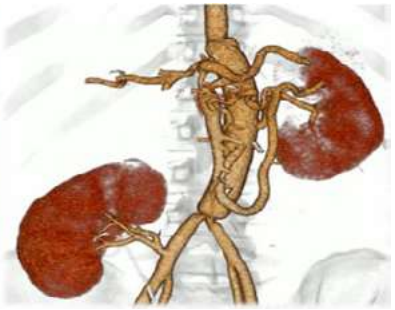
Vascular Surgery Unit, Department of Surgical Sciences, University of Turin, Molinette hospital, Turin, Italy

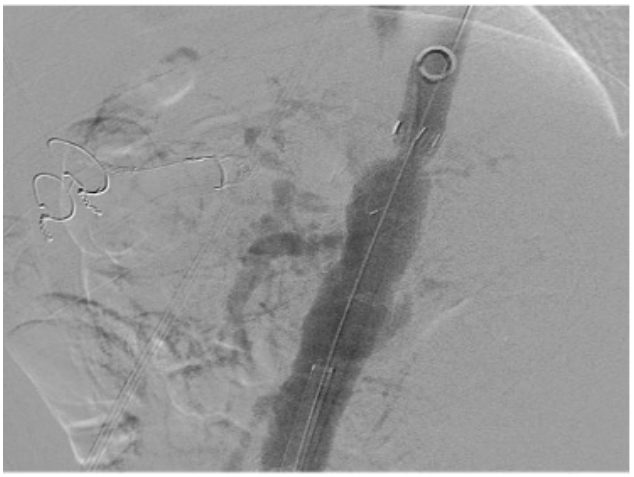
Aortic grafts infection is a relatively rare but potentially life-threatening pathology, and aorto-enteric fistulae (AEF) represent the most lethal subset of aortic infections. Primary AEF are defined as a spontaneous communication between the aorta and any portion of the gastrointestinal (GI) tract. Secondary AEF occur when there is a communication between an enteric structure and a previous aortic graft. Patients' presentation ranges from occult anemia to catastrophic GI hemorrhage and sepsis. To diagnose this condition, the MAGIC group developed a list of major and minor criteria with respect to clinical, surgical, radiological, and laboratory findings. 24-yo patient, with history of mid-aortic syndrome, smoke and chronic renal failure. In 2011, 2013 and 2015, he underwent multiple procedures of aortic and renal stenting. In 2022 he experienced MRSA-infection of these stent-grafts. In 2023, for persistence of the infection, he underwent at another hospital a right kidney autotransplant and aortic reconstruction with a physician made bovine pericardial tube graft and visceral vessels reimplantation with a thoraco-phreno-laparotomy (TPL) access. Admitted to our emergency department in 2025 for hematemesis and melena, the immediate CT-scan and gastroscopy showed an aortogastric fistula and persistence of graft infection with perigraft air, celiac trunk (CET) occlusion and severe stenosis of the superior mesenteric artery (SMA). Due to sudden hemorrhagic shock, he was treated in emergency setting with endovascular exclusion of the fistula

using an aortic cuff Gore Excluder as bridge therapy. The day after he underwent a redo TPL with gastric fundus resection and attempt to total prosthetic explantation, made impossible by the extensive adhesion and frailty of the bovine pericardial tube graft. Hence, a visceral revascularization was performed, with a thoracic aorta-CET-SMA bypass (bifurcated Dacron Silver prothesis) and extensive washing of the site with antiseptic solution. The patient was discharged after 15 days with long term targeted antibiotic therapy. This case report highlights the complexity of the vascular graft infection, especially in case of re-infection. AEF is one of the most challenging complication to deal with, due to emergency timing, surgical complexity and high mortality rate. The solution can be found in bridge therapies and unconventional surgeries, with the goal of stabilizing the patient and providing the best possible vascular solution









CR02 ACCURATE OF RCRI AND MFI-5 SCORES AS PREDICTORS OF MORTALITY AND ADVERSE OUTCOMES AFTER THORACIC ENDOVASCULAR ANEURYSM REPAIR

Tomás Calisto[1], Samuel Cardoso[2], Ivone Silva[3]

[1] School of Medicine and Biomedical Sciences (ICBAS), University of Porto
[2] Department of Angiology and Vascular Surgery, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António; Unit for Multidisciplinary Research in Biomedicine (UMIB), School of Medicine and Biomedical Sciences (ICBAS), University of Porto; ITR - Laboratory for Integrative and Translational Research in Population Health
[3] Department of Angiology and Vascular Surgery, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António; Department of Renal Transplantation, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António; Unit for Multidisciplinary Research in Biomedicine (UMIB), School of Medicine and Biomedical Sciences (ICBAS), University of Porto; ITR - Laboratory for Integrative and Translational Research in Population Health

INTRODUCTION: Thoracic endovascular aortic repair (TEVAR) offers significant advantages but remains associated with notable morbidity and mortality. Risk stratification tools such as the Revised Cardiac Risk Index (RCRI) and the Modified Frailty Index-5 (MFI-5) have been validated for other surgical procedures as predictors of mortality and major adverse cardiac events (MACE). The Comprehensive Complication Index (CCI), derived from the Clavien-Dindo classification, facilitates the longitudinal quantification of postoperative morbidity. This study evaluates the predictive accuracy of the RCRI and MFI-5 for morbidity and mortality in patients undergoing TEVAR.

MATERIALS AND METHODS: Patients who underwent TEVAR between January 2010 and December 2024 were retrospectively selected, excluding those with insufficient data for score calculation, prior aortic instrumentation, or aortic pathology of traumatic, neoplastic, or thrombotic origin.

For each patient, the RCRI, MFI-5, and CCI were calculated. Predictive performance was assessed using the Area Under the Receiver Operating Characteristic curves (AUC) for 30-day and 1-year mortality, MACE, and severe morbidity (CCI > 26.2 at 1 year).

RESULTS: Among 84 patients, 79% were male, with a mean age of 69 years (SD = 13). One-year follow-up was completed by 90.5% of the cohort, with 100% completing the 30-day follow-up. Both RCRI and MFI-5 exhibited limited predictive accuracy for postoperative MACE (30-day/1-year AUC = 0.615/0.474 for RCRI and 0.557/0.537 for MFI-5), mortality (30-day/1-year AUC = 0.591/0.429 for RCRI and 0.667/0.577 for MFI-5), and severe morbidity (1-year AUC = 0.483 for RCRI and 0.526 for MFI-5).

CONCLUSION: In this cohort, the RCRI and MFI-5 demonstrated poor predictive performance for morbidity and mortality following TEVAR. These findings highlight the necessity for further research, including exploratory analyses to identify additional predictive factors and to guide the development of an optimized risk assessment tool for this patient population.

CR03 NINE-MONTH SINGLE CENTER EXPERIENCE WITH ORBITAL ATHERECTOMY SYSTEM FOR HEAVILY CALCIFIED INFRA-INGUINAL LESIONS

José Oliveira-Pinto[1], Jacinta Campos[2], Luís Machado[2]

[1] Departamento de Angiologia e Cirurgia Vascular, Unidade Local de Saúde de Trás os Montes e Alto Douro; Departamento de Cirurgia e Fisiologia, Faculdade de Medicina da Universidade do Porto
[2] Departamento de Angiologia e Cirurgia Vascular, Unidade Local de Saúde de Trás os Montes e Alto Douro

INTRODUCTION: Technologies leading to luminal gain and plaque modification are key to appropriate vessel preparation and consequently optimization of endovascular treatment of infrainguinal Lesions.
Orbital atherectomy (OA) has recently gained momentum across european countries whenever plaque debulking is required, with reports of significant lumen gains along with reduced rates of primary stenting.
The purpose of this study was to assess the safety and short-term efficacy of OA for chronic infrainguinal arterial heavily calcified disease.

OBJECTIVE: A single center retrospective review of patients treated with OA for occlusive heavily calcified infrainguinal disease between June 2024 until February 2025 was performed. The primary endpoint was freedom from target lesion revascularization (TLR), including adjunctive stenting, or restenosis. Secondary interventions and major adverse limb events (MALE) during follow-up were secondary endpoints.

RESULTS: During a nine-month period, 10 patients underwent infra-inguinal OA at our center. All patients were male, with median age of 68 [range, 46-85 years].
History of smoking was present in six patients, Diabetes Mellitus (DM) in five and nine patients were hypertensive.
Two patients were at Rutherford 3 stage, two patients were at Rutherford 4 stage, four patients were at Rutherford 5 and two patients were at Rutherford 6. Calcified lesion extent was femoro-popliteal in four patients, femoral-popliteal-distal in four patients and popliteal-distal in two.
Solid crowns were used in all the patients: 1 patient (1,25 and 2mm); seven patients (1.5mm) and 2 patients (2mm). All procedures were sucessfull, with one patient requiring adjunctive intra-operative stenting (SUPERA®), due to imediate and refractory reestenosis.
Median follow-up period was 5,1 months [IQR 2.3-9.3]. Freedom from TLR was 90% at 3 months and 77% at 5 months.
During follow-up, freedom from secondary intervention was 100% at 3 months and 85% at 5 months. No MALE was registered during follow-up period.

CONCLUSION: Despite the complex lesions included in the retrospective analysis, OA appears to be a safe and effective option for severely calcified lesions, with high freedom from TLR and reduced primary stenting usage. Larger studies with longer follow-up are warranted to confirm present findings.

CR04 TEVAR IN BLUNT TRAUMATIC THORACIC AORTIC INJURY: A SINGLE CENTRE RETROSPECTIVE COHORT STUDY

Adriana Ferreira, Sofia Melo, Ryan Gouveia e Melo, Ruy Fernandes e Fernandes, Laura Carvalho, Maria Serrano, Emanuel Silva, João Ribeiro, Luís Mendes Pedro

Unidade Local de Saúde de Santa Maria

INTRODUCTION: Traumatic blunt thoracic aortic injury (BTAI) is associated with a high mortality rate and according to current guidelines, thoracic endovascular aortic repair (TEVAR) is considered the standard of care. This study aims to analyse our single centre experience in the management of BTAIs that were submitted to TEVAR.

METHODS: A retrospective cohort study was performed including all patients submitted to TEVAR due to BTAI from January 2009 to December 2024. Data were collected from electronic medical records. We assessed perioperative outcomes, procedural details, complications, mortality and lost during follow-up.

RESULTS: Thirty-tree patients were included [median age 44.1 years (interquartile range: 27.2–61 years), 87.9% males]. The predominant cause of BTAI was motor vehicle accidents (63.6%, n = 21). All patients presented with concomitant injuries

(51.5% brain, 51.5% vertebral body and hip fractures, 63.6% costal arch fractures, 33.3% liver, 30.3% upper and 60.6% lower limb). Mean Injury Severity Score on admission was 38.6 (±13.6). According to the ESVS BTAI degree of injury, 9.1%, 81.8% and 9.1% presented with grade I, II and III respectively. A median of 12.7 hours between accident and repair was found. Coverage of left subclavian artery was needed in 21 cases (67.7%) with posterior revascularization in one patient (3.2%) due to left upper limb ischemia. A mean oversizing of 28.5% (± 13.1) was found. In-hospital mortality was 15.1% and three (9.1%) required an early vascular reintervention. There were no cases of reintervention during follow-up. Six patients died during a median follow-up time of 14 months (0-76 months), with overall survival being 81.0% (95%CI: 59.9-91.7) and 72.0% (95%CI: 44.4-87.5) at 1 and 5 years, respectively. Of the patients who died, only one was aortic/procedure related due to graft infection complicated with a ruptured aortic arch pseudoaneurysm at the proximal sealing zone. No cases of bird-beak or endoprosthesis collapse were found. During follow-up, one patient developed an endoleak type IA. Of the patients who survived the initial event, 80.7% were lost during follow-up.

CONCLUSION: In our experience TEVAR for BTAI proved to be effective, with a low rate of procedure related complications. However, there is a need for effective strategies to maintain a long term follow up in this young population in order to understand the late behaviour of endografts in this setting.

Key Words: Aortic trauma, BTAI, TEVAR

CR05 ENDOVASCULAR EMBOLIZATION FOR HAEMORRHOID DISEASE (EMBORRHOID): A SINGLE-CENTER CASE REPORT ON THE FIRST THREE CASES

Samuel Cardoso[1], Luis Loureiro[2], Andreia Pinelo[3], Henrique Almeida[3], Miguel Queirós[3], João Marcelo Cabral[3], Mónica Bandeira[3], Carlos Pereira[2], Rui Machado[4]

[1] Department of Angiology and Vascular Surgery, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António; Unit for Multidisciplinary Research in Biomedicine (UMIB), School of Medicine and Biomedical Sciences (ICBAS), University of Porto; ITR - Laboratory for Integrative and Translational Research in Population Health
[2] Department of Angiology and Vascular Surgery, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António; Department of Renal Transplantation, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António
[3] Department of Angiology and Vascular Surgery, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António
[4] Department of Angiology and Vascular Surgery, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António; Department of Renal Transplantation, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António; School of Medicine and Biomedical Sciences (ICBAS), University of Porto

INTRODUCTION: Hemorrhoidal disease is a common anorectal condition affecting millions globally, often presenting with symptoms like rectal bleeding and pain. Traditional treatments, such as haemorrhoidectomy, can be invasive and painful, with prolonged recovery times. The "Emborrhoid" technique, a minimally invasive procedure, involving the embolization of the superior rectal arteries using coils or embolic particles, offers a promising alternative. It provides patients with chronic hemorrhoidal bleeding or those who are ineligible for surgical treatment. This case report details the first three patients treated with the “Emborrhoid” technique, showcasing its potential benefits in managing hemorrhoidal disease.

METHODS: This study reports the first three cases endovascular embolization for haemorrhoidal disease. The patients (two men and one woman) presented with disabling chronic rectal bleeding and were diagnosed with stage III hemorrhoidal disease. This treatment was decided by a multidisciplinary team (proctologist, colorectal surgeon and vascular surgeon).

RESULTS: The mean age of patients was 35.3 years (range between 22 and 50 years). Two of the patients had previously undergone to sclerotherapy and proctological surgery. The technical success of the embolization procedure was 100 %. At 1-month follow-up, clinical success was observed in 66 % (2/3) of the patients. During the first six months of follow-up, two patients experienced rebleeding and were submitted to additional embolization of the rectal arteries, which successfully resolved the rectal bleeding. No pain or ischemic complications were observed in any of the patients.

CONCLUSION: The “Emborrhoid” technique presents a promising minimally invasive option for patients with chronic hemorrhoidal disease, particularly those who are not candidates for traditional surgery. This case reports supports the favourable short-term clinical outcomes - high technical and clinical success and minimal complications.

CR06 CALL FOR ACTION: LACK OF EVIDENCE ON THE IMPACT OF ELECTRONIC CIGARETTES ON PERIPHERAL ARTERIAL DISEASE

Maria Neves Carmona, Eduardo Silva, Celso Nunes, Miguel Castro, Luís Orelhas, Jorge Costa, Manuel Fonseca

ULS Coimbra

INTRODUCTION: Electronic cigarette (e-cigarette) use has been associated with the progression of atherosclerosis and cardiovascular disease. E-cigarette aerosols lead to endothelial dysfunction, oxidative stress, inflammation, and dyslipidemia. Recent reviews focus on pathophysiology and significant clinical implications, mostly regarding cardiac disease.
We aimed to identify the impact of e-cigarette use on peripheral arterial disease on a clinical level. To our knowledge, no previous study has focused on this specific theme.

METHODS: A systematic review was performed based on PRISMA guidelines. Pubmed and SCOPUS were searched. Inclusion criteria: any study on adult patients with peripheral

artery disease and a history of e-cigarette vaping. The primary outcome we wanted to evaluate was the amputation rate. Other secondary clinical outcomes to analyze were revascularization results and mortality related to the disease. We excluded any study focused on pregnant females.

RESULTS: Our search yielded 4511 studies. Only one study complied with the criteria previously defined. It was a report on three cases of patients with known peripheral arterial disease who switched from cigarette smoking to nicotine e-vaping and developed further arterial complications. There was a high risk of bias (ROBINS-I V2). We found two other studies that focused on alternative products to combustion cigarettes (Swedish smokeless tobacco - snus) but they were not included as we wanted to focus on electronic cigarettes (more common in the Portuguese context than snus).

CONCLUSION: Despite the growing evidence on a microscopic level of the detrimental effects of e-cigarette use on atherosclerosis and cardiovascular disease, there is a significant lack of evidence on the impact of this risk factor on peripheral arterial disease (disease progression and treatment results). With the growing access to these products in Portugal, there is a preeminent need to find answers to these questions.

CR07 COMPLEX ILIAC AXIS ARTERIAL LESIONS APPROACH: WHAT SHOULD BE DONE FIRST?

Gonçalo Araújo, Ricardo Correia, Helena Fidalgo, Adriana Figueiredo, Joana Cardoso, Carolina Tavares, Inês Gueifão, Ana Loureiro, Maria Emília Ferreira

Hospital de Santa Marta

INTRODUCTION: Complex iliac axis arterial lesions were traditionally treated with conventional methods. Despite the TASC II recommending open surgery for these cases, endovascular treatment has shown significant improvements in managing this group of lesions. However, evidence regarding long-term outcomes remains limited. This study aims to compare outcomes between conventional surgery and endovascular treatment in patients with complex iliac artery disease

METHODS: Retrospective, single-center, comparative study. From January 2015 to January 2025, all patients' limbs with chronic lower limb ischemia due to iliac axis lesions who underwent an aortofemoral bypass or a percutaneous angioplasty of the entire iliac axis as a first limb revascularization procedure were considered. For limbs who underwent endovascular treatment (EVT), only those with iliac artery chronic total occlusions were included. Patients' limbs were categorized into two groups: those undergoing conventional surgery (AF group) and those undergoing EVT (EVT group). Both groups were compared regarding the primary endpoints of rates of reintervention, amputation and overall survival. Secondary endpoint included hospitalization time following primary procedure.

RESULTS: The study included a total of 97 treated limbs in a cohort of 68 patients, of which 33% (N=23) presented with intermittent claudication and 67% (N=45) with chronic limb-threatening ischemia (CLTI). 82% of the patients were male (N=56) and the mean age was 64 yeas. The median time of follow up was 36 months. The EVT group included 34 treated limbs (35%) in 32 patients and the AF group included 64 treated limbs (65%) in 36 patients. Regarding the primary endpoints, no statistically significant differences were found between groups in rates of reintervention (p=.35), amputation (p=.92) and death (p=.5) at 36 months of follow-up. Regarding secondary endpoints, the mean hospital stay was longer in AF group (p<.001).

CONCLUSION: This study demonstrates that both conventional and endovascular treatment are effective for managing complex iliac axis lesions, with no significant differences in long-term outcomes. However, EVT offers the advantage of a significantly shorter hospital stay. In the authors perspective, a single iliac axis disease can safely undergo a first EVT procedure without compromising further.

CR08 DESAFIOS E SOLUÇÕES: LITOTRÍCIA INTRAVASCULAR NO SETOR AORTO-ILIACO

Daniela Pereira Silva, Gonçalo Queiroz Sousa, Joana Silva, Maria José Ferreira

Hospital Garcia de Orta

INTRODUÇÃO: A revascularização endovascular tem ganho uma ampla aceitação no tratamento da Doença Arterial Obstrutiva Periférica (DAOP). No entanto, a presença de calcificação grave associa-se frequentemente a resultados subótimos, tanto pelo risco de lesões, como pela dificuldade de expansão do lúmen na angioplastia ou implantação de stents. A litotripsia intravascular (IVL) surge como uma técnica de preparação de vaso, utilizando energia pulsátil emitida através dum cateter de balão de angioplastia, permitindo a fratura do cálcio sem lesar a parede da artéria e com risco de embolização mínimo.
No sector aorto-ilíaco ainda é recente a sua utilização, com apenas um estudo, Disrupt PAD III, que considera a IVL segura e eficaz na doença ilíaca, com estenose residual média final de 12,0% ± 12,1%.

CASOS CLÍNICOS: Mulher de 69 anos, DRC sob HD, com DAOP grau IV do MID com calcificação aórtica importante e oclusão de ambas as artérias ilíacas comuns (AIC). Submetida a IVL na AIC direita seguida de angioplastia com balão com fármaco. No final, com bom resultado angiográfico, com

recuperação de pulso femoral, tendo fluxos trifásicos na artéria femoral comum no eco-doppler aos 3 meses pós-IVL. Mulher de 67 anos com antecedentes de HTA e AVC em 2013, admitida com DAOP grau IV do MID por múltiplas estenoses e oclusão curta ostial da AIC direita. Foi submetida a IVL de toda a AIC direita, com ótimo resultado no controlo final e recuperação dos pulsos femoral e poplíteo ipsilaterais.
Mulher de 79 anos com antecedentes de HTA, dislipidemia e hipotiroidismo, submetida a kissing-stent da bifurcação aórtica por DAOP grau III bilateral em 2023. Readmitida em 2025 com DAOP grau III bilateral por estenose do stent ilíaco esquerdo e oclusão do stent ilíaco direito devido a compressão externa por calcificação grave. Foi submetida a IVL intra-stent do eixo ilíaco esquerdo com bom resultado e com recuperação de pulsos distais. Posteriormente foi submetida a bypass femoro-femoral esquerdo-direito. Teve alta assintomática e com tempo de preenchimento capilar rápido bilateralmente.

CONCLUSÃO: Estes três casos mostram 3 usos distintos deste dispositivo no sector aorto ilíaco, um como preparação de vaso, noutro como abordagem final e noutro numa estenose de stent. Apesar do resultado positivo ao 1º e 3º meses, é necessário o acompanhamento a longo prazo destes doentes e mais investigação sobre a durabilidade das intervenções deste dispositivo no sector aorto-ilíaco.

CR09 RADIAL PUNCTURE AS A SAFE ALTERNATIVE FOR ENDOVASCULAR PROCEDURES: A SINGLE-CENTER EXPERIENCE

Ana Correia Matos, Tiago Ferreira, Vitor Bettencourt, Alberto Henrique, Orlanda Castelbranco

Hospital Egas Moniz

INTRODUCTION: Radial access is utilized in multiple vascular procedures. It possesses inherent characteristics that render it advantageous: it is more superficial, thereby facilitating puncture; its location over the radius enables effective compression against a bony structure; and finally, it exhibits collateral circulation via the ulnar artery and palmar arch. A primary advantage of this approach is rapid patient mobilization, with the potential for same-day discharge. Moreover, when compared to femoral/brachial punctures, it is associated with a lower incidence of access site complications, including hemorrhage/hematoma, pseudoaneurysm, arteriovenous fistulas, and neurological lesions. Our department has a long-standing practice of performing diagnostic angiography via the radial route, conducting more than 200 angiographies annually without complications and with same-day discharge. In this context, the progression to endovascular procedures seemed logical to us.

AIMS: This study aims to demonstrate the feasibility of using radial access for endovascular procedures, pre/post-procedure, preparation and compression techniques, and case selection. Additionally, we will characterize patient demographics, the anatomical areas treated, the maximum diameter of the material used, and assess immediate complications.

METHODS: Radial access review and endovascular procedures (2020-24) at Lisbon Western LHU.

RESULTS: Over 4 years, we performed 9 endovascular procedures using the radial artery as the vascular access site. The Barbeau test was conducted in all patients and a vasodilating solution was administered. The patient cohort consisted of 8 males and 1 female, with a mean age of 68 years. The procedures performed included: 3 cases of iliac axis revascularization, 2 cases of femoropopliteal bypass angioplasty, 1 splenic aneurysm embolization with coils, 1 renal artery stent placement, and 1 subclavian artery stent placement. We also report a case of right axillary artery pseudoaneurysm exclusion with a stent via radial and femoral puncture. A 5 Fr introducer was used in 5 cases, and a 6 Fr introducer in 2 cases. TR BAND® compression was applied in all cases. All procedures were performed successfully, without complications.

CONCLUSION: Radial access is a safe, effective alternative for endovascular procedures, showing no correlation between target anatomy, material diameter, and complications. Earlier discharge is possible, reducing pressure on hospital wards.

CR10 INITIATING CELIPROLOL TREATMENT FOR VASCULAR EHLERS-DANLOS: CLINICAL PROTOCOL AND CHALLENGES

Luis Loureiro, Cláudia Reis, Nuno Lamas, José Leitão, Margarida Coelho, João Carvalho, José Pereira, Rui Machado

Grupo de Estudo e Tratamento de Anomalias Vasculares de Adultos e Crianças do Santo António, ULS Santo António

BACKGROUND: Vascular Ehlers-Danlos Syndrome (vEDS) is a rare connective tissue disorder characterized by significant arterial fragility caused by mutations in the COL3A1 gene, leading to impaired type III collagen synthesis. This genetic anomaly predisposes patients to life-threatening arterial ruptures and dissections, representing a clinical challenge due to limited therapeutic options and uncertainty regarding treatment efficacy. Celiprolol, a beta-blocker with vasodilatory properties, has been shown to reduce vascular complications in these patients; however, its clinical use remains hampered by logistical difficulties, regulatory barriers, and limited availability.

METHODS: After significant institutional advocacy and correspondence with regulatory entities, celiprolol therapy was successfully introduced for three adult patients diagnosed with vEDS. A protocol was meticulously developed, initiating treatment at 200 mg orally once daily, with dose increments of 200 mg every six weeks until achieving a maximum dose of 600 mg/day or the highest tolerable dose. Daily monitoring included rigorous tracking of blood pressure and heart rate, alongside systematic documentation of adherence and potential adverse effects (fatigue, dizziness, and orthostatic hypotension), using structured follow-up forms designed specifically for this purpose.

RESULTS: Preliminary clinical observations from these patients include consistent monitoring of blood pressure, heart rate at rest and during physical exertion, treatment adherence, and detailed recording of any reported adverse symptoms. This structured approach facilitated early identification and prompt management of side effects, enabling personalized dosage adjustments and fostering effective multidisciplinary communication.

CONCLUSION: Introducing celiprolol therapy for patients with vEDS involved overcoming substantial administrative and regulatory challenges, highlighting critical gaps in accessibility to essential medications for rare conditions. Our initial experiences underline the importance of a structured therapeutic protocol and rigorous monitoring to effectively balance therapeutic efficacy and patient safety in managing this complex disease. Further efforts should aim to simplify regulatory processes and improve the availability of targeted treatments for rare, severe disorders such as vEDS.

SESSÃO PRÉMIO 3 - COMUNICAÇÕES ORAIS
PRIZE SESSION 3 – ORAL COMMUNICATIONS

C015 RENAL ARTERY OCCLUSION AFTER COMPLEX ENDOVASCULAR AORTIC REPAIR: INCIDENCE, OUTCOMES, REINTERVENTION TIMING, AND IMPACT ON RENAL FUNCTION

Tiago Magalhães[1], Ruy Fernandes e Fernandes[1], Ryan Gouveia e Melo[1], Carolina Passos[1], Mariana Costa[2], Luís Mendes Pedro[1]

[1] Serviço de Cirurgia Vascular, Unidade Local De Saúde Santa Maria
[2] Faculdade de Medicina da Universidade de Lisboa

INTRODUCTION: Complex endovascular aortic repair has become the first-line treatment option in most patients with thoraco-abdominal (TAAA) and complex abdominal aortic (CAAA) aneurysms. However, target vessel (TV) instability remains a concern during follow-up. We aimed at analyzing the outcomes regarding patency and late revascularization of renal fenestrations and branches in our cohort.

METHODS: A single-center cohort study based on a retrospective analysis of consecutive patients admitted for treatment of TAAA and CAAA using fenestrated and/or branched endografts (FB-EVAR) was performed, between May of 2011 and December 2024. Outcomes include technical success (TS), target renal occlusions, primary patency rate, renal-related late reintervention, time until reintervention, and their impact on renal function.

RESULTS: A total of 210 patients (79% male) were included, with a mean age of 72 years (±7.9). 53.9% (n=92) had TAAA, and 118 (43.9%) had CAAA. TS was achieved in 92.8% of cases. A total of 785 TV were treated, including 201 right renal arteries (RRA) and 200 left renal arteries (LRA). Renal occlusions were observed in 22 cases (5.5%), with primary patency rates at 12 and 36 months of 97.0% and 95.7%, respectively, for the RRA, and 93.7% and 91.0% for the LRA. Endografts with a branched design were associated with a higher rate of renal TV occlusion (p=0.013). Late reintervention for occluded TV was performed in 4 patients (6 branches and 1 fenestration). 2 patients had stent occlusion for 24h, one for 18 days, and a fifth patient for 21 days. Reinterventions were divided into endovascular and open revascularizations. In the open group, 1 patient underwent bilateral renal revascularization (21 days after occlusion), recovered urine output but did not recover renal function. In the endovascular group, all recovered renal function and were discharged without requiring dialysis, with a mean increase in creatinine (Cr.) of 0.85 mg/dL (±1.09). Among patients with renal artery occlusion who did not undergo intervention, the mean increase in Cr. was 1.98 mg/dL (±2.07) (p=0.230), and 4 (29%) required permanent dialysis.

CONCLUSION: Endovascular repair demonstrated high TS and satisfactory mid-term renal artery patency rates. However, TV occlusion remains a concern, particularly with branched endografts. Reintervention in selected cases of occlusion appears to be feasible, even after several hours, with possible preservation of renal function.

CO16 ACUTE MESENTERIC ISCHEMIA: TOO FRAIL OR TOO LATE - PART II

Andreia Braz Pinelo, Luis Loureiro, Marco Pires, Daniel Mendes, Henrique Almeida, Miguel Queirós, João Cabral, Samuel Cardoso, Rui Machado

Unidade Local de Saúde de Santo António

INTRODUCTION: Acute mesenteric ischemia (AMI) is a life-threatening emergency with persistently high mortality rates, requiring improved tools for perioperative risk assessment. This study investigates the real-world outcomes of patients with occlusive arterial AMI undergoing mesenteric revascularization, focusing on predictors of short-term mortality.

METHODS: A retrospective, single-center analysis was conducted on patients undergoing emergent mesenteric revascularization for occlusive arterial AMI between January 2015 and May 2024. The primary outcome was 30-day survival; secondary outcomes included predictors of in-hospital mortality based on preoperative laboratory parameters.

RESULTS: Sixty patients (mean age 74.9 years) were included, with a 30-day survival rate of 45%. Of the 60 patients, 16 (75%) with acute-on-chronic symptoms survived, compared to 9 (30%) with acute onset (p=0.003). Multivariate Cox regression identified lactate, bicarbonate (HCO_3), the HCO_3-to-lactate ratio, and neutrophil count as independent predictors of 30-day mortality. The HCO_3-to-lactate ratio ≤10 demonstrated high predictive accuracy (AUC 0.832, sensitivity 90.6%, specificity 75%). In acute-onset cases, excluding acute-on-chronic symptoms improved specificity to 100%.

CONCLUSION: AMI remains a critical condition with poor outcomes. The HCO_3-to-lactate ratio proved to be a robust prognostic marker, reflecting metabolic derangements and tissue hypoperfusion. Its use could guide perioperative risk stratification and clinical decision-making.

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CO17 MAPPING SUPRA-AORTIC TRUNKS: ANATOMIC INSIGHTS FOR ENDOVASCULAR AORTIC ARCH REPAIR

Luís Fernandes[1], Petroula Nana[2], Diogo Silveira[1], Alexandra Canedo[1], Tilo Kolbel[2]

[1] ULSGE
[2] Aortic Center, Hamburg

OBJECTIVE: This study aims to analyze variations in supra-aortic trunk (SAT) clock positions based on baseline characteristics in patients undergoing endovascular aortic arch repair with proximal sealing in Ishimaru zones 1-2.

METHODS: A retrospective review was conducted on preoperative computed tomography angiographies (CTAs) of patients treated endovascularly for various aortic diseases requiring sealing in Ishimaru zones 1-2. CTAs from 2011 to 2023 were analyzed using multiplanar reconstruction software (Aquarius iNtuition Edition version 4.7.2.10-12; TeraRecon Inc., Foster, CA, USA) to determine SAT clock positions. Baseline parameters, including age, sex, aortic arch type, and history of open ascending aortic replacement, were assessed for their influence on SAT positioning.

RESULTS: Of 138 eligible patients, 130 CTAs were available for analysis. Cohort's mean age was 71.1 ± 10.0 years, with 62.6% being male. No significant correlation was found between SAT clock positions and patient age or sex. Type I aortic arches were associated with more anterior SAT positions (Brachiocephalic trunk [BCT]: 12:30, left common carotid artery [LCCA]: 11:45) compared to type II and III arches, whereas type III arches exhibited a more posterior orientation (BCT: 12:45, LCCA: 12:00). The left subclavian artery position remained consistent across all arch types (12:00). Additionally, prior ascending aortic repair significantly influenced SAT clock positions.

CONCLUSION: SAT clock positions vary based on aortic arch morphology and prior open ascending aortic replacement. These findings may help guide the development of standardized off-the-shelf aortic arch endografts, improving their applicability and effectiveness across diverse patient populations.

CO18 ARTIFICIAL NEURAL NETWORK SCORE POTENTIAL IN IN-HOSPITAL MORTALITY AFTER RUPTURED AORTIC ANEURYSM REPAIR IN A TERTIARY HOSPITAL

Leandro Nóbrega, Lara Dias, Tiago Pereira, Tiago Moura, Rita Piedade, Pedro Paz Dias, Marina Dias-Neto, Joana Ferreira, Armando Mansilha

ULS São João

INTRODUCTION: Isolated application of scoring systems is not recommended for selection of patients for repair or palliation in ruptured abdominal aortic aneurysm (rAAA), but they may help in management discussion with patients and family. Artificial intelligence may lead to better and improved scoring systems in the future, but current evidence is scarce. The aim of this study is to assess applicability and potential of an artificial neural network (ANN) score in a tertiary hospital.

METHODS: A retrospective review of patients that were submitted to repair for rAAA in a tertiary institution from January 2012 to December 2024 was performed. Demographics, pre-operative and procedural data were collected. One point was assigned for each ANN item: age>70 years, loss of consciousness, cardiac arrest, and shock. The primary outcome was in-hospital mortality.

RESULTS: A total of 150 patients were admitted for rAAA repair between 20212 and 2024. Three patients were excluded for lack of clinical information. The mean age was 73.7 (±9.5) years and the majority were male (91.2%; n=134). The prevalence of smoking history was 47.6% (n=70), while 71.4% (n=105) and 13.6% (n=20) had hypertension and diabetes mellitus, respectively. Open repair was performed in 58.5% (n=86). According to the ANN score, 17.0% (n=25) scored 0, 25.2% (n=37) had a score of 1, 32.0% (n=47) scored 2, 19.0% (n=28) scored 3 and 6.8% (n=10) scored 4. In the univariable analysis, patients with a score of 3 and 4 had higher risk of in-hospital mortality (OR 11.8; 3.2-43.0, CI 95%; p<0.001 and OR 10.3; 1.7-60.9, CI 95%; p=0.010, respectively), whilst patients with a score of 2 had higher mortality but did not reach statistical significance (OR 2.7; 0.9-7.7, CI 95%; p=0.064). Additionally, mortality rates were 28.0% (n=7), 35.1% (n=13; OR 1.4; 0.5-4.2,

CI 95%; p=0.556), 51.1% (n=24), 82.1% (n=23) and 80.0% (n=8) for scores from 0 to 4, respectively. The area under the curve for ANN score was 0.72 (CI 95% 0.63 - 0.80).

CONCLUSION: The ANN score had moderate predictive power for in-hospital mortality in our population, especially for patients with higher scores. It has the advantage of using clinical factors that are easing to obtain. However, the unicentric and retrospective nature are limitations of our study. Future models based in a higher number of patients may yield better predictive models.

CO19 A DECADE OF OPEN ABDOMINAL AORTIC ANEURYSM REPAIR - INCIDENCE AND RISK FACTORS FOR POSTOPERATIVE INCISIONAL HERNIA

Rita Piedade, José Miguel Vilas Boas, Filipa Jácome, Jorge Costa Lima, Joana Ferreira, Armando Mansilha

ULS São João

INTRODUCTION: Incisional hernia (IH) is a well-documented complication following open abdominal aortic aneurysm (AAA) repair, with incidence rates potentially higher than historically reported. Understanding potential risk factors for IH development is important for optimizing perioperative strategies and long-term patient outcomes. This study aimed to evaluate the incidence of IH after open AAA repair, and identify associated risk factors associated with IH development.

METHODS: We retrospectively extracted data from patients submitted to open AAA repair between January 2013 and December 2023. Patients demographics, medical history, perioperative characteristics, and follow-up data were analyzed. Additionally, computed tomography (CT) scans performed during follow-up were reviewed to assess IH development.

RESULTS: We analyse data from 139 patients, who underwent open AAA repair at our institution between January 2013 and December 2023, those who died within 30 days postoperatively or were lost to follow-up were excluded. The cohort had 89 patients, with a mean age of 66.2 years, with 96.6% being male. Hypertension was present in 66.3% of patients, dyslipidemia in 60.7%, and diabetes mellitus in 16.9%. A history of smoking was identified in 82.9% of patients. Emergency procedures accounted for 18.0% of cases. Surgical techniques included aorto-aortic bypass (n=33), aorto-bi-iliac bypass (n=26), aorto-bi-femoral bypass (n=24), and aorto-iliac and femoral bypass (n=6).
The incidence of IH was 41.6% (37 of 89 patients), with 19 patients requiring surgical repair. The median follow-up duration was 40 months (IQR: 18-71) and 20 patients died during follow up. No significant associations were found between IH development and patient demographics or medical history. However, operative time was significantly longer in patients who developed IH (p= 0.015), with median time of 278 minutes for incisional hernia group and 230 for non incisional hernia group.

CONCLUSION: Insicional hernia after open AAA repair is a frequent complication, often requiring surgical repair. Prolonged operative duration was identified as a significant risk factor for IH development, while no other perioperative or patient-related variables demonstrated a significant association. Further studies are warranted to explore preventive strategies and optimize long-term surgical outcomes.

CO20 EVALUATING PROGNOSTIC RISK SCORES FOR 30-DAY MORTALITY IN RUPTURED AAA REPAIR: A COMPARATIVE ANALYSIS OF DISCRIMINATION AND CLINICAL UTILITY

Ana Carolina Silva Passos

ULS Santa Maria

INTRODUCTION: Ruptured abdominal aortic aneurysms(rAAA) remain a significant cause of death. Several score algorithms have been proposed to predict mortality after rAAA repair but its usefulness in clinical decision-making is still unclear, especially in endovascular treatment(rEVAR)and still require external validity in different populations.The study aim was to analyze the performance of several scoring algorithms in patients treated for rAAA in predicting 30-day mortality and compare its usefulness with our clinical judgment and outcomes.

METHODS: A single-center retrospective cohort study based on consecutive patients treated for rAAA with open surgical repair(OSR) or rEVAR(2010-2025) was performed. Patients with symptomatic AAA, thoraco-abdominal aneurysms, aorto-enteric fistulas, or aortic-graft infections were excluded.Variables necessary to retrospectively evaluate the scoring systems were registered and analyzed, in addition to 30-day mortality and post-operative complications.Four different scoring models[Vascular Study Group of New England rAAA Risk Score(VSGNE);Artificial Neural Network Score(ANN),Harbourview Risk Score(HMC),and Vancouver Score] were analyzed and compared.The performance of each prognostic score was assessed by calculating the area under the receiver operating characteristic(ROC) curve(AUC) based on logistic regression models.Comparisons between AUCs were performed using the DeLong test.

RESULTS: A total of 230 rAAA were included. Median age was 75(IQR:69-81) and 93.9% were male (n=216). 79.6%(n=183) patients underwent OSR.Overall,30-day mortality was 48.7%(n=112), being 53.0% for OSR and 31.9% for EVAR(p=0.010). Overall model performance(discrimination, using AUC) was fair for all scores, being 0.67(95%CI:0.58-076); 0.61(95%CI:0.54-0.68); 0.64(95%CI:0.57-0.71) and 0.63(95%CI: 0.57-0.71) for the HMC, VSGNE, ANN and Vancouver scores, respectively. There were no significant differences in model performance

between scores(p=0.17). In addition, score performance was not significantly different between patients submitted to OSR or rEVAR (p=0.39 for HMC; p=0.92 for VSGNE; p=0.17 for ANN and p=0.52 for Vancouver score).

CONCLUSION: All scores performed similarly, highlighting limited accuracy in predicting mortality. They can help in discussions on transfer, treatment, and expectations management but should not be the sole basis for withholding treatment.

Keywords: Ruptured abdominal aortic aneurysm, mortality, risk scores, open surgery, rEVAR

CO21 PERCUTANEOUS ACCESS CLOSURE FOR FEMOROPOPLITEAL ANGIOPLASTY - A SINGLE-CENTER RETROSPECTIVE STUDY

Ana Carlos Loureiro, Ricardo Correia, Carolina Tavares, Helena Fidalgo, Adriana Figueiredo, Inês Gueifão, Gonçalo Araújo, Gonçalo Rodrigues, Carlos Amaral, Maria Emília Ferreira

Hospital Santa Marta - Unidade Local Saúde São José

Vascular access for endovascular procedures plays a crucial role, particularly when it comes to its closure. In lower limb angioplasty, manual compression (MC) and percutaneous closure devices (PCD) are the most frequently used hemostatic techniques. PCD are associated with a lower incidence of hematoma and a shorter hospital stay. A retrospective observational study was conducted, including all patients submitted to femoropopliteal angioplasty from January to December of 2024. The aim was to evaluate the outcomes of different closure techiques in percutaneous revascularization. Data collection was performed using electronic medical records. Ultrasound-guided arterial puncture, sheath size, closure technique (MC vs. PCD), post-procedural access complications (hematoma, pseudoaneurysm, thrombosis), need for reintervention and the lenght of hospital stay, were the variables assessed.

A total of 158 patients were included in the study (70.5% male, median age 69). In 139 patients (88%), an ultrasound-guided arterial puncture was performed, while in the remaining cases, puncture was guided by anatomy combined with fluoroscopy. 5 Fr sheath was used in 38% of patients and 6 Fr was used in 27.2%. Hemostasis was achieved through MC in 108 patients (68.2%), while a PCD was used in 50 cases (31.6%), with AngioSeal being the most frequently employed (62%), followed by Mynx (34%) and Prostyle (4%). On the PCD group, an immediate failure rate of 10% was observed. Thirteen patients (8.22%) presented with post-procedural access complications, eight (61.5%) in the MC group and five (38.5%) in the closure device one. The most common complication was inguinal hematoma (69.2%), then pseudoaneurysm (30.7%), hemorrhage (7.7%) and arterial thrombosis (7.7%, with Prostyle). Reintervention due to access-related complications was required in 4 patients (2.5%). Patients in the PCD group had a shorter length of hospital stay (p = 0.02).
Effective percutaneous access closure is essential for preventing local complications. MC was the gold-standard technique until the advent of PCD, which have improved patient comfort, facilitated early ambulation and hospital discharge. However, these devices might also be susceptible to failure and complications. This study shows that both arterial closure techniques following femoropopliteal endovascular revascularizations are effective, have low complication rates and that PCD contributes to shorter hospital stays.

SESSÃO PRÉMIO MELHOR POSTER
PRIZE SESSION BEST POSTER

P01 THE GOOD, THE BAD AND THE UGLY: THE TALE OF AN EVER-GROWING ANEURYSM

António Duarte, Alice Lopes, Ana Silva, Pedro Amorim, Luís Mendes Pedro

ULS Santa Maria

OBJECTIVES: Aneurysmal sac growth is a major concern regarding follow-up after endovascular aortic repair (EVAR) and the main reason for aortic reintervention. Despite timely diagnostic tests and interventions, there are some cases of persistent sac growth who warrant further investigation, namely for less frequent etiologies.

CLINICAL CASE: We report the case of a 68-year-old male patient referred due to an asymptomatic 71mm infrarenal abdominal aortic aneurysm. He has a history of heavy smoking habits, severe chronic obstructive pulmonary disease and previous prostatectomy and local radiotherapy. Due to a favorable anatomy and a high surgical risk for open repair, the patient was subjected to standard EVAR in 2019 under general anesthesia and bilateral femoral cutdown access, with no complications. One year follow-up showed no endoleaks nor sac growth.
At three years, a control CT angiography showed late type II endoleak form persistent lumbar arteries, with stable sac diameter. In 2024, due to significant sac growth to 91mm, an urgent CT angiogram showed loss of proximal sealing in addition to type II endoleak. Based on these findings, a custom-made fenestrated cuff was implanted in this patient. Despite adequate sealing and no evidence of type I endoleak or target vessel complications, the patient was admitted in the emergency room after 5 months with de novo abdominal and lumbar pain. Blood tests showed frank leukocytosis and an increase in C-reactive protein levels. Urgent CT angiography showed a 105mm diameter sac and periaortic densification. Blood cultures were collected and the patient was put empirically on meropenem and linezolide. Urgent open conversion was performed with graft preservation, thrombus removal and sac wrapping.

Mycoplasma hominis was isolated from the aneurysm sac and thrombus and the patient was discharged 30 days after the surgery on levofloxacin and doxicycline. One month follow-up showed no signs of recurrence and the patient remains asymptomatic.

CONCLUSION: With the advent of EVAR, there is a greater need to develop robust follow-up protocols. In the absence of clear sources of endoleak, infection may cause over 20% of occult sac growth. In frail and selected patients such as this, sac evacuation and wrapping may be an alternative to graft explantation.

P02 BREAKING TRADITION: SINGLE FEMORAL ACCESS FOR IBD PLACEMENT AFTER EVAR

Luís Fernandes[1], Jose Torrealba[2], Diogo Silveira[1], Alexandra Canedo[1], Tilo Kolbel[2]

[1] ULSGE
[2] Aortic Center, Hamburg

AIMS: Iliac branched devices (IBD) allow antegrade blood flow to the pelvis while maintaining high patency rates and effective aneurysm exclusion. The standard technique typically involves bilateral femoral access and a through-and-through wire. This may be harder to achieve after previous endovascular aortic repair (EVAR) with risk of access site complications and distal migration of the previously placed endograft.
We present a method for placing an iliac branched device after previous EVAR using a single femoral access and a steerable sheath, allowing us to perform a simultaneous kissing balloon of the IBD components.

METHODS: We describe the technique applied to a patient with a type Ib endoleak following a previous aorto-bi-iliac EVAR.

RESULTS: Under general anesthesia, percutaneous left common femoral artery was achieved, and an IBD was successfully deployed in the left common iliac artery without the use of the through-and-through wire. A modified steerable sheath allowed transfemoral retrograde access and bridging covered stent deployment in the hypogastric artery (HA). Kissing dilation was performed to ensure adequate expansion of both external iliac artery and HA components through the single access. A bridging stent between the previous EVAR and the IBD was lastly placed. Control angiogram showed adequate patency and no endoleak.
The access site was percutaneously closed, and the patient had an uneventful postoperative recovery. A postoperative CT scan confirmed proper placement of the iliac branched device with no endoleaks.

CONCLUSIONS: IBDs can be deployed using a single access with the assistance of a steerable sheath, potentially reducing the risk of access site complications.

P03 GIANT CAROTID BODY PARAGANGLIOMA: OUR APPROACH TO SURGICAL EXCISION

Gonçalo Araújo[1], Ricardo Correia[1], Gonçalo Alves[1], Filipe Correia[2], Helena Fidalgo[1], Adriana Figueiredo[1], Joana Cardoso[1], Carolina Tavares[1], Inês Gueifão[1], Ana Loureiro[1]

[1] Hospital de Santa Marta
[2] Hospital Egas Moniz

INTRODUCTION: Carotid body tumors (CBT) typically present as an asymptomatic anterior neck mass. However, larger tumors can become symptomatic. Surgical excision is the primary treatment, often preceded by embolization to reduce tumor hemorrhage and perioperative risks. This case report presents a case of a successful excision of a giant Shamblin III CBT.

DESCRIPTION: We present a case of a 37-year-old woman, originally from Mozambique, with a decade-long painless, gradually growing pulsatile left cervical swelling and progressive dysphonia and dysphagia to solids. Cervical CT angiography revealed an expansive hypervascular lesion centered in the left carotid space spanning from the left carotid bifurcation to the base of the skull, with approximate dimensions of 11x8.1x5.5 cm. She had no impairment of cranial nerves but had a tumour-compressed upper airway. Further diagnostic investigations were carried out and the diagnosis of dopaminergic-producing left Shamblin III CBT was made. The patient underwent tumor embolization followed by surgical excision the following day. Under general anesthesia to safely protect the upper airway until tumour removal, the authors deployed detachable hydrocoils to occlude several ECA branches supplying the tumour. After 24 hours, a multidisciplinary team undertook CBT surgical removal. During the procedure, a neuromonitoring system was used to minimized the risk of injury of the lower cranial nerves. A regular longitudinal exposure of carotid vessels was conducted. After proximal control of the CCA, an easily bleeding CBT was medially mobilized to enable ICA exposure and preservation. Due to the high adhesion of the tumor and complete encasement of the external carotid artery, the authors ligated this artery and reconstructed CCA bifurcation with an end-to-end CCA-ICA anastomosis. She was extubated on postoperative day 1 and was discharged 10 days postoperatively, without any neurological deficits.

DISCUSSION / CONCLUSION: The management of carotid body paragangliomas, particularly those classified as Shamblin III, requires a multidisciplinary approach and refined surgical technique to ensure complete tumor removal without compromising essential structures. The combination

of preoperative embolization and a well-planned surgical procedure resulted in an excellent outcome for the patient, with no neurological complications.

P04 THE IMPENDING RUPTURE DIAGNOSIS DILEMMA: A CASE OF MISLEADING SYMPTOMS AND CONCURRENT LIFE-THREATENING CONDITIONS

Ana Margarida Rocha, Andreia Pires Coelho, Luís Fernandes, Marta Machado, Francisco Basílio, Patrícia Carvalho, Beatriz Guimarães, Alexandra Canedo

ULS Gaia Espinho

INTRODUCTION: Symptomatic non-ruptured abdominal aorta aneurysm (AAA) is an exclusion diagnosis. In this case report we were faced with two vascular challenges: (1) ascertaining a diagnosis of impending rupture and (2) restructuring an intervention plan and timing after a second abdominal emergency was diagnosed and treated.

CASE REPORT: A 72-year-old male with history of dyslipidemia and smoking presents to the emergency department with left lower quadrant abdominal pain for over 12 hours. Clinical assessment revealed a pulsatile mass in the abdominal midline and abdominal discomfort with palpation, without signs of peritoneal irritation. The patient was hemodynamically stable, and laboratory findings showed leukocytosis and elevated C-reactive protein. The abdominal Computed Tomography Angiography (CTA) scan revealed an infrarenal AAA with 85mm of diameter without other findings suggestive of an alternative diagnosis. CTA also showed extensive mural thrombus, hyperattenuating crescent sign, draped aorta, and focal discontinuity of intimal calcification, all features of an impending rupture. The patient was admitted to the vascular ward aiming to intervene in the first elective opportunity, but aggravating abdominal pain, in association with hypotension, prompted a decision. Open surgical repair was the chosen strategy based on the aneurysm´s anatomical features - short neck (13mm) with extreme infrarenal angulation (approximately 90º). Intraprocedural bowel mobilization revealed transmural ischemia extending from the transverse colon to the mid-rectum. General Surgery collaboration was attained and the patient underwent a Hartmann procedure. After an uneventful recovery, an endovascular aneurysm repair was performed.

CONCLUSION: Ischemic colitis is a well-known complication of major vascular surgery, particularly after AAA repair. However, ischemic colitis as either a consequence of AAA or as a diagnostic mimic of a symptomatic AAA is exceedingly rare. This patient presented with two life-threatening conditions, although only one was preemptively diagnosed. The colonic ischemia etiology is difficult to ascertain but likely occurred due to an hypoperfusion state in a patient with atherosclerotic disease and poor collateral circulation. After the colonic intervention, the vascular surgical plan was restructured to avoid placing a vascular prosthesis in an infected territory after what we deemed an appropriate recovery period.

P05 ONE SIZE DOES NOT FIT ALL – STAGED HYBRID APPROACH OF A CHALLENGING AORTIC ARCH ANEURYSM USING A DOUBLE-BRANCH CUSTOM-MADE DEVICE

Patrícia Carvalho, Luís Fernandes, Marta Machado, Francisco Basílio, Beatriz Guimarães, Ana Margarida Rocha, Daniel Brandão, Alexandra Canedo

Unidade Local de Saúde de Gaia e Espinho

INTRODUCTION: The anatomical complexity and variability of aortic arch pathology poses significant challenges to its management, particularly in high surgical risk patients. The introduction of branched endografts, specifically designed to overcome these challenges, has revolutionized this field as demonstrated in the present case-report.

CASE-REPORT: A 60-year-old male, with a prior history of smoking and neurosyphilis, was referenced to our outpatient clinic due to a CT finding of an aortic arch aneurysm with a maximum diameter of 66mm. Due to complex anatomical features, including a short brachiocephalic trunk and narrow iliac vessels, a staged hybrid approach was meticulously planned.
The patient was initially submitted to a left carotid-subclavian bypass, followed by a right subclavian-carotid bypass, both using PTFE grafts. Later, an endoconduit was constructed using two Viabahn® stent grafts (11x100mm), deployed from the origin of the left common iliac artery to the proximal segment of the left common femoral artery, facilitating future access for TEVAR. Finally, the aneurysm was excluded using a custom-made Relay® double inner-branched endograft (46x32x270mm) deployed in zone 0, with two inner branches for the brachiocephalic trunk (BCT)/right subclavian artery (RSA) and left common carotid artery (LCCA). The inner branches were catheterized via trans-carotid (left) and trans-axillary (right) accesses. An iliac extension (16x12x100mm) to the BCT/RSA and a Viabahn® stent graft (7x75mm) to the LCCA were deployed. An additional extension endograft (34x30x150mm) was deployed to complete distal exclusion. The left subclavian artery was subsequently occluded using an Amplatzer™ Plug II.
Postoperatively, the patient experienced a posterior circulation stroke, with full recovery within two weeks and no residual neurological deficits. Follow-up imaging at six months showed patency of the endografts with complete exclusion of the aneurysm and no evidence of endoleaks. The patient remained asymptomatic, with no further vascular or neurological events.

CONCLUSION: This case highlights the feasibility of a staged hybrid approach for complex aortic arch aneurysms in patients with challenging anatomy. The use of a custom-made branched endograft and careful preoperative planning proved critical to the success of the procedure.

P06 UNDER PRESSURE - CENTRAL VEIN THROMBOSIS ASSOCIATED WITH AORTOSTERNAL VENOUS COMPRESSION

Andreia Pinelo, Daniel Mendes, Henrique Almeida, Miguel Queirós, João Cabral, Samuel Cardoso, Mónica Banderia, Rui Machado

Unidade Local de Saúde de Santo António

CASE-REPORT: A 50-year-old woman with no significant medical history presented with sudden-onset left upper limb edema, left-sided headache, and photophobia. Computed tomography angiography (CTA) revealed thrombosis of the left internal jugular vein and the subclavian-axillary-brachial venous axis (Figure 1A).
Complete collapse of the left brachiocephalic vein due to compression between the aortic arch and sternum (aortosternal venous compression, AVC) was observed (Figure 1B). Exclusion of cerebral venous sinus thrombosis and pulmonary embolism confirmed the localized nature of the thrombosis. Thrombophilia screening yielded no abnormalities. Full anticoagulation therapy with Rivaroxaban resolved symptoms within three months. Due to persistent anatomic compression and low bleeding risk, a long-term reduced dose of Rivaroxaban (10 mg daily) was initiated.

DISCUSSION: Aortosternal venous compression (AVC) is a rare mechanical entrapment of the left brachiocephalic vein between the sternum and the aortic arch, often exacerbated by conditions like aging or atherosclerosis causing ecstatic or tortuous thoracic arteries. Reduced anteroposterior diameter during expiration intensifies compression. Like in other venous compression syndromes, it is probable that this continuous and intermittent mechanical injury to the vein wall ultimately leads to vein scarring and stenosis/ occlusion. Collateral circulation typically compensates, rendering AVC asymptomatic in most cases. However, thrombosis may develop due to venous stasis. CTA is crucial for diagnosing AVC, providing detailed visualization of thoracic anatomy and venous compression. Contrast venography can further delineate real-time mechanical obstructions and confirm dynamic obstruction. Management lacks standardization due to limited case reports.
Anticoagulation remains first-line treatment, as observed in the presented case. Surgical decompression or endovascular interventions, such as angioplasty or stenting, are potential options in refractory cases, described in hemodialysis access-related stenoses. This case highlights **Aortosternal Compression** as a rare cause of upper limb and central venous thrombosis, emphasizing the ongoing need to uncover the broad spectrum of venous entrapment syndromes.

P07 FROM COMPLICATION TO CURE: ADVANCED ENDOVASCULAR SALVAGE OF A TYPE III ENDOLEAK AFTER BEVAR

Luís Fernandes[1], Jose Torrealba[2], Diogo Silveira[1], Alexandra Canedo[1], Tilo Kolbel[2]

[1] ULSGE
[2] Aortic Center, Hamburg

INTRODUCTION: Type III endoleak after fenestrated/ branched endovascular aneurysm repair (F/BEVAR) can constitute a very challenging situation, and ultimately, could demand total relining.
Complexity of this redo procedures increases greatly compared to the initial procedures. Due to the increased difficulty, relining a failed BEVAR may be facilitated by using a new branched device, given its' more forgiving nature regarding positioning errors. However, inner small diameter grafts may pose difficulties that demand alternative strategies.

METHODS: We present a case of endovascular salvage of a type III endoleak caused by a fabric tear in a small diameter branched endograft, using a combination of branched and fenestrated graft.

CASE REPORT: 71-year-old male with previous four branched endovascular repair. At 2-year follow-up, a new onset type IIIb endoleak in a 70mm type V thoracoabdominal aneurysm was identified, due to a tear in the main graft at the level of the left renal branch. Total relining of the previous placed graft was decided, however, the small inner diameter of the BEVAR precluded a BEVAR in BEVAR strategy. A custom-made (CMD) endograft with three fenestrations and one branch was planned. To minimize workspace issues, double diameter reducing ties were incorporated. Under fusion guidance, the CMD graft was deployed with proper alignment of all vessels.
Fenestrations and the branch were adequately bridged to each target vessel for the transfemoral access, followed by the placement of the distal component. Completion angiogram showed no endoleak with adequate perfusion to all target vessels. The patient was discharged without complications.

CONCLUSION: F/BEVAR in BEVAR is a challenging and complex operation. Appropriate planning and execution are the most important factors to achieve an uneventful repair.

P08 ZABERAB: ZELANT™ ASSISTED BARE METAL ENDOVASCULAR RECONSTRUCTION OF THE AORTIC BIFURCATION

Henrique Andrade de Almeida, Luís Loureiro, Joana Martins, Sérgio Teixeira, Andreia Pinelo, Miguel Queirós, João Cabral, Samuel Cardoso, Mónica Bandeira, Rui Machado

Unidade de Saúde Local de Santo António

AIMS: Endovascular treatment of chronic juxtarenal aortic occlusions is limited. Lysis and covered endovascular reconstruction of the aortic bifurcation, or the LA CERAB technique, has been described as a possible approach. We aim to describe a new approach to chronic aortoiliac occlusion: endovascular pharmacomechanical peripheral thrombectomy and bare metal endovascular reconstruction of the Aortic bifurcation.

CASE REPORT: We report a case of an 80-year-old male patient with bilateral critical limb threatening ischemia, with right toe minor lesions and left rest pain. The patient had a history of chronic heart failure, diabetes mellitus, hypertension, dyslipidaemia and had a history of heavy smoking in the past. Imaging studies (doppler ultrasonography and computed tomography angiography (CTA)) documented a chronic occlusion of the infrarenal aorta, occlusion of the common iliac arteries and stenosis of the right external iliac artery (TASC D). CTA also noted well-developed Winslow pathway collaterals. Preoperative assessments excluded the possibility of aortobifemoral bypass surgery due to high surgical risk. The patient was proposed to an endovascular approach and underwent a percutaneous pharmacomechanical thrombectomy with left axillary access to ensure true lumen catheter placement at the proximal extent of disease, and bilateral femoral accesses. After aortoiliac recanalization, an off-label use of Angiojet™ Zelant 8Fr system was used to perform pharmacomechanical thrombectomy. Despite the chronicity of the occlusion, near complete thrombectomy was achieved. Endovascular reconstruction of the Aortic bifurcation with aortic bare metal stent extended into the common iliac arteries with parallel bare metal stents was subsequently performed with good technical success. Right external iliac artery stenosis was submitted to balloon angioplasty and stenting with a self-expanding stent. Post-operative CTA revealed complete patency of the aortic reconstruction patient. No complication was reported. At 2 months follow-up, the patient remains with bilateral distal pulses.

CONCLUSION: This is the first clinical description of a percutaneous pharmacomechanical thrombectomy successfully performed in a chronic juxtarenal aortic occlusion, enabling an endovascular reconstruction of the Aortic bifurcation. This approach deserves consideration in patients at high risk for open reconstruction.

09 TOTAL ENDOVASCULAR ARCH REPAIR: SHOULD IT BE THE FIRST LINE OPTION IN THE ELECTIVE TREATMENT OF AORTIC ARCH ANEURYSMS?

Marta Machado, Daniel Brandão, Luís Fernandes, Roberto Boal, Francisco Basílio, Patrícia Carvalho, Beatriz Guimarães, Ana Margarida Rocha, Pedro Brandão, Alexandra Canedo

ULSGE

INTRODUCTION: Although traditionally the standard of care in the treatment of aortic arch aneurysms is open surgical arch replacement, this usually require sternotomy, cardiopulmonary bypass and hypothermic arrest , which even in the subset of patients fit for open surgery, it is associated with a pooled mortality and stroke rate of 5 %. Nowadays, a multi-disciplinary team of vascular and cardiac surgeons is mandatory to decide the best and individualized treatment in each patient.

CLINICAL CASE: A 70-year-old man was incidentally diagnosed with an asymptomatic saccular aortic arch aneurysm. After vascular and cardiac surgeons discussion, was decided to perform a total endovascular arch repair.
Percutaneous right femoral and axillar arteries, left brachial artery and left femoral vein access were obtained. Only left carotid artery was surgically exposed.
A custom-made three-inner branched endograft was deployed under balloon inflation in the inferior vena cava. The endograft has 2 anterograde branches, one for the innominate trunk (bridged with an iliac limb 12mm) and other for the left carotid artery (bridged with a be-graft stent 6mm), while a retrograde branch with a preloaded catheter for the left subclavian artery (bridged with Viabhan 10mm followed by Begraft 10 mm due to a kink). Closure of the right axillary access (simultaneously with balloon angioplasty), right AFC and left VFC with 2 proglides each and closure of the brachial access with angioseal. The duration of surgery was 3.5 hours.
Patient was discharged asymptomatic 3 days after. CTA at 3 months demonstrated aneurysm exclusion, patency of the three supra-aortic branches and absence of cerebral ischemic lesions.

CONCLUSION: In elective setting, a triple-branch custom made device enables a total endovascular arch repair without the need for any surgical revascularization, which allows lower invasiveness and morbimortality comparing with open or hybrid surgery. A third down-going branch also allows upper-extremity access for future visceral branch endovascular interventions.

Figure 1. CTA showing aortic arch saccular aneurysm
CTA - Computed Tomography Angiography

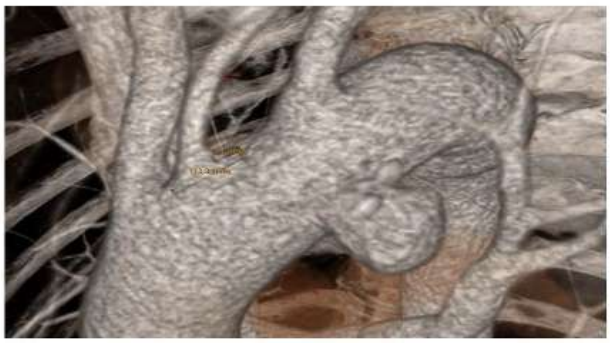
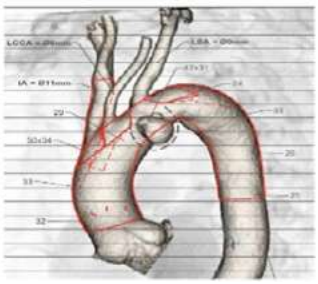


Figure 2. A-Planning and sizing



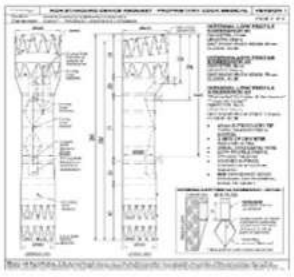
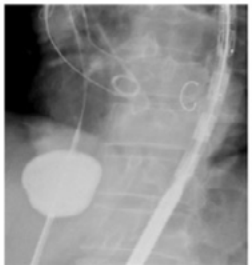
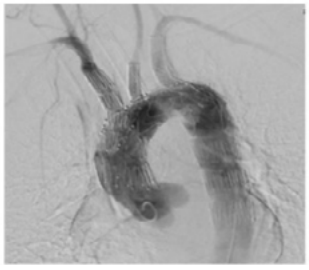


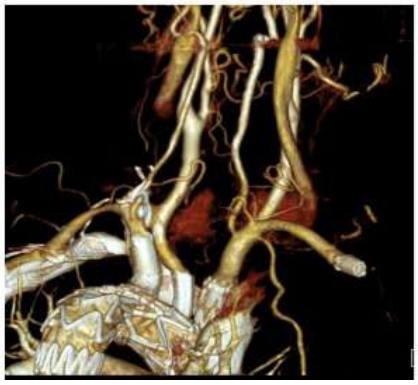
Figure 3. Endovascular custom made 3 branches repair under IVC ballooning





IVC: Inferior Vena Cava

Figure 4. CTA control at 3 months



CTA - Computed Tomography Angiography

P10 OVERCOMING HOSTILE NECK ANATOMY IN ABDOMINAL AORTA ANEURYSM ENDOVASCULAR TREATMENT - THE REVERSE SLIDER TECHNIQUE

Ana Margarida Rocha, Andreia Pires Coelho, Luís Fernandes, Marta Machado, Francisco Basílio, Patrícia Carvalho, Beatriz Guimarães, Alexandra Canedo

ULS Gaia Espinho

INTRODUCTION: Around 40-60% of abdominal aorta aneurysm (AAA) patients are deemed ineligible for endovascular aneurysm repair (EVAR) because of hostile anatomy. Short and angulated necks pose a serious risk of type IA endoleak due to the difficulty in achieving proper proximal fixation and endograft seal. With this case report, we aim to present a technique that allows a more aggressive deployment of an Endurant II (Medtronic, Santa Rosa, Calif) endograft for short necks.

CASE REPORT: A 72-year-old male with a history of dyslipidemia and smoking was admitted to the vascular ward with a diagnosis of an AAA with 85-mm diameter. The patient had recently undergone an uneventful postoperative course following a Hartmann procedure, performed due to ischemic colitis. The anatomical features of the aneurysm were suboptimal for EVAR, specifically a short neck (approximately 13mm) and an infrarenal angulation of 90°. However, considering the recent colonic intervention, we proceeded with the endovascular procedure. The Endurant II stent graft (Medtronic, Santa Rosa, Calif) was deployed using the reverse slider technique. Post-procedure angiographic images confirmed successful exclusion of the aneurysm with accurate fixation on the proximal point. Computed Tomography Angiography 1-month after the procedure revealed correct positioning of the endograft with no evidence of endoleak.

CONCLUSION: The reverse slider technique allows proximal sealing in short and angulated neck aneurysm. It involves the repeated rotation of the external slider in the reverse direction, accompanied by gradual deployment of the suprarenal stent, allowing the proximal edge of the endograft to gradually expand, progressively approaching the contralateral side of the aortic wall. Extreme neck angulation complicates achieving an adequate proximal seal in short necks. This technique ensures a proximal sealing zone in the greater curvature side resembling that on the lesser curvature side. In contrast to the standard deployment method, the reverse slider technique facilitates graft placement orthogonally to the axis of the aorta, enabling the main body of the graft to deploy in alignment with the angulation of the aorta.

SESSÃO PRÉMIO MELHOR COMUNICAÇÃO EM VÍDEO
PRIZE SESSION VIDEO COMMUNICATION

V01 LEFT RENAL VEIN TRANSPOSITION AS FIRST LINE OPTION IN THE TREATMENT OF NUTCRACKER SYNDROME

Marta Machado, Luís Fernandes, Francisco Basílio, Patrícia Carvalho, Beatriz Guimarães, Ana Margarida Rocha, Pedro Brandão, Alexandra Canedo

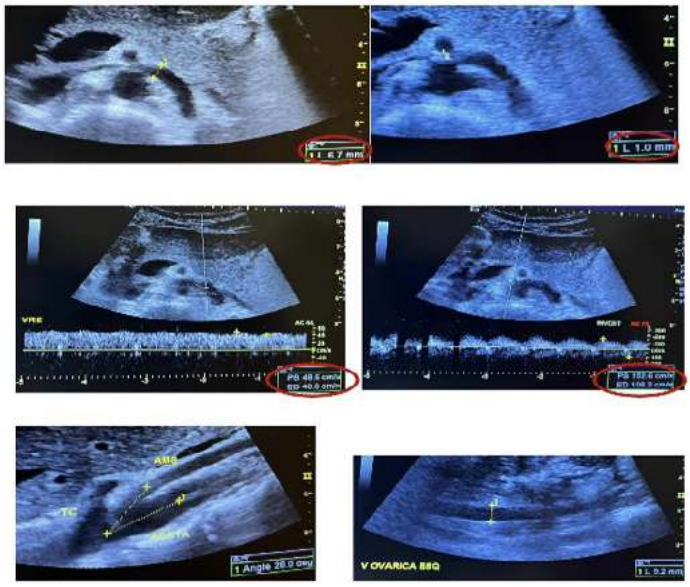
ULSGE

INTRODUCTION: Nutcracker syndrome (NCS) describes the symptomatic compression of the left renal vein (LRV) between the aorta and superior mesenteric artery.

CLINICAL CASE: 28 year old female, previously healthy, with a medical history of left flank pain since five years ago, with numerous visits to the emergency room but no conclusive diagnosis. The left flank pain was accompanied by lumbar and lower abdominal pain. She denied epigastric pain, nausea, or vomiting. Blood tests and urine analysis were within the normal limits. CTA of the abdomen showed meso-aortic compression of the LRV (Fig1).
Doppler Ultrasound (DUS) confirmed acute aortomesenteric angle <35°; LRV diameter ratio >4 with hemodynamically significant flow acceleration; Uterine varices and dilated left ovarian vein (Fig2).
The patient was diagnosed with anterior NCS and was performed LRV transposition and ovaric vein ligation. A supraumbilical midline incision was made, the bowel was packed away and the retroperitoneum was opened inferior to transverse mesocolon. Once the LRV was identified, it was dissected toward the inferior vena cava (IVC). IVC was dissected with sufficient length distally to reimplant the left renal vein ≥4 cm below its initial insertion site. The left adrenal vein was ligated and divided. After 100 U/kg heparin bolus a side-biting clamp was placed on IVC at the location of the LRV, and it was clamped and transected. The IVC was oversewn with double-layer 5-0 Prolene suture. On inspection of the target site for reimplantation of the LRV to the distal IVC the length was insufficient so the anterior wall of anastomosis was performed with a bovine pericardium patch. Finally was performed ligation of the left gonadal vein and and closure by layers. Post-operative recovery was uneventful and the patient reported complete resolution of her pain complains after 1 month.

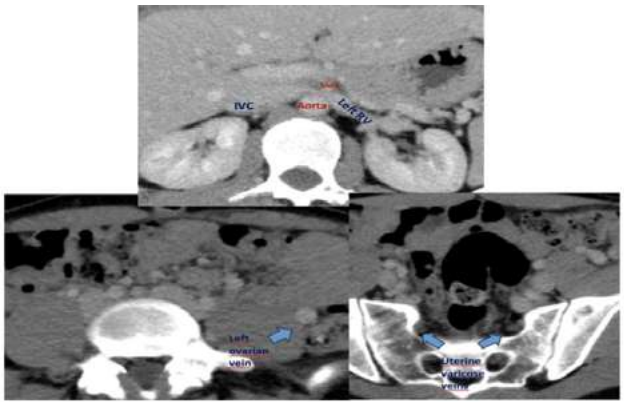
CONCLUSION: In accordance with the Delphi consensus published in January 2025, transposition of left renal vein should be the first line option in NCS.
In this case, although the big diameter of left ovarian vein, was decided not to perform left ovarian vein transposition (although it would be technically easier) because with these thechnique renal vein compression would persist. In our opinion, renal autotransplantation should also only be performed in centers with huge experience on these thechnique due to the high complexity and morbimortality.

Figure 1. Doppler ultrasound showing LRV ratio >4 with hemodynamic acceleration, acute aortomesenteric angle and dilated ovarian vein



LRV: Left Renal Vein

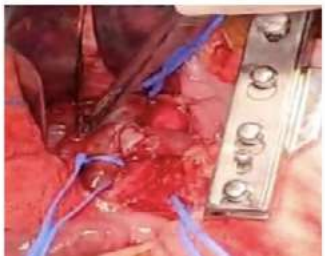
Figure 2. CTA showing an anterior nutcracker syndrome with a dilated ovarian vein and extensive uterine varicose veins



CTA: Computed tomography angiograhy; **IVC:** Infeior Vena Cava, **RV:** Renal vein

Figure 3. A: Dissection of IVC, LRV and ovarian vein

B: Transposition of LRV and plasty of anterior wall of TL anastomosis with bovine pericardium patch to insure tension free



IVC: Infeior Vena Cava, **LRV:** Left Renal vein

V02 MANAGEMENT OF RUPTURED TYPE 4 TAAA USING A UNITARY MANIFOLD DEVICE: A FEASIBLE ALTERNATIVE?

Henrique Andrade de Almeida, Luís Loureiro, Daniel Mendes, Sérgio Teixeira, Andreia Pinelo, Miguel Queirós, João Marcelo, Samuel Cardoso, Mónica Bandeira, Rui Machado

Unidade Local de Saúde de Santo António

AIMS: Endovascular treatment of ruptured type 4 thoracoabdominal aortic aneurysm (TAAA) is complex and not always feasible. Custom-made devices are generally not a solution due to manufacturing time, and off-the-shelf devices are not always available in emergent settings. Physician-modified endografts (PMEG) are a solution that eliminates manufacturing delays while allowing flexibility for anatomic variation and creating a branched or fenestrated system. We aim to describe an approach to a rupture type 4 aortic aneurysm using physician-modified, nonanatomic-based Unitary Manifold (UM) device.

METHODS: Clinical data review through consultation of clinical files. Informed consent for data and image use was obtained from the patient.

CASE REPORT: We report a case of a 66-year-old male patient with known type 4 thoracoabdominal aortic aneurysm. The patient had a history of chronic heart failure with reduced ejection fraction, with a history of coronary artery bypass graft twenty years prior to the referred episode, hypertension, dyslipidemia, chronic kidney disease, and was a heavy smoker. Anatomic morphology of the aneurysm excluded the patient for endovascular elective treatment (and the preoperative assessments excluded open surgery due to high surgical risk in two different vascular centers. The patient was admitted to the emergency room with abdominal pain and an episodic loss of consciousness. At admission, the patient was hemodynamic stable, hemoglobin value had decreased from 19 g/dL (one month prior) to 13g/dL, and computed tomography angiography showed a ruptured type 4 TAAA with a significant retroperitoneal hematoma. The patient was treated with UM device (Medtronic™ Endurant II Stent Graft) with two branches for the superior mesentery artery and celiac trunk (Gore Viabahn® Endoprosthesis) with good technical success.

CONCLUSION: In conclusion, the UM device provided a viable endovascular solution for the emergent treatment of a ruptured type 4 TAAA in a high-risk patient. This approach successfully addressed the anatomical challenges and the urgent nature of the condition, demonstrating the feasibility and technical success of UM devices in situations where standard off-the-shelf or custom-made devices are not options.

V03 FREE-FLOATING CAROTID THROMBUS RESULTING IN CRESCENDO TRANSIENT ISCHEMIC ATTACKS AND STROKE: A RARE BUT DEBILITATING ENTITY

António Duarte, Alice Lopes, Ana Silva, Pedro Amorim, Luís Mendes Pedro

ULS Santa Maria

INTRODUCTION: Cerebrovascular disease remains a major cause of morbidity and mortality. Over 85% of all strokes are ischemic, mostly due to carotid artery disease. According to recent ESVS guidelines, symptomatic carotid disease is a formal indication for timely intervention, i.e. within 14 days after the index event. Neurologically unstable patients remain a clinical challenge, including patients with crescendo TIAs, due to a high risk of recurrent stroke if untreated.

CASE REPORT: We present the case of a 48-year-old female patient with heavy smoking habits (75 smoking pack years). She first noticed multiple, unattended episodes of upper left limb weakness and visual defects in 2018. One month later, she was admitted with clinical signs of a right hemisphere stroke. On physical examination, she presented a left homonymous hemianopsia, forced right deviation of the gaze, left central facial palsy, grade 1 left upper limb paresis, grade 3 left lower limb paresis and left anesthesia (NIHSS 15). An urgent CT scan showed ischemic signs along the distribution of the right middle cerebral artery (MCA). Mechanical thrombectomy was performed (TICI 3). Although on dual antiplatelet, the patient developed recurrent symptoms. Carotid duplex ultrasound was performed, identifying a floating thrombus on an hypoechogenic plaque. After multidisciplinary discussion, the patient was subjected to thrombectomy, carotid endarterectomy and patch angioplasty. The procedure was performed with Pruitt-Inahara shunting and under general anesthesia, with no perioperative complications. The patient was discharged 3 days after the surgery uneventfully. Follow-up ultrasounds showed no restenosis or occlusion and the patient recovered after intensive rehabilitation.

DISCUSSION: This case highlights the need for thorough evaluation of the carotid plaque when assessing symptomatic patients. According to the latest series, free-floating thrombus may be found in 1% of all patients with stroke, with a 30-day risk of TIA, stroke or death over 17%. Regarding treatment, guidelines recommend long-term anticoagulation and serial Duplex ultrasound assessments. Should the patient develop recurrent symptoms while on therapeutic anticoagulation, endovascular or open thrombus removal should be considered. While carrying an overall high risk of periprocedural stroke or death, the intervention in this case prevented further recurrence and allowed for full recovery, along with timely rehabilitation.

V04 SPIRAL VEIN TECHNIQUE AS AN ALTERNATIVE FOR POPLITEAL ARTERY ANEURYSM REPAIR: A CASE REPORT

Henrique Andrade de Almeida, Sérgio Teixeira, Andreia Pinelo, Miguel Queirós, João Cabral, Samuel Cardoso, Mónica Bandeira, Rui Machado

Unidade Local de Saúde de Santo António

AIMS: SThe current alternative treatment options for patients with popliteal artery aneurysm (PAA) who do not have a suitable vein for conventional autologous venous bypass (either in situ or reversed) include prosthetic grafts or endovascular stent grafts.
The treatment employing the spiral vein technique is a valid alternative that is often overlooked. We present a case report of a patient treated with this technique with good technical and clinical success.

METHODS: Clinical data review through consultation of clinical files. Informed consent for data and image use was obtained from the patient.

CASE REPORT: We report a case of a 55-year-old male patient with complaints of left intermittent claudication for 250 meters and a known left popliteal artery aneurysm. The patient had rheumatoid arteritis, hypertension, and was a heavy smoker.
His past medical history included a prior episode of an acute right limb ischemia episode due to popliteal artery aneurysm thrombosis. Imaging studies with computed tomography angiography and ultrasound showed a 17 mm popliteal aneurysm with circumferential thrombus and a 2.0 to 2.5 mm left great saphenous vein. The patient was submitted to a saphenous vein interposition using a posterior popliteal approach with a spiral vein technique using an ipsilateral great saphenous vein with good surgical and clinical success.

CONCLUSION: In conclusion, the spiral vein technique provided a successful and viable alternative for treating popliteal artery aneurysms in patients without a suitable autologous vein for conventional bypass.

SESSÃO COMUNICAÇÕES *RAPID PACE*
SESSION RAPID PACE COMMUNICATIONS

CR11 TIPS AND TRICKS FOR ENDOVASCULAR MANAGEMENT OF HEAVILY CALCIFIED FEMOROPOPLITEAL LESIONS

Carolina Tavares, Ricardo Correia, Helena Fidalgo, Adriana Figueiredo, Inês Gueifão, Gonçalo Araújo, Ana Loureiro, Vanda Pinto, Carlos Amaral, Maria Emília Ferreira

ULS S. José - Hospital Santa Marta

Severe arterial calcification presents a challenge in endovascular procedures, with lower success rates and worse clinical outcomes. In long heavily calcified chronic total occlusions, intraluminal crossing or spontaneous reentry after subintimal crossing is often difficult. There's also higher complication risk and limited vessel expansion. We propose a structured approach for heavily calcified femoropopliteal artery disease. Main access (6-7 Fr) should be ultrasound(US)-guided ipsilateral access; if there's a lesion in the proximal superficial femoral artery (SFA), contralateral retrograde access is preferred. The surgeon should be prepared for fluoroscopy-guided retrograde puncture of the popliteal artery or distal arteries with a 4 Fr sheath or sheathless access. When spontaneous reentry is not possible, techniques such as CART, reverse-CART and double-balloon rendezvous should be employed. Lesion preparation should be aggressive, using plain old balloon angioplasty, high-pressure and non-compliant balloon angioplasty and/or intravascular lithotripsy (shockwave). There should be a low threshold for definitive treatment with bare metal stenting in the presence of suboptimal DSA result, preferably with the vasculomimetic crush resistant Supera stent. The retrograde distal access can be used for PRESTO technique for the SFA ostium and should be closed using endoclamping, while Mynx deployment is preferred for the main access. We present a series of six patients with femoropopliteal severely calcified lesions treated in 2024 using this method, all presenting with chronic limb-threatening ischemia Fontaine grade IV. Main access was always US-guided, primarily 6 Fr (67%), equally divided between ipsilateral antegrade and contralateral retrograde approaches. Lesion crossing was subintimal in all cases, with one spontaneous reentry and five patients requiring CART or rCART to reentry. All lesions were prepared using Shockwave and definitive treatment was performed with bare metal stenting, predominantly with Supera (83%). Mynx was used to close 83% of the main accesses. There was 100% procedural success and no mortality at 30 days. Except for one patient that died at 5 months of follow-up, all other patients healed their wounds, with a median healing time of four months. The proposed method demonstrated good results in challenging cases and the application of this advanced techniques may serve as an important tool for optimizing outcomes in these complex cases.

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CR12 SHOULD ALL ELECTIVE ENDOVASCULAR ANEURYSM REPAIR PATIENTS BE SUBMITTED TO PRE-SURGICAL DENTAL ASSESSMENT?

Maria Neves Carmona, Eduardo Silva, Celso Nunes, Miguel Castro, Luís Orelhas, Jorge Costa, Manuel Fonseca

ULS Coimbra

INTRODUCTION: The 2020 ESVS guidelines for vascular graft and endograft infections recommend that, before implantation of any vascular graft/endograft, elimination of any potential source of sepsis, especially of dental origin, should be considered. This advice is based on the 2015 ESC guidelines for managing infective endocarditis.
Ten years have passed since that first publication. We aimed to discover if any new information about this topic had been published since then and to answer the question: Should all elective endovascular aneurysm repair (EVAR) patients be submitted to pre-surgical dental assessment?

METHODS: A systematic review was performed based on PRISMA guidelines. Pubmed and SCOPUS were searched. We included any study regarding endograft infection in patients submitted to elective EVAR with eventual association with dental procedures or assessment. The primary outcome we wanted to evaluate was the prevalence of endograft infection. Another secondary clinical outcome to analyze was mortality related to the disease. We excluded any study focused on ruptured aneurysm repair.

RESULTS: Our search yielded 1013 studies.
Only six studies complied with the criteria previously defined. One was a case report on an aortic graft infection and aortoenteric fistula (AEF) associated with D. pneumosintes bacteraemi (it could be explained by a dental origin of infection which seeded to the graft, resulting in AEF and systemic infection but an adequate alternative hypothesis would be that the AEF lead to graft infection and subsequent distal emboli and bacteraemia). The other five studies were systematic reviews that were intertwined and suggested that any potential sources of dental sepsis be eliminated at least 2 weeks before implantation of an aortic prosthesis. The primary source for these systematic reviews was a systematic review from 2017 on perioperative dental screening and management of patients undergoing cardiothoracic, vascular surgery and other cardiovascular invasive procedures.

CONCLUSION: Only one original recent study was published regarding this topic, and it was of low evidence grade. More information is needed on this subject to guide our practice.

CR13 OUTCOMES OF ABDOMINAL AORTIC ANEURYSM REPAIR IN THE BRAZILIAN PUBLIC HEALTHCARE SYSTEM: A 10-YEAR ANALYSIS AND THE IMPACT OF THE COVID-19 PANDEMIC

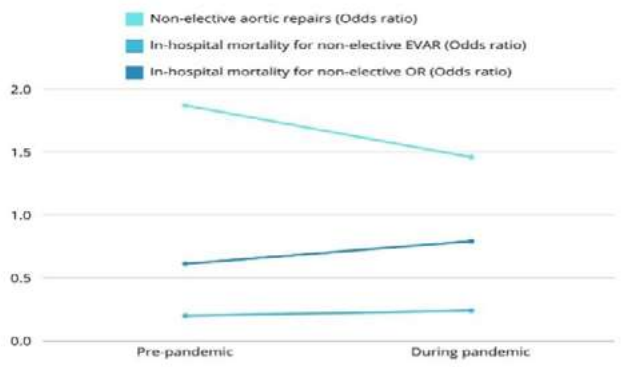
Marina Aragão Hamdan de Freitas[1], Túlio Pinho Navarro[1], Alessandra Rocha Luz[1], Lara Lellis Navarro Minchillo Lopes[1], Alan Dardik[2], Saieesh Alam Rao[3]

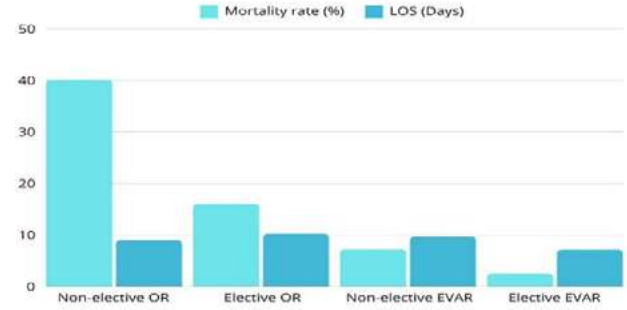
[1]Hospital das Clínicas - Universidade Federal de Minas Gerais (UFMG)
[2]Yale School of Medicine
[3]Northwestern University - Faculty of Medicine

INTRODUCTION: The global burden of Abdominal Aortic Aneurysm (AAA) is expected to rise, particularly in low- and medium-income countries, where risk factors like aging are increasing. In Brazil, a medium-income country, most AAA repairs are performed by the Unified Health System (Sistema Único de Saúde – SUS) and tracked by DATASUS, a publicly available database. This study aims to describe AAA repair outcomes in Brazil over the past decade and assess the impact of the COVID-19 pandemic on surgical results.
Methods: DATASUS was queried for emergent and non-emergent open repair (OR) and endovascular aneurysm repair (EVAR) between 2013 and 2022 using procedure-specific codes. Endpoints included procedure modality (OR vs. EVAR), time for intervention (elective vs. non-elective), in-hospital mortality, and length of stay (LOS). A 10-year trend analysis was carried out, followed by a comparison of results between the COVID-19 pandemic period (2020-2022) and the pre-pandemic period (2017-2020). Data were analyzed using chi-square tests and linear regression.

RESULTS: A total of 11,140 aortic repairs were performed, with 69.6% being EVAR. The frequency of both OR and EVAR decreased over the decade. Non-elective OR had the highest mortality rate at 40.1% (824 deaths), followed by elective OR at 16.0% (212 deaths), non-elective EVAR at 7.2% (325 deaths), and elective EVAR at 2.5% (82 deaths). The average LOS was higher for elective OR (10.8 days), followed by non-elective OR (9 days), non-elective EVAR (9.7 days), and elective EVAR (7.1 days). During the COVID-19 pandemic, the frequency of both non-elective (tbc -9.146; Pvc=0.038) and elective (tbc -19.844; Pvc=0.043) aortic repairs decreased, with a significant increase in the odds of non-elective cases (odds ratio 1.87 vs 1.46; $p < 0.001$). In-hospital mortality also increased for non-elective EVAR (0.20 to 0.24, P=0.0152) and non-elective OR (0.613 to 0.793, P=0.0231) during the pandemic.

CONCLUSION: Over the past decade, the frequency of OR and EVAR procedures in SUS has decreased, with most surgeries being EVAR and non-elective. Elective EVAR mortality was comparable to rates reported in developed countries, while elective OR mortality is concerning. LOS was longer for OR than for EVAR. During the pandemic, there was a decrease in the frequency of AAA repairs and an increase in mortality for non-elective interventions.





a mature and functional primary autologous AV access. Secondary outcomes were secondary procedures and type of access performed.

RESULTS: A total of 204 patients were included, with 31 (15%) octogenarians. Diabetes mellitus was the most common etiology of chronic kidney disease. At the time of access construction, there were less octogenarians that were already under dialysis (19.4% vs 39.3%, p=0.033). Regarding baseline characteristics, octogenarians had less smoking history (25.8% vs 46.2%, p=0.034) but higher prevalence of cardiac disease (61.3% vs 37.8%, p=0.014). There were no other significant differences. The rate of primary mature (48.3% vs 57.2%, p=0.369) and functional (31.0% vs 33.8%, p=0.384) accesses were similar between both groups. Secondary procedures were necessary in similar fashion (37.9% vs 44.8%, p=0.492). During the follow-up, the mortality rate was significantly higher in octogenarians (38.7% vs 5.2%, p<0.001).

CONCLUSION: In our cohort, octogenarians had similar rates of primary maturation and functional accesses. The type of access and the rate of secondary procedures were also similar. These results highlight the importance of having a multidisciplinary team with US assessment to improve decision making regarding the most suitable access in older patients.

CR14 OCTOGENARIANS IN PRIMARY VASCULAR ACCESS SETTING – A SINGLE CENTER EXPERIENCE

Leandro Nóbrega, Lara Dias, Tiago Moura, Pedro Paz Dias, Joana Ferreira, Luís Coentrão, Armando Mansilha

ULS São João

INTRODUCTION: Octogenarians were a minority of patients that underwent primary autologous access construction due to limited life expectancy and comorbidities. However, with the higher average life expectancy associated with improved medical care, it is expected that more octogenarians will be candidates to autologous access. The aim of this study is to access the impact of being octogenarian after first autologous arteriovenous (AV) access construction in our center.

METHODS: All patients evaluated in our multidisciplinary outpatient clinic in a tertiary care center and submitted to primary autologous AV access construction in 2021 and 2022 were included. AV grafts and patients without post-operative evaluation were excluded. Our multidisciplinary outpatient clinic performed clinical and ultrasound (US) evaluation and recommended the type of AV access. AV access maturation was defined as clinical and ultrasound maturation criteria, as evaluated by a nephrology consultant. A functional AV access was defined accordingly to the ESVS Vascular Access guidelines. Primary outcomes were the achievement of

CR15 FEMORAL ARTERY APLASIA WITHOUT PERSISTENT SCIATIC ARTERY: A CASE REPORT AND LITERATURE REVIEW OF ILIOFEMORAL ARTERY ANOMALIES

Carolina Tavares, Carlos Amaral, Rita Ferreira, Helena Fidalgo, Adriana Figueiredo, Inês Gueifão, Gonçalo Araújo, Ana Loureiro, Vanda Pinto, Maria Emília Ferreira

Hospital Santa Marta, ULS S. José

Iliofemoral artery abnormalities are rare with Greebe J et al. identifying only six cases among 8000 patients. These anatomical variations may present with a range of clinical symptoms or remain asymptomatic. In cases of femoral artery hypoplasia or aplasia, a persistent sciatic artery (PSA) is often observed. The sciatic artery, which supplies the lower limbs during embryonic development, typically regresses by the 3rd month of gestation. When it persists, it connects the internal iliac artery (IIA) to the popliteal artery (PA). Although PSA is the most common pathway other variations can occur. We present a case report alongside a literature review of this abnormalities. We describe the case of a 67-year-old female with a history of dyslipidemia but no other cardiovascular risk factors. She was referred to vascular surgery after a duplex ultrasonography revealed the absence of the left common and superficial femoral artery, despite preserved multiphasic flow in the PA. The patient was asymptomatic, with no intermittent claudication, rest pain or trophic lesions.

On physical examination, Cowie's sign –absent femoral pulse with a palpable popliteal pulse- was present, raising suspicion for PSA. An angio-CT showed an agenesis of the common and superficial femoral artery. The common iliac artery was normal, but the external iliac artery was hypoplastic and the IAA was ectatic. The obturator artery (IIA branch) anastomosis with the hypertrophied ascending branch of the medial circumflex femoral artery and reconstituted the deep femoral artery. Distally, the fourth perforating artery of Elliott (DFA termination) anastomosis with the superior lateral genicular artery to restore flow to the supragenicular popliteal artery. Tibioperoneal arteries are patent. There was no significant arterial disease for the patient's age or any anatomical variation in the arteries of the left calf or right lower extremity. Although this is an anatomical variation and is unlikely to have clinical significance for this patient, recognizing such anomalies is crucial when evaluating ischemic-like symptoms or planning femoral artery access. Awareness of these variations is also essential during knee or hip surgery to avoid compromising critical collateral anastomosis. When abnormalities of the femoral artery system are present, it is crucial to assess for a persistent sciatic artery (PSA), as it carries a risk of aneurysmal degeneration, which may lead to rupture and embolization.

CR16 ANEURISMAS DA ARTÉRIA CARÓTIDA EXTRACRANIANOS – CASE REPORT

Mónica Bandeira, Joana Martins, Sérgio Teixeira, Arlindo Matos, Andreia Pinelo, Henrique Andrade de Almeida, Miguel Queirós, João Marcelo Cabral, Samuel Cardoso, Rui Machado

ULS Santo António

INTRODUÇÃO: Os aneurismas da artéria carótida extracranianos são raros, apresentando-se frequentemente de forma assintomática. Aquando do desenvolvimento de sintomas, apresentam-se, predominantemente, sob a forma de sintomas neurológicos decorrentes de tromboembolismo e ateroembolismo.

CASE REPORTS: São apresentados dois casos de aneurismas da artéria carótida interna, ambos em doentes com múltiplos fatores de risco cardiovasculares (hipertensão arterial, dislipidemia e tabagismo) e com apresentação clínica através de sintomas neurológicos (acidentes vasculares cerebrais de artérias do território vascular da artéria carótida aneurismática). O tratamento consistiu na realização de aneurismectomia e anastomose topo-a-topo. Na avaliação pós-operatória, ambos se apresentaram com sequelas neurológicas minor transitórias.

CONCLUSÃO: Quando sintomáticos, os aneurismas da artéria carótida extracranianos são debilitantes e têm impacto negativo na qualidade de vida dos doentes. O tratamento deve ser sempre individualizado, tendo como prioridade a preservação da funcionalidade neurológica do doente.

CR17 GASTRODUODENAL ARTERY PSEUDOANEURYSM – A RARE COMPLICATION OF PANCREATITIS

Ana Correia Matos, Lourenço Castro e Sousa, Vitor Bettencourt, Tiago Ferreira, Alberto Henrique, Orlanda Castelbranco

Hospital Egas Moniz

AIM: Peri-pancreatic pseudoaneurysms are an uncommon vascular complication. The pathophysiology of these aneurysms is not fully understood, but weakening of the arterial wall by proteolytic enzymes has been implicated. The splenic artery is the most commonly affected, followed by the gastroduodenal artery (10%). This condition may be asymptomatic or present with abdominal pain or potentially life-threatening hemorrhage due to rupture. Treatment modalities include endovascular therapies (coils, plugs) or open surgery.

METHODS: We report a clinical case of a gastroduodenal artery pseudoaneurysm in a patient with acute-on-chronic pancreatitis, treated with coil and plug embolization.

RESULTS: A 76 year-old male was admitted to the Emergency Department with a 24-hour history worsening of abdominal pain, localized to the upper quadrants. The patient had a history of chronic pancreatitis, with recurrent acute episodes, complicated by walled off necrosis and secondary type 2 diabetes mellitus, which led to hospitalization in the Gastroenterology department. During the last hospitalization, two months before, he underwent CT angiography which revealed two pseudoaneurysms, the largest measuring 38x37 mm.
During the new hospitalization, an abdominal CT angiography revealed "Two pseudoaneurysms: one in continuity with the gastroduodenal artery measuring 64 × 56 × 53 mm, and another likely arising from the left gastric artery measuring 10 × 9 × 13 mm.
Additionally, there is walled-off necrosis in the pancreatic tail." Due to rapid growth and the high likelihood of rupture, the patient underwent gastroduodenal artery pseudoaneurysm embolization through the left brachial access, with placement of multiple coils and a plug. The procedure was uneventful.

CONCLUSION: Gastroduodenal artery pseudoaneurysms are rare.
Prompt diagnosis and early treatment are essential due to the potentially fatal consequences and increased mortality if left untreated.

CR18 GIANT ABDOMINAL AORTIC ANEURYSMS: MORBI-MORTALITY ANALYSIS IN A TEN-YEAR CASE-CONTROL STUDY

Francisco José Andrade Basílio, Andreia Pires Coelho, Ricardo Gouveia, Luís Fernandes, Marta Machado, Patricia Carvalho, Beatriz Guimarães, Ana Margarida Rocha, Alexandra Canedo

ULSGE

PURPOSE: This study aimed to identify significant differences in risk factors, anatomical characteristics, and clinical outcomes between patients with giant and non-giant abdominal aortic aneurysms (AAAs).

METHODS: We retrospectively identified 24 consecutive patients who underwent repair of a giant AAA between 2013 and 2024. This group was matched in a case-control manner with 24 patients who underwent repair of a non-giant AAA. Matching criteria included sex, rupture status, and type of surgery to ensure comparability between the cohorts.

RESULTS: Patients with giant AAAs were significantly older (77.45 vs. 72.17 years, p = 0.052) and had a higher prevalence of hypertension (91.67% vs. 62.5%, p = 0.016). Anatomically, the giant AAA group had a higher proportion of saccular aneurysms (25% vs. 4.17%, p = 0.041).
Giant aneurysms presented with a trend toward shorter and more angulated aneurysm necks but did not reach statistical significance (length: 22.08 mm vs. 25.02 mm, p = 0.565; infrarrenal angulation: 34.33° vs. 26.42°, p = 0.264). Patients with giant AAAs had a significantly higher rate of intraoperative complications (29.17% vs. 4.17%, p = 0.020) and peri-operative events, including 30-day stroke (16.67% vs. 0%, p = 0.037), and 30-day myocardial infarction within (16.67% vs. 0%, p = 0.017). However, in the long-term there were no significant differences in mortality rates at 1 or 5 years nor there were differences in the need for re-intervention at 1 year.

CONCLUSION: Giant AAA is a rare condition with no universally accepted definition and limited dedicated research. The increased technical difficulty in intervention is evident in the higher risk of intra and peri-operative complications which highlight the need for careful perioperative management.
Anatomical differences probably did not reach statistical significance due to the low number of patients. Multicentric databases focused studies would probably allow a more thorough analysis of the impact of giant size in AAA outcomes.

CR19 THE POTENTIAL LIFE-SAVING IMPACT OF GENETIC INFORMATION – AN ILLUSTRATIVE CASE OF PREGNANCY-ASSOCIATED TYPE B AORTIC DISSECTION

Mariana Tomásio Neves[1], Oana Moldovan[1], Ana Berta Sousa[1], Alice Lopes[2], Luís Mendes Pedro[2]

[1]Medical genetics Department, Unidade Local de Saúde Santa Maria
[2]Vascular surgery Department, Unidade Local de Saúde Santa Maria

INTRODUCTION: Type B aortic dissection (TBAD) is a life-threatening condition requiring careful management, particularly during pregnancy, where hemodynamic and hormonal changes increase aortic stress. Marfan syndrome and other connective tissue disorders significantly elevate the risk of aortic dissection, often with subtle or absent phenotypic markers, complicating early recognition. While medical therapy is the first-line treatment for uncomplicated TBAD, identifying genetic aortopathies is crucial for surgical risk stratification and long-term surveillance. The 2024 ESC guidelines emphasize genetic testing in optimizing intervention timing, post-dissection monitoring, and family screening.

CASE SUMMARY: A 30-year-old pregnant woman (29 weeks, 3 days gestation) presented with acute left chest pain radiating to the back and dyspnea after a suspected food choking episode. Her family history included a father with an uncomplicated type B aortic dissection at 54 and a paternal half-brother who died suddenly. The pregnancy had been uneventful until this episode. CT angiography revealed a type B aortic dissection from the left subclavian artery to the iliac arteries, with no malperfusion or rupture. Given stable hemodynamics, a conservative approach was adopted, focusing on blood pressure control, fetal lung maturation, and close imaging surveillance. Following a multidisciplinary discussion, an elective preterm cesarean section was performed to reduce hemodynamic stress and enable postnatal aortic surveillance, without complications. Postpartum genetic evaluation identified a pathogenic FBN1 variant (c.7754T>C, p.(Ile2585Thr)), confirming Marfan syndrome. Neither the patient nor her father displayed the classical Marfan phenotype. Cascade testing found the same variant in her father.

DISCUSSION: Genetic screening in vascular surgery is expanding. Connective tissue disorders often present with subtle manifestations, delaying diagnosis until complications arise. In this family, genetic testing should have been performed during the father's dissection, enabling earlier identification of at-risk family members. Recognizing this gap, our hospital initiated a collaboration between Medical Genetics and Vascular Surgery, ensuring all TBAD patients are referred for genetic evaluation. This centralizes care to enhance early diagnosis, optimize risk stratification, and improve surveillance, reducing the risk of catastrophic aortic events in affected families.

CR20 ASSOCIATION BETWEEN LABORATORY PARAMETERS AND AUTOLOGOUS VASCULAR ACCESS PATENCY: A COMPARATIVE ANALYSIS IN DIALYSIS AND NON-DIALYSIS PATIENTS

Tiago Costa-Pereira, Lara Dias, Leandro Nóbrega, Joana Ferreira, Luís Coentrão, Armando Mansilha

ULS São João

AIMS: Autologous vascular access (VA) represents the preferred access type for haemodialysis due to lower infection rates and longer functional patency compared to other access types. However, VA failure remains a significant clinical challenge. Various biochemical parameters have been proposed as potential predictors of vascular access success, though their predictive value remains controversial. This study aimed to investigate the association between laboratory markers, such as haemoglobin and albumin, and patency of autologous VA.

METHODS: A retrospective analysis was conducted on patients assessed in our multidisciplinary outpatient clinic in a tertiary care center and submitted to primary (first) autologous AV access construction between January 2021 and June 2023. AV grafts and patients without post-operative evaluation were excluded. Laboratory values were collected at the time of VA creation. AV access maturation was defined as clinical and ultrasound maturation criteria, as evaluated by a nephrology consultant. Statistical analysis included univariate analysis and Cox regression models to evaluate associations between laboratory markers and VA outcomes (maturation, primary patency, and overall patency), with adjustments for age and gender.

RESULTS: A total of 262 patients included. Female patients demonstrated significantly lower hemoglobin levels compared to males (10.7 g/dL vs 11.2 g/dL, p=0.016). Patients on dialysis exhibited lower albumin concentrations than non-dialysis patients. Univariate analysis revealed no significant associations between any laboratory marker and VA maturation, loss of primary patency, or overall patency. Cox regression analysis identified hemodialysis status as a significant predictor of primary patency loss. After adjusting for age and gender, no laboratory marker was associated with primary patency loss in hemodialysis patients, while higher albumin levels were significantly associated with primary patency loss in non-hemodialysis patients (p=0.008).

CONCLUSIONS: The impact of laboratory markers on vascular access outcomes appears to differ between haemodialysis and non-haemodialysis patients. While laboratory markers showed no significant association with VA outcomes in haemodialysis patients, higher albumin levels were associated with increased risk of primary patency loss in non-haemodialysis patients. These findings highlight the complex relationship between biochemical parameters and vascular access outcomes.

E-POSTERS EXHIBITION

P11 A GUNSHOT WOUND – CASE REPORT AND SOCIOCULTURAL REFLECTION

Luis Orelhas, Jorge Duarte Costa, Maria Neves Carmona, Leonor Baldaia, Miguel Castro e Silva, Eduardo Silva, Celso Nunes, Mário Moreira, Luis Antunes, Manuel Fonseca

ULS Coimbra

Major vascular abdominal trauma is rare, mostly associated with penetrating abdominal injuries. ESVS 2025 Vascular Trauma Guidelines show a lack of European data related to major vascular trauma. These vascular traumas are usually associated with other abdominal organs injuries. Traumatic iliac vessels injuries are even rarer, accounting for <2% of all vascular traumas with reported mortality rate between 24-80%. We report a case of thirty-three year-old melanodermic male patient, admitted at the Emergency Department with a penetrating abdominal trauma with unknown cause. Medical history was not possible to collect. Evaluation by trauma team revealed hypotension, tachycardia, prostration, painful abdomen, palsy in a pulseless left lower limb and a non-bleeding penetrating left flank wound, likely from a gunshot. A FAST protocol was performed showing small quantity of peritoneal free liquid and a suggestive retroperitoneal hematoma along the left flank. Supportive measures with fluids and blood units were taken with adequate response, therefore a Trauma CT Scan was performed, revealing minimal free peritoneal fluid, Common Iliac Artery (CIA) Grade 3 lesion causing an extensive retroperitoneal left flank hematoma. A projectile was also identified to the right of lumbosacral transition. In a Multidisciplinary approach, decision for endovascular repair first was made.

An endovascular repair of the CIA with a covered stent Gore VBX through an ipsilateral retrograde femoral artery access. Phlebography was also performed with no lesions found in the left iliac axis. An exploratory laparotomy was performed, and small bowel perforation was excluded by The Clip and Drop Back Technique. Further retroperitoneal hematoma exploration was avoided due to hemodynamic stability and non-pulsatile hematoma. Laparostomy was decided. Patient was admitted to Intensive Care Unit where he remained for 9 days. An abdominal second look was made after 48 hours with intestinal reconstruction and laparostomy closure. Projectile was not removed. Patient was discharged from ward on 21st day. A thirty-day post-operatory CT scan showed a patent stent, without pseudoaneurysmatic lesion of the repaired left CIA. After, patient was lost to follow-up.

This case report is relevant to the current European and Portuguese sociocultural environment due to the increase in trauma associated with violent crime, highlighting the need for institutional investment and training in vascular trauma.

P12 CORRELATION BETWEEN PLANTAR ACCELERATION TIME, ANKLE BRACHIAL INDEX AND SVS-WIFI SCORES IN PATIENTS WITH CHRONIC LIMB-THREATENING ISCHEMIA

Marina Aragão Hamdan de Freitas, Guilherme de Castro Santos, Alessandra Rocha Luz, Túlio Pinho Navarro, Gabrielle Martins Peres

Hospital das Clínicas - Universidade Federal de Minas Gerais (UFMG)

INTRODUCTION: In patients with diabetes and chronic limb-threatening ischemia (CLTI), the ankle-brachial index (ABI) may be inaccurate due to arterial calcification. An alternative method is spectral Doppler flow analysis of the lateral plantar artery of the foot, correlating the degree of limb ischemia and the amputation risk stages of the classification system (SVS-WIfI).

OBJECTIVES: To determine the accuracy of Plantar Acceleration Time (PAT) compared to ABI and SVS-WIfI amputation risk stages in patients with CLTI.

METHODS: Cross-sectional study carried out at the Risoleta Tolentino Neves Hospital (Belo Horizonte - Brazil) from June 2019 to March 2020, with patients over 18 years of age with CLTI. The following data were collected: demographic data, comorbidities, ABI and TAP measurement. Individuals were categorized into three thresholds based on ABI (ABI <0.8; ABI <0.6; ABI <0.4) and two thresholds based on amputation risk (1-very low and low; 2-moderate and high), according to the SVS-WIfI classification. The correlation of ABI and amputation risk with TAP were estimated using Spearman's correlation. Sensitivity, specificity, positive predictive value, negative predictive value and accuracy were also calculated using ROC (Receiver Operator Characteristic) curves.

RESULTS: 184 consecutive patients (265 lower limbs) were referred for vascular Doppler ultrasonography of the lower limbs. 141 patients (74 diabetic and 67 non-diabetic), 198 lower limbs (104 diabetic and 94 non-diabetic) met the criteria, and were included for analysis. TAP correlated significantly with ABI and amputation risk ($P < 0.001$) in both groups. The accuracy of TAP for detecting ABI < 0.8 was up to 91% in the diabetic group and 85% in the non-diabetic group; for ABI < 0.6, 79% in the diabetic group and 85% in the non-diabetic group; for ABI < 0.4, 88% in the diabetic group and 87% in the non-diabetic group. The accuracy of TAP to detect moderate/high risk of amputation reached 77% in both groups. TAP correlated accurately with ABI and SVS-WIfI scores.

CONCLUSION: Plantar acceleration time (PAT) demonstrated a high correlation with ABI, ischemia classification stages, and amputation risk of the SVS-WIfI classification system with high sensitivity, specificity, and accuracy in patients with CLTI.

P13 RARE BUT DEADLY: MYCOTIC SUPERIOR MESENTERIC ARTERY ANEURYSM

Ana Silva, António Duarte, Alice Lopes, Pedro Amorim, Luís Mendes Pedro

Hospital Santa Maria

INTRODUCTION: Superior mesenteric artery (SMA) aneurysms are rare and often infectious.Their nonspecific presentation can delay diagnosis, increasing rupture risk, with mortality rates from 30% to 90%. Antibiotic therapy alone is insufficient to prevent rupture, and there is no consensus on the optimal surgical approach or timing.

CLINICAL REPORT: We present the case of a 31-year-old indian male, with no relevant medical history. The patient reported a one-month history of abdominal pain and fever, with multiple visits to the emergency department. Several CT angiographies (CTA) were performed during this period showing a fast growing SMA aneurysm. Due to worsening symptoms, the patient had a new CTA that showed a suspected rupture and he was transferred to tertiary vascular surgery center. At admission, he was hemodynamically stable with hyperlactatemia and elevated inflammatory markers. The patient underwent an exploratory laparotomy, which identified the aneurysm without intestinal ischemia, hematomas or signs of massive infection. Based on these findings, surgery was postpone for an etiological study. Cultures and infectious serologies were performed, with no pathogen isolated until now. Empirical meropenem was initiated, reducing inflammatory parameters. A diagnostic arteriography showed distal occlusion of the aneurysm with splanchnic circulation maintained by the inferior mesenteric artery. An elective aneurysm resection was executed, with tissue samples collected for microbiology and pathology, which did not reveal any etiologic agent until now. The patient showed favorable postoperative evolution, with a switch in antibiotic therapy to amoxicillin+clavulanic acid and doxycycline. A follow-up CTA confirmed successful aneurysm resection with preserved splanchnic branches. The patient was discharged with instructions to continue empirical antibiotic therapy and start aspirin.

CONCLUSION: SMA aneurysms diagnosis requires high suspicion, particularly in young patients, as seen in this case. The diagnosis of infection should not rely solely on microbiological isolation and intraoperative findings suggestive of infection must be considered. Early recognition, prompt initiation of antibiotic therapy and resection of the aneurysm are essential to improving outcomes. The decision to perform arterial reconstruction may be supported by arteriographic findings in patients whose clinical stability allows it, as in this case, balancing the risk of graft infection.

P14 ABDOMINAL AORTIC BI-ILIAC ANEURYSM IN A PATIENT WITH A PELVIC KIDNEY

João Ferreira Pires, Luís Silvestre, Marta Romão Rodrigues, Tiago Magalhães, Mariana Moutinho, Luís Mendes Pedro

Unidade Local de Saúde de Santa Maria

INTRODUCTION: Abdominal aortic aneurysm (AAA) is rarely associated with a pelvic kidney. Aneurysm repair is technically demanding because of the abnormal origin of the renal artery and the renal ischemia during aortic cross-clamping.

CASE REPORT: Female patient, 71 years old, referred to a vascular surgery consultation for an asymptomatic abdominal aortic bi-iliac aneurysm. Relevant medical history includes hypertension, dyslipidemia, and HIV infection with an undetectable viral load. A CT angiography revealed a 50 mm infrarenal abdominal aortic aneurysm, a 40 mm right common iliac artery aneurysm, a 30 mm left common iliac artery aneurysm and a pelvic right kidney with a renal artery origin at the aortic bifurcation.The patient underwent a partial aneurysm resection and bifurcated 14 × 7 mm Dacron graft interposition in an aorto-bi-external iliac position, with a bypass to the right renal artery with a 7 mm Dacron graft. The graft preparation with the branch for the right renal artery was performed with prior assembly on a back table. The renal anastomosis was performed immediately after the aortic anastomosis with a total renal ischemia time of 54 minutes, (including 34 minutes of renal artery perfusion using cold Ringer's lactate). The postoperative course was uneventful, with preserved urinary output and no acute kidney injury. A follow-up CT angiography was performed, demonstrating patency of the reconstruction.

CONCLUSIONS: Renal preservation in the surgical approach to an abdominal aortic aneurysm in the case of a pelvic kidney is challenging but feasible, as demonstrated in this clinical case.

Key-words: Pelvic kidney; abdominal aortic aneurysm

P15 ADVANCED ENDOVASCULAR TECHNIQUES FOR IN-STENT OCCLUSION RECANALIZATION: A CASE REPORT

Carolina Tavares, Ricardo Correia, Helena Fidalgo, Adriana Figueiredo, Inês Gueifão, Gonçalo Araújo, Ana Loureiro, Vanda Pinto, Carlos Amaral, Maria Emília Ferreir

ULS S. José - Hospital Santa Marta

In-stent restenosis and occlusion are significant challenges in endovascular treatment. Reintervention is often complicated by the difficulty of crossing an occluded stent without passing through the stent struts. Anterograde approach may fail due to subintimal dissection at the stent edge, so retrograde and direct stent puncture might be an alternative.
We present the case of an 83-year-old female patient with personal history of hypertension and previous bare metal stenting of the proximal superficial femoral artery (SFA) and P1-3 segments of the popliteal artery (PA). She presented with chronic left lower limb rest pain and an ischemic malleolar ulcer. Duplex ultrasound revealed occlusion of the entire SFA, PA, tibioperoneal trunk (TPT) and distal anterior tibial artery (AT). Given her frailty and lack of venous conduit, endovascular treatment was pursued. 7F retrograde contralateral femoral access was obtained and angiography showed occlusion of SFA, PA, TPT and mid-distal AT; posterior tibial (PT) and peroneal arteries were patent. Anterograde crossing of the proximal stent was achieved intraluminally, but the distal stent could only be crossed subintimaly. 4F fluoroscopy-guided retrograde AT access was obtained but also resulted in subintimal crossing. Fluoroscopy-guided anterograde direct stent punction at P1 enabled intraluminal recanalization until the PT. Using this access, CART technique facilitated reentry of the AT guidewire in the distal PA, allowing in-stent retrograde cannulation. Using this access, reverse-CART technique enabled contralateral guidewire reentry just above the distal stent, achieving anterograde intraluminal catheterization of the PT. AT access was closed with endoclamping. Plain old balloon angioplasty of TPT and PT and drug-coated balloon angioplasty of the distal stent and infra-stent PA were performed. Drug-eluted stents were implanted in the SFA ostium and in the SFA between the previous stents. Final angiography confirmed recanalization of the SFA, PA and TPT, with no residual stenosis or flow-limiting dissection. At 1-month of follow-up, revascularization remained patent with rest pain resolution and significant wound healing improvement.
In-stent occlusion often require a complex endovascular approach. Endovascular surgeons should be able to use techniques as retrograde distal access, direct stent puncture, CART and reverse-CART to achieve an intraluminal stent revascularization and optimal DSA and clinical results.

P16 LOW-PROFILE ENDOVASCULAR REPAIR FOR ANEURYSMAL AND OCCLUSIVE ILIAC DISEASE: A CASE-BASED INSIGHT

Luís Fernandes, Diogo Silveira, Marta Machado, Francisco Basílio, Patrícia Carvalho, Beatriz Guimarães, Ana Margarida Rocha, Alexandra Canedo

ULSGE

INTRODUCTION: Concomitant aneurysmatic and atherosclerotic occlusive disease remains challenging during EVAR, often demanding unconventional approaches.

Current treatment options including lower-profile grafts or intravascular lithotripsy don't mitigate risks of technical failure, rupture or access site complications.

CASE REPORT: 60-year-old patient with a 56mm infra-renal aortic aneurysm with extensive occlusive iliac disease. Priors included CABG, COPD and a right lower limb multi-level revascularization (common femoral endarterectomy, femoral popliteal bypass and a 6mm self-expandable BMS on the external iliac artery). Left iliofemoral axis was patent, with sequential calcified critical stenosis (mean diameter: 4mm). Percutaneous access was obtained on both common femoral arteries. On the right side, after placement of two Prostyle sutures, a 16Fr Dryseal sheath was carefully advanced through the right external iliac stent (swallow technique) and a 26mm Gore Excluder bifurcated device deployed. To minimize risk of bypass occlusion, downsize to a 7Fr sheath, with Prostyle suture adjustment, was performed. On the left side, after iliac axis pre-dilation, contralateral gate cannulated, an 8x150mm Gore Viabahn deployed followed by and an 8Lx79mm Gore VBX with 3 cm overlap (the later post-dilated to 14mm to seal the gate) bridging both components. Flow-limiting dissection on the distal external left iliac artery required a self-expandable BMS. Completion angiography showed no endoleaks or complications. Left common femoral artery was closed with a single Prostyle suture.

DISCUSSION: Combination of Viabahn and VBX allows treatment of aneurysmatic aortic disease with heavily diseased iliac arteries with good trackability, lesser risks, maintaining adequate seal, percutaneous access and profile reduction to 8Fr, potentially reducing morbidity.

P17 GLOMUS TUMOR A RARE ENTITY WITH A PATHOGNOMONIC CLINICAL PRESENTATION

Marta Machado, Luís Fernandes, Francisco Basílio, Patrícia Carvalho, Beatriz Guimarães, Ana Margarida Rocha, Pedro Brandão, Alexandra Canedo

ULSGE

INTRODUCTION: The glomus tumor is a rare benign vascular tumor of the neuromyoarterial glomus, a highly specialized arteriovenous anastomosis responsible for thermoregulation. Less common types of glomus tumors such as extradigital and intravascular lesions can present a diagnostic challenge. This case report adds to the literature of proven extradigital glomus tumors with documented pathologic and imaging characteristics and describes their place in the differential for soft tissue mass of the wrist.

CLINICAL CASE: An otherwise healthy 50-year-old man presenting with complaints of a tender mass on the radial aspect of the left wrist. He reported the mass first appeared approximately 2 years prior, but had been growing progressively larger over time. He also reports hypersensitivity to touch and cold (example exposure to wind). On physical examination, a soft mass, painful to palpation and which deflates with compression and elevation of limb. (Figure 1)

MRI of the wrist revealed a well-circumscribed lobulated, soft tissue mass along the radial aspect of the wrist centered in the subcutaneous fat, measuring 2.2 × 1.5 × 2.4 cm. The mass demonstrated hyperintense T2 signal, isointense T1 signal, and avid postcontrast enhancement. Diagnostic angiography was performed via arterial (brachial artery) and venous (dorsal vein of the hand) access, with no evidence of significant arterial supply, with characterization of the venous drainage of the lesion. (Figure 2)

The lesion was removed after ligation of the distal and proximal ends of the dorsal wrist vein and the specimen was sent to the histologic examination which revealed a glomus tumor. (Figure 3)

Figure 1. Soft mass on the radial aspect of the wrist

Figure 2. Diagnostic angiography performed via arterial (brachial artery) and venous (dorsal vein of the hand) access

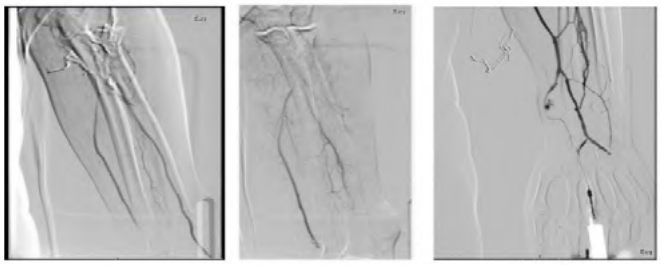
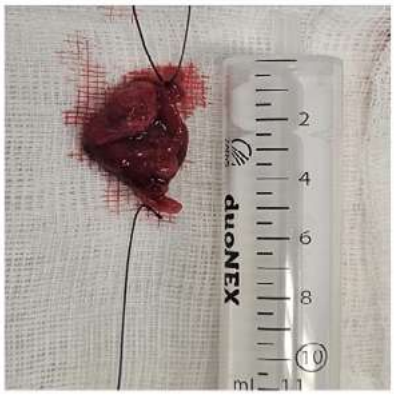


Figure 3. Lesion after excision



Following the excision, the patient's pain completely disappeared and no further pain was reported afterward. 1-year follow-up of the patient showed no pain, symptoms, or tumor recurrence.

DISCUSSION/CONCLUSION: The triad of cold intolerance, intense paroxysmal pain, and well-defined site of pain is characteristic of the tumor. Occasionally, a combination of imaging findings and clinical history as described may help suggest the diagnosis prospectively.
Surgeons should be aware of this rare condition and consider it in the differential diagnosis when treating a painful soft-tissue mass of the wrist.
Timely diagnosis and surgical resection are generally curative with complete resolution of symptoms.

P18 UNCOMMON PRESENTATION OF CAROTID WEB: A RARE CAUSE OF STROKE IN AN ELDERLY PATIENT

Samuel Cardoso[1], Henrique Rocha[2], Carlos Veterano[2], Pedro Sá Pinto[3], Carlos Pereira[3], Rui Machado[4]

[1]Department of Angiology and Vascular Surgery, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António; Unit for Multidisciplinary Research in Biomedicine (UMIB), School of Medicine and Biomedical Sciences (ICBAS), University of Porto; ITR - Laboratory for Integrative and Translational Research in Population Health,
[2]Department of Angiology and Vascular Surgery, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António
[3]Department of Angiology and Vascular Surgery, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António; Department of Renal Transplantation, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António,
[4]Department of Angiology and Vascular Surgery, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António; Department of Renal Transplantation, Centro Hospitalar Universitário de Santo António, Unidade Local de Saúde de Santo António; School of Medicine and Biomedical Sciences (ICBAS), University of Porto

INTRODUCTION: Carotid web is a rare vascular anomaly characterized by a thin, fibrous membrane in the wall of the internal carotid artery that protrudes into the arterial lumen. It is a cause of cryptogenic stroke, affects, particularly, young African women without cardiovascular risk factors. The diagnosis is implied for the presence of characteristic imaging findings on Doppler ultrasound and computed tomography angiography (CTA). The diagnosis confirmation is obtained by histological exam. The therapeutic approach is tailored based on various clinical factors. We present a case of a symptomatic carotid web with a typical presentation in a patient whose clinical characteristics diverge from those commonly described in the literature.

CASE DESCRIPTION: An 87-year-old Caucasian male with multiple cardiovascular risk factors presented with sudden-onset right-sided weakness and numbness, compatible with crural-dominant right hemiparesis and right tactile hemi hypoesthesia. The Doppler ultrasound of the carotid vessels revels an image of the membrane flap in the posterior wall of the left internal carotid artery, on mode B-image. CTA of the head and neck revealed a contrast-filling defect in the left internal carotid artery. The patient underwent left carotid endarterectomy, during which a thin fibrous membrane was excised. Histopathological analysis confirmed the diagnosis of web carotid. The patient was discharged on the seventh day post-operation without complications and had no further ischemic episodes during the two-month follow-up period.

DISCUSSION: This case presents a rare instance of symptomatic carotid web in an elderly male with cardiovascular risk factors, contrasting with its usual occurrence in younger women of African descent. Carotid web, a vascular anomaly linked to cryptogenic stroke, disrupts blood flow and promotes thrombus formation. Given the high stroke recurrence risk, intervention is preferred over medical therapy. Carotid endarterectomy allows confirm the diagnosis and prevent recurrence of the ischaemic events.

CONCLUSION: This clinical case reinforces the importance of no exclude the possibility of carotid web based solely on the patient's demographic profile; contributes to expand understanding of the clinical and demographic spectrum of this rare condition; and emphasises the necessity of accurate diagnosis and an appropriate therapeutic approach to mitigate recurrent ischemic events.

P19 EMERGENT HYBRID TREATMENT OF A CORAL REEF AORTA

Miguel Queirós, Mónica Bandeira, Samuel Cardoso, João Cabral, Henrique Almeida, Andreia Pinelo

ULS de Santo António

Emergent Hybrid Treatment of Coral Reef Aorta

INTRODUCTION: Coral reef aorta (CRA) is a rare form of atherosclerosis that affects the thoracoabdominal aorta and its branches. CRA can result in hypoperfusion and thromboembolic disease affecting vital organs. Conventional management involves open thoracoabdominal aortic thromboendarterectomy with bypasses as needed. However, endovascular and hybrid approaches have also proven effective, particularly in emergency cases. We report a case of CRA in a patient presenting with acute mesenteric ischemia and resistant hypertension.

CASE REPORT: A 66-year-old woman presented to the emergency department with diffuse abdominal pain that had started the same day. The patient had a previous history of resistant hypertension and bilateral lower limb claudication

for 100 meters. Computed tomography angiography (CTA) revealed a thoracoabdominal coral reef aorta sparing the renal arteries ostium, with subocclusive stenosis of the celiac trunk, long atherosclerotic occlusion of the superior mesenteric artery (SMA), and subocclusive atherosclerotic stenosis of the right common iliac artery. Arterial blood gas analysis showed pH 7.45, potassium 2.5 mmol/L, and lactate 3.5 mmol/L. Blood works revealed leukocytosis (46,000/µL) and lactate dehydrogenase (LDH) of 400 U/L, while other parameters were unremarkable.
The patient was started on medical support, but after a few hours, abdominal pain persisted with minimal improvement. Given the lack of response to conservative management, emergent revascularization was performed. Diagnostic angiography confirmed subocclusion of the celiac trunk and long occlusion of the proximal SMA. A left axillo-femoral bypass was performed to increase retrograde perfusion to the renal arteries and provide inflow for ilio-visceral artery bypass if endovascular revascularization failed.
Revascularization of the celiac trunk was possible and successfully performed with a 6 mm covered stent. Postoperatively, the patient experienced resolution of abdominal pain and normalization of blood pressure without the need for antihypertensive treatment.

CONCLUSION: Coral reef aorta is a rare and potentially fatal condition due to end-organ ischemia. In the acute setting, swift revascularization is mandatory.
In our patient, a less invasive hybrid approach combining endovascular visceral revascularization and an extra-anatomical axillo-femoral bypass successfully restored visceral and renal perfusion

P20 TWO-STAGE ENDOVASCULAR REPAIR OF A GIANT AORTIC ANEURYSMATIC DISEASE

Andreia Ministro, Augusto Ministro, Luís Mendes Pedro

ULSSM

A man was incidentally diagnosed with a 16 cm type III thoracoabdominal aortic aneurysm and a 7.5 cm descending thoracic aortic aneurysm. A two-stage approach was performed.
The larger aneurysm was urgently treated, due to rupture risk, using an off-the-shelf branched endograft (T-branch) with thoracic and abdominal extensions. The second aneurysm was subsequently excluded with an off-the-shelf endograft featuring a branch (TBE) for the left subclavian artery and an extension to the previously placed endograft. The staged approach minimized spinal cord ischemia risk.

P21 AORTOILIAC DISEASE COMBINED WITH EXTENSIVE INFRAINGUINAL LESIONS: A CHALLENGING CASE WITH A CHALLENGING ENDOVASCULAR SOLUTION

Gonçalo Araújo, Ricardo Correia, Inês Gueifão, Helena Fidalgo, Adriana Figueiredo, Joana Cardoso, Carolina Tavares1, Ana Loureiro, Maria Emília Ferreira

Hospital de Santa Marta

INTRODUCTION: The endovascular treatment of aorto-iliac disease is complex, but it becomes extremely challenging when associated with extensive infrainguinal disease, like the highlighted CLTI case.

DESCRIPTION: We present a case of an 60-year-old male with a history left transtibial amputation. Two years ago, the patient had an acute thrombotic ischemia in the right lower limb treated with femoral endarterectomy, thrombectomy, and SFA POBA with bailout stenting in the distal SFA. He presented in his latest consultation with rest pain and wet gangrene in the right 1st toe. He was admitted for endovascular revascularization and right first toe amputation. Initial angiography showed significant luminal stenosis of the infra-renal aorta, left iliac axis occlusion, right EIA stenosis, right CFA occlusion with patent ABK popliteal artery after occluded stent in the distal SFA. The authors planned a two-stages endovascular revascularization along with right first toe amputation: after infrainguinal recanalization, a unilateral CERAB procedure. For infrainguinal revascularization, the initial access used was left axillary artery. However, the author were unable to antegradely cannulate the lumen of the occluded distal SFA stent due to subintimal track of the guidewire on mid-distal SFA. Therefore, after a retrograde puncture of the occluded SFA stent, the authors used CART technique to obtain an axillo-distal SFA through-and-through access. Definite treatment of the infrainguinal vessels was DCB on proximal-SFA and bailout stenting of mid-SFA. Flow-limiting right CFA dissection was left untreated at this stage. Subsequently, to treat the aorto-iliac disease, a retrograde ultrasound-guided right proximal SFA puncture was performed. Renal arteries endoclamping was performed during the delivery of a BeGraft aortic stent 12x59mm and 10mm BeGraft peripheral stenting in remaining infrarrenal aorta and right CIA via the right SFA access. This was followed by renal endoclamping release and right EIA stenting. Finally, via axillary access, stenting of the CFA and ostial AFS was performed. 1 month postoperatively the patients showed complete healing of the amputation stump and no rest pain complaints.

CONCLUSION: While the surgical challenges in such cases are considerable, this case illustrates the potential of advanced endovascular techniques in managing complex vascular conditions and that with proper planning, the outcomes can be highly favorable.

P22 ATYPICAL POST-SCLEROTHERAPY VASCULAR LESION: A CASE REPORT

Paula Dias[1], Juliana Sousa[1], Maria José Julião[2], Ricardo Vale Pereira[1], Manuel Fonseca[1]

[1]Angiologia e Cirurgia Vascular, Hospitais da Universidade de Coimbra, [2]Anatomia Patológica, Hospitais da Universidade de Coimbra

BACKGROUND: Sclerotherapy is a widely used minimally invasive treatment for varicose veins, offering high success rates. However, complications can arise, including local inflammation, hyperpigmentation, telangiectatic matting, and ulceration. While most complications are well-documented, long-term vascular anomalies following sclerotherapy remain rare. This case report presents an unusual delayed vascular lesion.

CASE REPORT: An 82-year-old female with a history of SVT treated with ultrasound-guided sclerotherapy presented with a gradually enlarging, firm, non-pulsatile mass on her right leg approximately 3.5 years post-treatment. Doppler ultrasound suggested a varicose collateral aneurysm. Given the lesion's atypical characteristics and potential malignancy risk, surgical excision was performed. Histopathological analysis revealed the lesion to be a cavernous hemangioma, a benign vascular tumor.

CONCLUSION: This case emphasises the necessity of long-term monitoring following sclerotherapy, as delayed complications such as vascular anomalies may arise. While cavernous hemangiomas are typically congenital, their presence post-sclerotherapy raises questions about potential treatment-induced endothelial damage and vascular remodeling. Advanced imaging and histopathological evaluation are crucial for accurate diagnosis and appropriate management of atypical soft tissue masses. This case highlights the importance of surveillance in post-sclerotherapy follow-up and the need for further research into late-onset vascular complications.

P23 ISCHEMIC MONOMELIC NEUROPATHY: CASE OF SERIES

Rita Piedade, José Miguel Vilas Boas, Leandro Nóbrega, Lara Dias, Jorge Costa Lima, Joana Ferreira, Luís Coentrão, Armando Mansilha

ULS São João

INTRODUCTION: Ischemic monomelic neuropathy(IMN) is a rare but severe complication of arteriovenous fistula(AVF) and arteriovenous graft(AVG) creation, characterized by ischemic nerve injury in the absence of steal syndrome. Due to its subtle clinical presentation, IMN is often misdiagnosed, leading to delayed intervention and potential irreversible neurological deficits. Immediate recognition and prompt AVF or AVG ligation is recommended. This case of series describes two patients with IMN in whom early diagnosis and intervention prevented major disability.

METHODS: Patients' clinical information was retrospectively reviewed.

CASE REPORTS: A 79-year-old male with end-stage renal disease(ESRD) due to type II diabetes mellitus underwent axillo-axillary AVG creation with a 4-7mm tapered PTFE propaten graft under regional block and local anesthesia. Within 24 hours, he developed severe arm pain, associated with progressive motor and sensory deficits in the first, second and third fingers(Fig.1). Radial pulse was palpable, and no other signs of cutaneous ischemia were noted, Doppler ultrasound confirmed triphasic arterial flow(Fig.2). Urgent surgical exploration led to AVG ligation and posterior brachial artery repair(Fig.3). Electromyography(EMG) later confirmed a severe axonal lesion of the median nerve. The patient was managed with analgesia and physical therapy, showing gradual motor recovery. A 64-year-old male with ESRD and type II diabetes mellitus underwent brachio-axillary AVG placement using the same graft type, also under regional and local anesthesia. On postoperative day one, he reported paresthesia limited to the second finger, which progressed to motor and sensory deficits in the first three fingers(Fig.4). No other ischemic signs were noted, distal pulses remained palpable and Doppler ultrasound showed normal arterial waveforms(Fig.5). 36 hours after AVF creation, prompt surgical AVG ligation was made. EMG confirmed a severe subacute axonal nerve lesion. The patient continued physical therapy with progressive functional improvement.

CONCLUSION: IMN is a rare but potentially debilitating complication following vascular access creation. Early recognition and prompt surgical ligation of AVGs were the key factor to prevent significant long-term disability, in these cases. Increased awareness among multidisciplinary teams, including nephrologists, neurologists, vascular surgeons and nurses, is essential to early recognition and management of IMN cases.

P24 HYBRID APPROACH IN THE TREATMENT OF A CONTAINED RUPTURE OF A DISTAL THROACIC AORTIC ANEURYSM: A CASE REPORT

Miguel Castro e Silva, Jorge Costa, Maria Carmona, Leonor Baldaia, Luis Orelhas, Eduardo Silva, Celso Nunes, Gabriel Anacleto, Luis Antunes

ULS Coimbra

BACKGROUND: Distal thoracic aortic aneurysms involving the visceral segment present significant surgical challenges, particularly in cases of rupture. While endovascular techniques have transformed aortic aneurysm repair, complex cases

often necessitate a hybrid approach combining open and endovascular interventions.

CASE REPORT: A 72-year-old male, former smoker with no significant comorbidities, presented with a three-day history of lumbar pain and a fever spike on the day before admission. CT angiography (CTA) revealed a contained rupture of a distal thoracic aortic aneurysm involving the visceral segment. Management and Outcome: The patient underwent thoracic endovascular aortic repair (TEVAR) using a Medtronic Valiant Captiva stent graft (28×28×100mm), combined with left common iliac-to-superior mesenteric artery and left common iliac-to-common hepatic artery bypasses. A conduit was perioperatively constructed using a 9mm Dacron and a 6mm PTFE graft. Postoperative CTA revealed an endoleak, leading to coil embolization of the celiac trunk. However, persistent endoleak required further TEVAR extension with a proximal aortic cuff (Medtronic Valiant Captiva 28×28×7mm), successfully excluding the aneurysm. The patient was discharged after 41 days, asymptomatic, with a 30-day follow-up CTA confirming aneurysm exclusion and bypass patency.

CONCLUSION: A hybrid approach combining TEVAR with open bypass grafting can be an effective strategy for managing complex aortic aneurysms involving the visceral arteries, as well as distal thoracic aortic aneurysms lacking a distal landing zone before the visceral aorta. Early detection, individualized treatment planning, and a multidisciplinary team are crucial for optimizing outcomes. This case highlights the feasibility and success of hybrid techniques in high-risk vascular emergencies.

P25 POPLITEAL ARTERY EPITHELIOID HEMANGIOMA – A CASE REPORT AND LITERATURE REVIEW

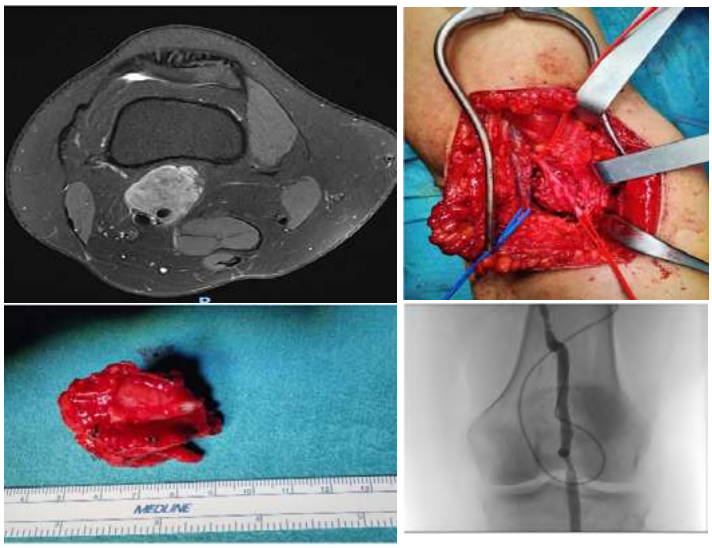
Armanda Duarte, Tony Soares, Tiago Costa, Luís Correia, Manuela Mafra, Diogo Cunha e Sá

Hospital da Luz Lisboa

INTRODUCTION: Ephitelioid Hemangioma (EH), also known as angiolymphoid hyperplasia with eosinofilia(ALHE), is a rare benign tumour. Large vessels involvement is extremely rare, with few cases reported on the upper arm, popliteal and external cervical arteries.

CASE DESCRIPTION: A 32-year-old female, with no previous history, seeks an orthopaedic surgeon for knee pain. During the diagnostic work-up, an MRI revealed a 37mm lesion, encompassing 270 degrees of the popliteal artery, with no involvement of bone or muscle (Fig.1). Duplex-ultrasound confirmed the presence of a mass surrounding the popliteal artery without compressing the vessel. A biopsy suggested an EH. After multidisciplinary discussion, including vascular surgery team, an elective surgical intervention was scheduled. By a posterior approach the mass was dissected and successfully isolated from the popliteal vein and the surrounding structures. As anticipated, the adherence of the tumor to the popliteal artery made it impossible to individualize, so a segment of the artery was resected with the mass and a short bypass with inverted contralateral great saphenous vein was performed (Fig.3-4).
The postoperative course was uneventful, and the patient was discharged on the 2nd day after surgery under antiplatelet monotherapy. At follow-up the pain subsided with a full recovery. The histology and anatomopathological exam revealed a solid mass, well-delimited, with clear margins, enveloping the artery, compatible with EH.

DISCUSSION: To the best of our knowledge, this is the third case published of EH of the popliteal artery. This lesion has been described using a variety of names - inflammatory angiomatous nodule, atypical granuloma, pseudopyogenic granuloma, and histiocytoid hemangioma - which reflects its diverse appearances and the ongoing discussion about whether it is a reactive process - related with trauma, damaged vessels, and eosinophilic infiltration - or a true neoplasm, as part of “tumors of histiocytoid endothelial cells". The incidence of EH peaks in the fourth to fifth decade and is slightly more common in women. When related to a large muscular artery it typically grows into the vessel lumen leading to occlusive symptoms. Many treatment options are described in literature, but surgical excision is considered the optimal treatment with the lowest recurrence rates. Despite its classification as a benign vascular tumor, EH has high recurrence rates (33-40%) mainly related to incomplete resection.



P26 AXILLARY CRUTCH: A MILESTONE IN THE HISTORY OF MEDICINE

Marta Machado, Daniel Brandão, Luís Fernandes, Francisco Basílio, Patrícia Carvalho, Beatriz Guimarães, Ana Margarida Rocha, Pedro Brandão, Alexandra Canedo

ULSGE

INTRODUCTION: In the history of medicine, axillary crutches were switched to elbow-supporting crutches, because axillary crutch induces repetitive trauma of upper extremity which can lead to stenosis, thromboembolism and aneurysm formation, which are potentially lethal conditions for the upper limb.

CLINICAL CASE: Woman, 72 years old, with congenital hypoplasia of the right limb, for this reason needing to walk with an axillary crutch on right upper limb since childhood.

She went to the emergency department, due to continuous pain, decreased temperature and paleness of the right upper limb beginning six hours before. She showed hand cyanosis with loss of sensitivity and motricity , absence of arterial flow and presence of venous flow on Doppler.The patient had no history of heart disease or arrhythmia. Doppler-ultrassound showed a right brachial artery aneurysm, 12 mm in diameter, with occlusion of brachial artery (Fig 2). The brachial artery was exposed through a longitudinal incision of the bicipital groove. The aneurysm, axillar artery proximal to aneurysm and brachial artery distal to aneurysm were dissected. After the intravenous injection of 5,000 IU of heparin, the axillary artery at the proximal part of the aneurysm and brachial artery distal do aneurysm were clamped. Was performed aneurysmectomy and thromboembolectomy. We performed a proximal anastomosis using 5-0 PTFE sutures in an end-to-end fashion. The distal anastomosis was performed using 5-0 PTFE sutures in an end-to-end fashion (Fig 3). The patient was discharged 3 days after with total recover of hand sensitivity and motricity with distal pulses. (Fig 4). Doppler ultrassound at 1 month showed excellent flow in the graft and confirmed successful exclusion of the aneurysm of the brachial artery.

CONCLUSION: A brachial artery aneurysm is rare, but potentially lethal for the upper extremity. When a patient who has been using crutches for a prolonged period presents with acute occlusion of the brachial artery, suspicion of a thrombosed arterial aneurysm should be arisen. In the long-term management of these patients, switch to elbow-supporting crutches postoperatively to avoid further trauma to the axillary/brachial vessels is essential.

Figure 1. Axilliary crutch with brachial area inflammation and cyanosis

Figure 2. Doppler ultrasound showing a thrombosed brachial artery aneurysm

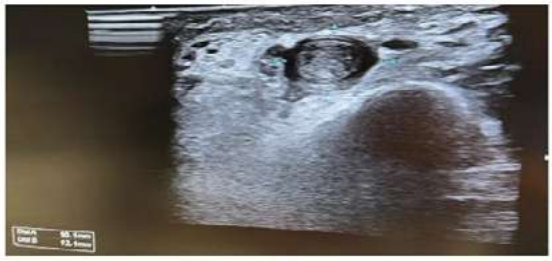


Figure 3. Aneurysmectomy with evidence of thrombus and PTFE interposition graft

Figure 4. Comparison of hand before and after the surgery

P27 TIME IS OF THE ESSENCE: SUCCESSFUL TREATMENT OF AN ACUTE CAROTID PSEUDOANEURYSM WITH ENDOVASCULAR THERAPY

Leandro Nóbrega, Lara Dias, Diogo Monteiro, Tiago Moura, Tiago Pereira, Margaret Soares, José Vilas-Boas, Rita Piedade, Paulo Pereira, Joana Ferreira, Joel Sousa1, Armando Mansilha

ULS São João

INTRODUCTION: Acute onset carotid endarterectomy pseudoaneurysms are a rare complication, usually associated with patch infection. When present, urgent intervention is usually required, either by open surgery or endovascular means. Our aim is to report an endovascular repair of an acute pseudoaneurysm of a carotid endarterectomy ten years after the surgery.

METHODS: The authors present the case of an acute onset carotid endarterectomy pseudoaneurysm, successfully treated by endovascular exclusion.

RESULTS: A 75-year-old male patient present to the emergency department with left cervical pulsatile mass that had developed and increased within the past two weeks.

He had been submitted to left carotid endarterectomy ten years prior. No local inflammatory signs, skin necrosis or neurologic deficits were present upon admission. A CTA was therefore performed, revealing a 34 mm left carotid bifurcation pseudo-aneurysm.
Although the patient presented a complex arch anatomy, with the presence of a bovine trunk, an endovascular repair was planned and successfully performed, by means of external carotid artery coil embolization and aneurysm exclusion with two covered stents (Viabahn 6x50mm, Gore Medical) through femoral access. The procedure was uneventful, and successful exclusion was achieved. At 6 months post-op, patient presents with no visible cervical mass, and supra-aortic trunk CTA confirms stent patency and aneurysm exclusion.

CONCLUSION: This case report is a successful example of a simple endovascular solution of a rare complication. Early diagnosis and prompt treatment is paramount to prevent serious complications such as stroke, hemorrhage, or death.

P28 THE TIP OF THE ICEBERG – REPORT OF AN EXTREMELY RARE MANIFESTATION OF THORACIC AORTIC ANEURYSM RUPTURE

Patrícia Carvalho, Luís Fernandes, Marta Machado, Francisco Basílio, Beatriz Guimarães, Ana Margarida Rocha, Daniel Brandão, Alexandra Canedo

Unidade Local de Saúde de Gaia e Espinho

INTRODUCTION: A ruptured thoracic aortic aneurysm is a life-threatening condition associated with significant morbidity and mortality. In very rare cases, the rupture into the mediastinum can manifest as ecchymosis of the neck and upper chest wall, as the posterior mediastinum extends into the retropharyngeal space, providing a communication between the chest and neck. We herein present a case of such a rare and unexpected manifestation.

CASE-REPORT: A 86-year-old female, with a prior history of hypertension, dyslipidemia, diabetes mellitus, obesity, severe aortic stenosis, atrial fibrillation and cerebrovascular disease, was admitted to her local hospital due to lower limb cellulitis, decompensated heart failure and acute kidney injury. During hospitalization, a sudden neck swelling was noticed and a cervical/thoracic computed tomography was performed, showing a rupture of a saccular aneurysm at the level of the aortic isthmus, causing mediastinal and cervical hematoma.
The patient was transferred to our institution where she was submitted to an emergent thoracic endovascular aortic repair (TEVAR). A Medtronic Valiant™ Captivia™ thoracic stent graft (42x42x157mm) was deployed through the right femoral artery, just beyond the origin of the left subclavian artery. Completion angiography showed successful exclusion of the aneurysm.
However, in the second postoperative day, the patient underwent severe clinical status deterioration and ended up succumbing due to multiple organ disfunction.

CONCLUSION: Neck or upper chest wall ecchymosis of acute onset should raise suspicion, especially when associated with hemodynamic instability. Although rare, early recognition of this manifestation and prompt management is of utmost importance.

P29 A NON-HEALING ISCHEMIC TRANSFEMORAL AMPUTATION STUMP - WHAT NOW?

Gonçalo Araújo, Ricardo Correia, Helena Fidalgo, Adriana Figueiredo, Joana Cardoso, Carolina Tavares, Inês Gueifão, Ana Loureiro, Maria Emília Ferreira

Hospital de Santa Marta

INTRODUCTION: A non-healing ischemic transfemoral amputation stump is a severe condition that can lead to high mortality rates. This case report discusses a patient with extensive iliofemoral arteries disease and previous occluded conventional revascularization procedures, who presented with a non-healing left transfemoral amputation stump. Revascularization of the native axis was performed to promote stump healing and prevent further complications.

DESCRIPTION: We present a case of a 68-year-old male with a history of multiple conventional revascularization surgeries initially due to bilateral iliac artery occlusion: an aortic-bifemoral bypass, femoro-femoral bypass, and later, an axilo-bifemoral bypass. In 2024, due to axillo-femoral bypass acute occlusion, the patient underwent a left transfemoral amputation. Postoperatively, the transfemoral amputation stump failed to heal even after re-amputation and multiple surgical debridements. After careful team and patient centered consideration, the authors decided to attempt a native ilioprofunda axis revascularization to avoid a hip disarticulation surgery. Diagnostic angiography revealed occlusion of the right EIA, left iliac axis, left CFA and left SFA, with small caliber but patent second portion of the left PFA. Using antegrade access through the left humeral artery, the authors were able to cross the iliac axis but not below the CFA due to the subintimal tract of the guidewire. Therefore, a retrograde puncture of the mid-PFA was performed and a retrograde 4F introducer sheath was inserted. The With a reverseCART technique on the EIA a through-and-through humeral-PFA access. The left iliac axis was predilated and then stented in the CIA and EIA. CFA and proximal- PFA were stented through the humeral access. Final angiography

showed excellent angiographic results. The stump was surgically debrided, and a negative pressure wound therapy was applied. 3 months post-operation, the patient had a fully healed transfemoral amputation stump.

DISCUSSION/CONCLUSION: When dealing with non-healing stumps associated with iliac axis occlusion, extensive team discussions are crucial to explore available therapeutic options.
Endovascular revascularization emerge as an attractive approach due to its lower morbidity. When individualized and well-planned, it can ultimately save both the limb and the patient's life.

P30 PREDICTIVE VALUE OF THE WIFI CLASSIFICATION SYSTEM, AMPUTATIONS AND MORTALITY IN PATIENTS WITH PERIPHERAL ARTERIAL DISEASE AND DIABETIC FOOT

Marina Aragão Hamdan de Freitas[1], Alessandra Rocha Luz[2], Túlio Pinho Navarro[1], Alan Dardik[3], Eduardo Felipe Venuti Coelho[2]

[1]Hospital das Clínicas - Universidade Federal de Minas Gerais (UFMG)
[2]Hospital das Clinicas - Universidade Federal de Minas Gerais (UFMG)
[3]Yale School of Medicine

INTRODUCTION: Peripheral arterial disease (PAD) and diabetic foot are conditions with a significant impact on global health, affecting approximately 202 million people. In this context, the WIfI (Wound, Ischemia, Foot Infection) Classification System was developed by the Society for Vascular Surgery (SVS) as a tool to guide decision-making in the revascularization process, evaluating factors that contribute to amputations and death.

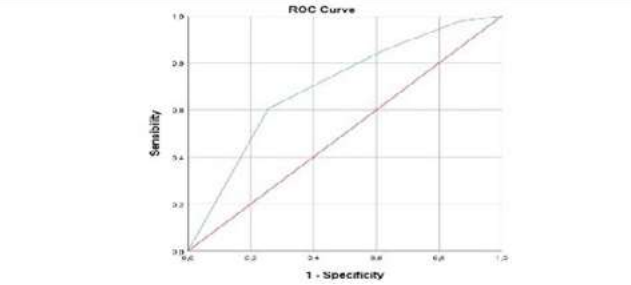
OBJECTIVES: To evaluate the predictive value of the WIfI system in relation to the probability of major amputations and deaths among patients with peripheral arterial disease and/or diabetic foot.

METHODS: Retrospective cohort study with 660 patients, treated between 2015 and 2017. Clinical, laboratory and surgical records were collected, seeking information such as mortality, major amputations and amputation-free survival. Patients were categorized according to the WIfI classification, which allows the categorization of patients into four stages of amputation risk: very low risk (stage 1), low risk (stage 2), moderate risk (stage 3), and high risk (stage 4).

RESULTS: The majority of patients (62.9%) were male, with a mean age of 65.5 years.
Furthermore, women were found to have a higher degree of ischemia and risk. Nutritional assessment showed that 67% of patients were at nutritional risk, with a higher rate of women at risk than men (78.9% vs. 61%, p=0.007). Table 1 shows the main results.

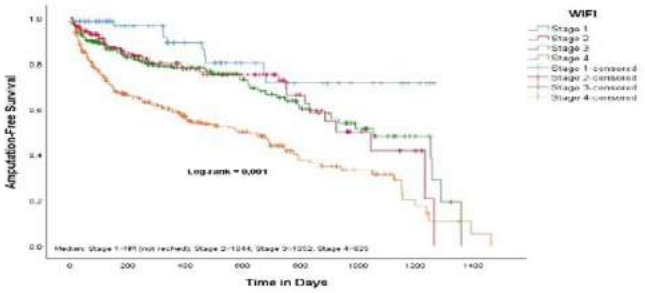
CONCLUSION: It was concluded that, in patients with threatened limb viability due to peripheral arterial disease and/or diabetic foot, an increase in the risk stage of the WIfI classification was associated with higher amputation and mortality rates. Risk stage 4 demonstrated high sensitivity and specificity in predicting amputation.
Therefore, the WIFI system proved to be a diagnostic and prognostic tool, with essential applicability in the management of these patients.

ROC Curve if the WIFI Stages of amputation risk to predict Total Amputation



ROC: Receiver Operator Characteristics; **WIfI:** Wound, Ischemia, and foot infection

Kaplan-Meier Survival Curve of the follow-up time (time between hospitalization and last evaluation) in days of the WIFI Stages od Amputation Risk Vs Amputation Free Survival



WIfI: Wound, Ischemia, and foot infection

Major amputation, Mortality and Amputation Free Survival rates by Sex and Stages of Amputation Risk of the SVS-WIfI Classification (in-hospital + during follow-up) in 660 CLTI/DF patients, January 2015-December 2017, HRTN Vascular Unit.

Outcome	Sex	Stage 1		Stage 2		Stage 3		Stage 4		Total		P-value*
		n	%	n	%	n	%	n	%	n	%	
Major Amputation	Female	1	3.4	6	15.3	7	9.1	48	48.0	62	25.3	<0.00
	Male	3	7.3	16	15.6	36	25.3	58	44.6	113	27.2	1
	Total	4	5.7	22	15.6	43	19.6	106	46.0	175	26.5	
Mortality	Female	4	13.7	8	20.5	10	13.0	29	29.0	51	20.8	0.017
	Male	2	4.8	12	11.7	19	13.4	21	16.1	54	13.0	
	Total	6	8.6	20	14.2	29	13.4	50	21.7	105	15.0	
Amputation Free Survival	Female	24	82.7	25	64.1	61	79.2	44	44.0	154	62.8	<0.00
	Male	36	87.8	78	76.4	94	66.2	64	49.2	272	65.5	1
	Total	60	85.7	103	73.0	155	70.8	108	47.0	426	64.5	

P31 ENDOVASCULAR APPROACH FOR ACUTE ON CHRONIC MESENTERIC ISCHEMIA: A VIABLE OPTION FOR SELECTED PATIENTS

Roberto Cunha, Nuno Coelho, Luis Fernandes, Marta Machado, Francisco Basílio, Patricia Correia, Beatriz Guimarães, Andreia Coelho, Pedro Monteiro, Alexandra Canedo

ULSGE

BACKGROUND: Acute mesenteric ischemia (AMI) is a rare condition, accounting for approximately 0.1% of all hospital admissions, with a high mortality rate of 80%. Early diagnosis and treatment are critical to prevent bowel ischemia. Conventional surgical repair, while allowing for bowel inspection, is associated with high morbidity and mortality. Endovascular techniques are emerging as promising alternatives.

REPORT: A 76-year-old woman presented with a 7-month history of postprandial abdominal pain, food fear and significant weight loss (25-30 kg). Over the past 3 days, the pain became constant. Physical examination revealed abdominal tenderness. Laboratory results showed leukocytosis (13,700/uL), high C-reactive protein (23mg/dL), and lactate of 0.7mmol/L. A previous CTA indicated celiac trunk occlusion and pre-occlusive SMA stenosis, but she was not referred for vascular consultation. A new CTA revealed thrombotic occlusion of the SMA origin with distal embolization. The diagnosis of acute-on-chronic mesenteric ischemia was made, and the patient was proposed for urgent endovascular revascularization. Catheter-directed thrombolysis was performed, followed by percutaneous thrombectomy using the Penumbra® system. Primary stenting of the SMA ostium was performed using a 6x39mm Advanta® stent. Postoperative recovery was uneventful, and the patient showed significant symptom improvement. CTA prior to discharge revealed a patent stent with no residual thrombus. The patient was discharged on apixaban 5 mg twice daily, and at 6 months, the stent remained patent, with the patient reporting no abdominal complaints and a weight gain of 15 kg.

DISCUSSION: The clinical diagnosis of acute-on-chronic mesenteric ischemia is challenging due to nonspecific early symptoms. CTA should be considered the first-line imaging modality. Endovascular therapy has been increasingly used in the management of AMI, demonstrating improved 30-day mortality rates and shorter hospital stays. However, it may not be suitable for all patients, particularly those with bowel infarction, who require open surgical intervention. In this case, percutaneous thrombectomy and SMA stenting were successful, and despite close abdominal monitoring, bowel resection was not required.

CONCLUSION: Endovascular-first strategies are a viable option for appropriately selected patients with AMI, as long as close monitoring is ensured and surgical assessment is considered when required.

P32 THE DYNAMIC EVOLUTION OF ABDOMINAL AORTA INTIMAL FLAP: CHALLENGES IN MANAGEMENT

Ana Margarida Rocha, Andreia Pires Coelho, Luís Fernandes, Marta Machado, Francisco Basílio, Patrícia Carvalho, Beatriz Guimarães, Alexandra Canedo

ULS Gaia Espinho

INTRODUCTION: Vascular trauma has an inherently significant morbidity and mortality. Most aortic blunt traumatic lesions occur in the thoracic aorta involving the isthmus. The underlying shearing/avulsion mechanisms are rarely identified in isolated abdominal aorta blunt injuries, which may be in part justified by prehospital fatalities.

CASE REPORT: A 56-year-old female with a history of hypertension and hypothyroidism was involved in a motor vehicle accident with a front-impact collision. At the site of the crash, the patient complained of upper limb paresthesis and diffuse abdominal pain. Due to sudden impaired consciousness and hypotension, she was intubated at the scene. Following clinical stabilization, computed tomography angiography (CTA) scans of the head, spine, thorax, abdomen, and pelvis were obtained. In addition to bilateral rib fractures, CTA revealed a small hemoperitoneum and an irregularity of the aortic wall contour at the distal abdominal aorta near the iliac bifurcation.
Although there was an apparent abnormal external wall contour, no active contrast extravasation suggestive of complete disruption of the vessel wall was identified, nor any bulging or contained bleeding that might raise the suspicion of a pseudoaneurysm. Therefore, albeit the uncommon imagiological description, the injury was interpreted as a grade 1 injury (intimal flap), according to the European Society for Vascular Surgery grading system for arterial trauma, and vascular injury was managed conservatively with imagiological re-evaluation within 48 hours. The control CTA showed that, although maintaining the irregularity of the vessel wall, the intimal flap appeared of smaller dimensions, and there was no evidence of the development of new injuries. A week later, the abdominal CTA follow-up revealed improvement of the aortic injury and the patient was discharged with the scheduled follow-up Vascular Surgery appointment.

CONCLUSION: Within the extremely rare blunt abdominal aortic trauma, intimal flap is one of the most common lesions in patients who reach the emergency department. Given the dynamic nature of these lesions, CTA images may be difficult to interpret and change rapidly in a small time frame, especially in the acute stage.
There is a wide lack of knowledge regarding the natural history of these injuries which prompts clinical and imagiological surveillance but also adds complexity to the intervention decision.

P33 TRAUMATIC FOREARM COMPARTMENT SYNDROME WITH ULNAR ARTERY INJURY MANAGED WITH THE SHOELACE TECHNIQUE: A CASE REPORT

Paulo Pereira[1], Joana Ferreira[2], Leandro Nóbrega[2], Diogo Domingues-Monteiro[2], Tiago Moura[2], Tiago Pereira[2], Rita Piedade[2], José Vilas-Boas[2], Margareth Soares[3], Lara Dias[2], Armando Mansilha[2]

[1]Department of Angiology and Vascular Surgery, Centro Hospitalar Universitário de São João, Porto, Portugal
[2]Department of Angiology and Vascular Surgery, Centro Hospitalar Universitário de São João, Porto, Portugal; Department of Surgery and Physiology, Faculdade de Medicina da Universidade do Porto, Portugal,
[3]Department of Angiology and Vascular Surgery, ULS São João, Porto, Portugal

BACKGROUND: Acute compartment syndrome (ACS) is a surgical emergency requiring prompt diagnosis to prevent irreversible damage to vascular, neural, and muscular structures. Delayed or inadequate intervention may result in severe functional impairment, limb loss, or mortality. In the upper limb, the forearm, comprising three distinct compartments , is the most commonly affected site. Trauma can often appear benign while concealing significant injuries. Even minor and seemingly innocuous traumatic injuries may require surgical exploration to rule out underlying damage.

METHODS: Retrospective analysis of the patient clinical records.

CLINICAL CASE: A 30-year-old male with no relevant medical history presented to the emergency department following a work-related knife laceration to the medial left forearm. He reported forearm pain and hypoesthesia and paresthesia of the left hand. Examination revealed edema, forearm tension, and a palpable brachial pulse with absent ulnar and radial pulses. CT angiography showed patent arterial and venous axes with perilesional hematoma. The patient was transferred to a tertiary hospital with vascular surgery support. Doppler ultrasound confirmed absent radial and ulnar artery flow with preserved triphasic brachial artery flow. Traumatic compartment syndrome with arterial compromise was diagnosed. Urgent decompression was performed. During surgical exploration, a laceration of the ulnar artery was noted in the middle third of the arm. Ulnar artery ligation and hematoma drainage were performed. Radial pulse was restored and the anastomotic ends of the ulnar artery were pulsatile after. An open shoelace technique was applied at the end. Postoperatively, the patient retained strength, sensation, and a palpable radial pulse. Progressive approximation of the shoelace was performed throughout , with fasciotomy closure 8 days after. Patient was discharged 2 weeks after.

CONCLUSION: Laceration of the ulnar artery without concomitant bone fracture or crush injury leading to acute compartment syndrome is a rare clinical condition. Our search identified only two similar case reports. The shoelace technique utilizing a vessel loop is a viable approach for fasciotomy closure. Literature reports highlight its advantages, including reduced need for skin grafts and shortened wound closure period.

P34 SÍNDROME DE RAYNAUD SECUNDÁRIO A ESCLEROSE SISTÉMICA – E QUANDO SE ESGOTAM AS OPÇÕES TERAPÊUTICAS CONVENCIONAIS?

Afonso Teles[1], Mónica Nunes Ferreira[2], Gabriela Teixeira[2], Ana Raposo[2]

[1]Unidade Local de Saúde de Trás-os-Montes e Alto Douro
[2]Unidade Local de Saúde do Tâmega e Sousa

INTRODUÇÃO: A Esclerose Sistémica é uma doença crónica autoimune caracterizada por uma disfunção vascular generalizada e fibrose progressiva da pele e órgãos internos. A vasculopatia digital está quase sempre presente, sendo o fenómeno de Raynaud a manifestação clínica inaugural em 96% dos doentes. A progressão das alterações estruturais dos pequenos vasos resulta em dor isquémica, ulceração digital e, em casos extremos, isquemia refratária.

CASO CLÍNICO: Homem, 64 anos, fumador. Antecedentes de Esclerose Sistémica sob terapêutica imunossupressora. Recorre ao hospital com queixas de dor intensa no 2º dedo da mão direita associadas a palidez, cianose e necrose seca da falange distal. Já sob terapêutica médica com bloqueador dos canais de cálcio e inibidor da 5-fosfodiesterase. Após discussão multidisciplinar foi decidido internamento para controlo álgico e realização de análogo da prostaciclina endovenoso (iloprost). Esta terapêutica não foi eficaz e após discussão do caso com a Equipa da Dor de Anestesiologia, foi realizado Bloqueio Ecoguiado do Gânglio Estrelado direito. O doente relatou ausência total da dor 10 minutos após o procedimento e observou-se uma melhoria significativa da perfusão da mão (coloração, temperatura e mobilidade dos dedos). No dia seguinte o doente manteve-se sem queixas e teve alta hospitalar. Manteve alívio total da dor durante 1 semana.
Passados 2 meses, realizou Radiofrequência Pulsada do Gânglio Estrelado, com ausência sustentada de dor nas avaliações posteriores.

DISCUSSÃO: O iloprost é o fármaco de escolha em casos de isquemia grave ou ulceração digital no fenómeno de Raynaud secundário a Esclerose Sistémica. Tem a vantagem de apresentar um benefício a longo prazo em muitos doentes, por vezes com duração superior a 6 meses. Quando esta opção terapêutica falha, as alternativas são limitadas. A simpatectomia do membro superior já não se encontra recomendada atualmente dada a variabilidade da sua eficácia e da duração do alívio dos sintomas.
Apesar da escassa literatura disponível, este caso reforça a hipótese de que a Radiofrequência Pulsada do Gânglio Estrelado pode ser uma opção segura e eficaz no tratamento da dor e isquemia digital associadas ao Síndrome de Raynaud secundário a Esclerose Sistémica, especialmente em casos refratários à terapêutica médica convencional. Mais estudos são necessários para avaliar a sua eficácia.
É fundamental a abordagem multidisciplinar destes doentes para melhor sucesso terapêutico.

P35 AORTO-BIFEMORAL BYPASS WITH RENAL ENDOCLAMPING IN A PATIENT WITH CLTI AND RESISTANT HYPERTENSION

Miguel Queirós, Mónica Bandeira, Samuel Cardoso, João Cabral, Henrique Almeida, Andreia Pinelo, Duarte Rego, Paulo Almeida, Rui Machado

ULS de Santo António

INTRODUCTION: Atherosclerosis is a systemic disease characterized by arterial damage, inflammation, and remodeling, ultimately leading to arterial stenosis. When hemodynamically significant disease affects the renal arteries, it can contribute to resistant hypertension and loss of renal function.
This case presents a patient with aortoiliac occlusive disease and right renal artery stenosis, highlighting the importance an hybrid surgical approach to treatment.

CASE REPORT: We report the case of a 64-year-old man with a history of aortoiliac disease previously treated with a kissing stenting technique. The patient presented with progressively worsening bilateral lower limb claudication and resistant hypertension in the last months. Computed tomography angiography (CTA) revealed thrombotic occlusion of the infrarenal aorta, common and external iliac arteries with significant perirenal thrombus. Additionally, suboclusive right renal artery stenosis was identified.
A hybrid procedure was planned, consisting of an aorto-bifemoral bypass with renal endoclamping and right renal artery stenting. Procedure began by catheterization of both renal arteries via left brachial access. Two 4 mm compliant percutaneous transluminal angioplasty (PTA) balloons were advanced into the renal arteries.
A median laparotomy was performed, and infrarenal aortic control was achieved. Aortic arteriotomy was then performed after renal endoclamping, followed by thrombectomy using an 8F Fogarty catheter, resulting in excellent inflow restoration. After completion of the aorto-bifemoral bypass, right renal artery stenting was performed using a 5 mm uncovered balloon-expandable stent. No significant residual aortic thrombus was detected, and no renal embolization was observed.

CONCLUSION: Aorto-bifemoral bypass in patients with infrarenal aortic occlusion and perirenal thrombus carries a significant risk of embolization. During open surgery, suprarenal aortic and renal clamping is typically required for safe thrombectomy.
However, in selected patients requiring renal artery intervention, a hybrid approach without suprarenal aortic clamping can be performed safely.

P36 ANEURISMA ISOLADO DA ARTÉRIA FEMORAL SUPERFICIAL (AFS), UM DIAGNÓSTICO RARO - CASO CLÍNICO

Tiago Moura, Leandro Nóbrega, Lara Dias, Diogo Domingues-Monteiro, Tiago Costa-Pereira, José Vilas-Boas, Rita Piedade, Paulo Pereira

ULS São João

Aneurismas isolados da artéria femoral superficial (AFS) são raros, ocorrendo apenas em 0,5% dos aneurismas periféricos. Eles podem ser encontrados incidentalmente ou em contexto urgente, como isquemia aguda de membro ou rutura aneurismática.

CASO CLÍNICO: homem de 73 anos, com antecedentes de tabagismo, hipertensão arterial, dislipidemia, obesidade (IMC 35) e DPOC.
Apresentava uma história com quatro dias de evolução de dor, arrefecimento, palidez e parestesias do pé direito. O exame físico demonstrou apenas pulso femoral palpável no membro inferior direito, défices sensitivos no pé e gradiente térmico ao nível do tornozelo. EcoDoppler: aneurisma da AFS direita, 16mm maior diâmetro, ocluído com trombo hipoecogénico, ausência de fluxo detetável nas artérias poplítea e tibial posterior, fluxo monofásico de baixa amplitude na artéria tibial anterior. Dado diagnóstico de isquemia aguda de membro grau IIa, decidiu-se início de tratamento com fibrinólise dirigida por catéter (FDC).
O doente manteve-se em tratamento durante 72h. Na avaliação angiográfica final, constatou-se uma repermeabilização completa do setor femoro-poplíteo.
Com base em más condições anatómicas e fisiológicas para cirurgia aberta, nomeadamente obesidade e uma DPOC sem estratificação prévia, decidiu-se realizar a exclusão do aneurisma da AFS por via endovascular.

TÉCNICA CIRÚRGICA: acesso femoral retrógrado contralateral percutâneo, com cross-over e colocação de bainha 8Fr na artéria ilíaca externa ipsilateral ao aneurisma. Exclusão do aneurisma com dois stents auto-expansíveis (9x100mm e 10x150mm).
Angiografia final com exclusão completa do aneurisma, permeabilidade mantida dos stents, sem sinais de embolização distal. Este caso demonstra a inequívoca complexidade associada aos aneurismas periféricos e suas complicações urgentes, apresentando uma solução puramente endovascular como possível para resolução destes casos.

P37 SPLENIC ARTERY ANEURYSM IN ENDOVASCULAR ERA

João Ferreira Pires, Tiago Magalhães, Marta Romão Rodrigues, Mariana Moutinho, Luís Silvestre, Luís Mendes Pedro

Unidade Local de Saúde de Santa Maria

INTRODUCTION: Splenic artery aneurysms (SAA) are a rare condition (estimated incidence between 0.1–2%) but represent the most common among visceral aneurysms (60%). The main risk factors include female sex, multiparity, portal hypertension, and post-transplant status. Most diagnoses of SAA are incidental, discovered through imaging exams conducted for other reasons. The overall consensus in the literature is that asymptomatic SAA greater than 3 cm or with a growth greater than 0.5 cm/year should be treated. Treatment of SAA can follow an open or endovascular approach. The choice between open or endovascular approach should take into account the patient clinical conditions and aneurysm anatomy.

CASE REPORT: Male patient, 72 years old, asymptomatic, referred for vascular surgery consultation due to an incidental diagnosis of a splenic artery aneurysm. Relevant medical history include arterial hypertension, type II diabetes mellitus, atrial flutter and dyslipidemia. CT angiography showed a 38 mm aneurysm at the middle third of splenic artery. An open surgical approach was decided and an aneurysm resection with end-to-end anastomosis of the splenic artery was performed. The postoperative course was uneventful, and the patient was discharged after one week of hospitalization. Follow-up CT angiography was performed one month after surgery revealing no complications, patency of splenic artery and absence of spleen infarction areas.

CONCLUSIONS: According to literature data, open surgery of SAA seems to have a postoperative morbidity and mortality similar to endovascular surgery whereas the late complication and reintervention rate is definitely lower. Thus, the long term results of open repair are globally more favorable.

Key-words: Splenic artery aneurysm

P38 SEQUENTIAL BYPASS FAILURE IN PERIPHERAL ARTERIAL DISEASE: A CASE OF ADAPTIVE SURGICAL STRATEGY

João Marcelo Cabral, Mónica Bandeira, Samuel Cardoso, Miguel Queirós, Henrique Almeida, Andreia Pinelo, Ivone Silva, Inês Antunes, Rui Machado

Unidade Local de Saúde de Santo António

INTRODUCTION: Peripheral arterial disease (PAD) is a complex condition that often necessitates multiple surgical interventions to preserve limb viability. Each additional procedure adds further complexity to an already intricate pathology.

METHODS: A retrospective analysis was conducted using electronic medical records and imaging studies retrieved from the Picture Archiving and Communication System (PACS).

DISCUSSION: A 61-year-old male patient with a history of an aortobifemoral (ABF) bypass performed in 2013 presented in 2024 with occlusion of the right limb of the graft. He underwent a thrombectomy of the right ABF limb and a femoropopliteal bypass using the ipsilateral great saphenous vein (GSV). However, due to poor outflow, the bypass failed, necessitating a subsequent ABF right limb-to-posterior tibial artery (PTA) bypass using the contralateral GSV. Five months later, the ABF-PTA bypass occluded. At this stage, an inflow issue was suspected, leading to a femorofemoral (FemFem) bypass from the left to the right ABF limb, along with a thrombectomy of the ABF-PTA bypass.
Despite anticoagulation, the patient presented to the emergency department 10 days postoperatively with acute right leg pain and coldness that had begun three hours earlier. On physical examination, the left femoral pulse was palpable, but the right femoral and right ABF-PTA pulses were absent. Surgical intervention was proposed and accepted. After multidisciplinary discussion, it was hypothesized that the failure was due to the single long outflow ABF-PTA bypass. Therefore, a thrombectomy of both the FemFem and ABF-PTA bypasses was performed, achieving good inflow and backflow. To further optimize outflow from the right ABF limb, a FemFem-to-deep femoral artery (DFA) bypass was performed using a 6 mm PTFE conduit. At the end of the procedure, the patient had palpable pulses in both the PTA and DFA beyond the distal anastomosis of the FemFem-DFA bypass. Two weeks postoperatively, the patient remains asymptomatic, with both bypasses functioning adequately.

CONCLUSION: PAD is a highly complex and challenging pathology. Vascular surgeons must engage in meticulous planning and multidisciplinary discussions to determine the most effective treatment strategy for each patient, often requiring unconventional approaches.

P39 COMMON ILIAC ARTERY RUPTURE FOLLOWING EVAR: A CASE REPORT

Miguel Queiros[1], Mónica Bandeira[2], Samuel Cardoso[2], João Cabral[2], Henrique Almeida[2], Andreia Pinelo[2], Duarte Rego[2], Rui Machado[2]

[1]ULS de Santo Antonio
[2]ULS de Santo António

INTRODUCTION: Endovascular aortic repair (EVAR) is a key intervention for abdominal aortic aneurysms (AAA), offering reduced perioperative mortality, particularly in high-risk patients who are unsuitable for open surgery. However, EVAR carries a significant risk of post-procedural complications, some of which may require reintervention.

CASE PRESENTATION: We present the case of a 70-year-old male with previous medical history of atrial fibrillation, hypertension, Hodgkin lymphoma, and AAA repair via EVAR performed three years prior to presentation. The initial procedure included an iliac branch device (IBD) on the left iliac bifurcation and a bell-bottom technique on the right common iliac artery.
The patient presented to the emergency department with a one-week history of progressive weakness, numbness, and pain in the right lower limb, which had acutely worsened. Clinical examination revealed a large, pulsatile right flank mass and diminished right lower limb strength. Bilateral femoral and popliteal pulses were present but weaker on the right side. A CTA demonstrated a large retroperitoneal hematoma with active bleeding from the right common iliac artery.
Emergent angiography confirmed a significant contrast blush at the right common iliac artery near its bifurcation. The right internal iliac artery was successfully embolized using 10-mm coils, followed by the placement of an iliac extension graft to exclude the rupture site. Final angiographic assessment confirmed complete exclusion of the pseudoaneurysm without evidence of endoleaks.

CONCLUSION: While EVAR is a highly effective treatment for AAA, rigorous post-procedural surveillance with routine imaging is crucial, particularly in patients with high-risk features. This case highlights the importance of vigilant surveillance and timely intervention to address life-threatening complication

P40 PSEUDOANEURYSM OF THE INFERIOR PANCREATICODUODENAL ARTERY: A CASE REPORT

Manuel João Silva, Bruno Pereirinha, Roberto Cunha, Isabel Vieira, Pedro Maximiano, Mafalda Correia, Nelson Oliveira, Emanuel Dias

Hospital do Divino Espírito Santo

INTRODUCTION: Pancreaticoduodenal artery aneurysms are extremely rare, accounting for approximately 2% of visceral artery aneurysms. Their clinical presentation is usually nonspecific, with abdominal pain, gastrointestinal bleeding, and, in severe cases, hemorrhagic shock. Pseudoaneurysms of the pancreaticoduodenal arteries are commonly associated with pancreatitis, celiac artery occlusion or stenosis, or abdominal trauma. Regardless of their size, these aneurysms carry a high risk of rupture.

CASE REPORT: A 66-year-old male patient with a history of former alcoholism, chronic pancreatitis, and previous double coronary bypass surgery presented to the emergency department with an isolated episode of hematochezia and nonspecific abdominal pain. On physical examination, he was normotensive and normocardic, with mild epigastric tenderness and a pulsatile abdominal mass. A rectosigmoidoscopy revealed multiple diverticular ostia but no active bleeding. CT angiography showed parenchymal calcifications and ductal dilation suggestive of chronic pancreatitis, along with an 85mm pseudoaneurysm due to erosion of the inferior pancreaticoduodenal artery. The patient underwent embolization of the inferior pancreaticoduodenal artery using two 2-3mm coils. He was discharged on the first postoperative day with complete resolution of previous abdominal complaints. At a three-month follow-up appointment, the patient remained asymptomatic, with CT angiography confirming pseudoaneurysm thrombosis with no opacification distal to the coils.

CONCLUSION: Despite their rarity, pancreaticoduodenal artery pseudoaneurysms are associated with an estimated 90% mortality rate if unrecognized. Unlike aneurysms in other vascular territories, there is no correlation between their size and rupture risk. Therefore, treatment is recommended regardless of their dimensions. Endovascular treatment with coil embolization is the preferred method due to its minimally invasive nature and high success rates. This case highlights pancreaticoduodenal pseudoaneurysms as a highly fatal but potentially treatable condition, particularly in patients with personal history of pancreatitis.

P41 ENDOVASCULAR COIL EMBOLIZATION OF A PERONEAL ARTERY PSEUDOANEURYSM POST-ORTHOPEDIC SURGERY: A CASE REPORT WITH LITERATURE REVIEW

Paulo Pereira[1], Joana Ferreira[2], Leandro Nóbrega[2], Lara Dias[2], Diogo Domingues-Monteiro[2], Tiago Moura[2], José Vilas-Boas2, Rita Piedade[2], Margareth Soares[3], Tiago Pereira[2], Armando Mansilha[2]

[1]Department of Angiology and Vascular Surgery, Centro Hospitalar Universitário de São João, Porto, Portugal
[2]Department of Angiology and Vascular Surgery, ULS São João, Porto, Portugal; Department of Surgery and Physiology, Faculdade de Medicina da Universidade do Porto, Portugal
[3]Department of Angiology and Vascular Surgery, ULS São João, Porto, Portugal

BACKGROUND: Pseudoaneurysms of the peroneal artery are a rare entity. Their aetiology includes trauma, iatrogenic injury, and, less commonly, mycotic infections or connective tissue disorders. Clinical presentations range from asymptomatic to those with local compressive symptoms, ischemia, or rupture. Management strategies include endovascular approaches, such as coil embolization, as well as open surgical interventions.

METHODS: Analysis of the patient's clinical records and a literature review on PubMed.

CLINICAL CASE: A 73-year-old male with a history of right leg trauma in 2022 leading to an open tibia and fibula fracture requiring surgical fixation, complicated by recurrent infections. In January 2025, underwent surgery for the

removal of osteosynthesis material and fibular osteotomy. Postoperatively, persistent hemorrhagic drainage prompted a computed tomography angiography (CTA), which revealed a hematoma and a suspected pseudoaneurysm of the right peroneal artery.
The patient was referred to a tertiary care center with vascular surgery support. Clinical examination confirmed palpable posterior tibial and dorsalis pedis pulses. Diagnosis was established, and definitive management was achieved via endovascular coil embolization through right femoral arterial access. Embolization was performed using three 3mm coils (Cook Medical). Post-procedure, distal pulses remained intact, and the patient had an uneventful two-day hospital course.

LITERATURE REVIEW: A literature review on PubMed identified 43 case reports of similar cases. The majority reported peroneal artery pseudoaneurysms secondary to traumatic or iatrogenic causes. Endovascular treatment was the primary therapeutic approach in almost all, with coil embolization being the preferred technique, demonstrating favorable outcomes.

CONCLUSION: Although not explicitly outlined in current guidelines, endovascular coil embolization has proven to be a minimally invasive and effective approach for managing peroneal artery pseudoaneurysms, as evidenced by the positive outcomes observed in this clinical case and reported in the literature.

P42 LESÃO TRAUMÁTICA DA ARTÉRIA CARÓTIDA INTERNA POR ARMA DE FOGO – CASO CLÍNICO

Tiago Moura, Leandro Nóbrega, Lara Dias, Diogo Domingues-Monteiro, Tiago Costa-Pereira, José Vilas-Boas, Rita Piedade, Paulo Pereira, Paulo Gonçalves Dias, Joana Ferreir, Armando Mansilha

ULS São João

Apresentamos um homem de 61 anos, com história de tabagismo e alcoolismo. Foi transferido para o nosso hospital por trauma cervical com arma de fogo por tentativa de suicídio. À chegada à sala de emergência, o doente já estava entubado por apresentar hematoma cervical esquerdo em expansão, com desvio contralateral da traqueia. Após avaliação primária e estabilização, realizou AngioTAC cervical que confirmou a presença do hematoma expansivo, mas com aparente integridade dos principais vasos do pescoço. Demonstrou ainda a presença de material hiperdenso em posição posterior à artéria carótida interna esquerda, correspondendo provavelmente a um fragmento de bala. Com base nos achados clínicos, a equipa de trauma decidiu proceder a uma cervicotomia exploradora para controlo do hematoma e exérese do fragmento de bala. A abordagem cirúrgica demonstrou uma lesão traumática da artéria carótida interna com hemorragia ativa, com dois orifícios nas paredes anterior e posterior, correspondentes à entrada e saída da bala. Procedeu-se a abordagem emergente do eixo carotídeo para controlo e sua clampagem, seguida de correção das lesões em questão com excisão segmentar da artéria carótida interna e anastomose termino-terminal entre os topos seccionados. O pós-operatório decorreu sem intercorrências, com permeabilidade mantida do eixo carotídeo esquerdo, assim como ausência de sequelas neurológicas. O ecoDoppler controlo realizado um mês após a cirurgia demonstrou permeabilidade mantida do eixo carotídeo. Este caso clínico pretende demonstrar a imprevisibilidade que o trauma por arma de fogo pode ter, assim como a necessidade de manter alto nível de suspeição perante hematomas cervicais expansivos, mesmo que com aparente normalidade imagiológica.

P43 FLOW REDUCTION IN HIGH-FLOW ARTERIOVENOUS FISTULAS - COMPARISON BETWEEN TWO TECHNIQUES

Marina Aragão Hamdan de Freitas, Guilherme de Castro Santos, Gabrielle Martins Peres, Túlio Pinho Navarro, Ricardo Jayme Procópio

Hospital das Clínicas - Universidade Federal de Minas Gerais (UFMG)

INTRODUCTION: Arteriovenous fistulas are the preferred option for hemodialysis access. However, the development of high-flow fistulas is a common complication that leads to unfavorable outcomes and therefore should be diagnosed and addressed early. There is no consensus in the literature as for the definition of a high flow, but volumes above 2000mL are considered to be excessive and with potential for complications. Furthermore, there are still no well-established definitions in the guidelines regarding the best method for approaching high-flow fistulas.

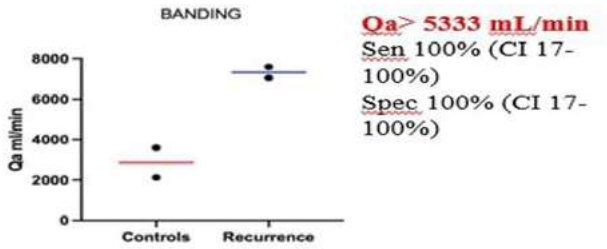
OBJECTIVES: To evaluate the effectiveness of banding techniques versus creation of a new fistula in patients with high-flow fistula, considering the patency rate and high-flow recurrence.

METHODS: A retrospective analysis was carried out on all patients who underwent surgery to reduce flow in arteriovenous fistulas between May 2021 and April 2024, at the Hospital das Clinicas of the Federal University of Minas Gerais (UFMG). Subsequently, the patients were divided into two groups — banding and new fistula — according to the procedure performed, followed by an analysis of patency and flow volume with benchmarking between the two groups.

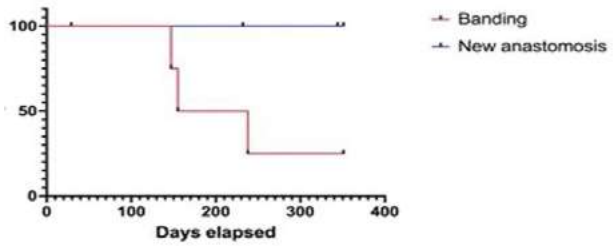
RESULTS: A total of 9 procedures were included in the study, performed on 7 patients. Five procedures were banding and 4 were creation of a new fistula. The evaluation of the groups included median age, flow volume before, flow volume after, percentage of flow reduction and primary patency after 30, 90, 180 and 270 days (data summarized

in table 1). The fistula patency rate in the new fistula group was 100% in all analyses, whereas in the banding group, there was a drop to 50% after 180 days and 25% after 270 days. All patients submitted to both techniques showed a reduction of at least 50% in flow after the approach, however, of the patients who underwent banding, all with flow above 5330mL had recurrence of high flow.

CONCLUSION: Both techniques analyzed were effective in reducing flow in arteriovenous fistulas. However, banding demonstrated higher rates of recurrence and fistula stenosis. Despite being a minimally invasive procedure that allows the maintenance of vessels for the creation of new fistulas in dialysis patients, it should not be performed in patients with flow above 5330mL, being preferable in this context the traditional approach with creation of a new arteriovenous fistula (AVF).



	Banding (n=4)	New anastomosis (n=4)
Age (mean)	52	43
Qa before mL/min (median)	5332	6810
Qa after mL/min (median)	1900	2500
% Qa reduction	62	63
Days (median)	196	288



P44 EMERGENT TREATMENT OF SECONDARY AORTOENTERIC FISTULA WITH PERCUTANEOUS AORTIC ENDOVASCULAR REPAIR – A CASE REPORT

José Miguel Vilas Boas, Rita Piedade, Paulo Pereira, Tiago Costa Pereira, Tiago Moura, Diogo Domingues Monteiro, Lara Dias, Leandro Nóbrega, Joel Sousa, Joana Ferreira, Armando Mansilha

ULS São João

AIM: Secondary aortoenteric fistulas (sAEF) are rare and devastating complications that occur in patients who have undergone previous graft replacement of the abdominal aorta. Several etiologies have been proposed to graft-enteric fistula formation, but graft infection seems to be the most frequent. Diagnosis and treatment of sAEF are challenging and survival outcomes are usually poor. We hereby report a case of a male patient submitted to emergent percutaneous aortic endograft placement to correct a graft-enteric fistula.

METHODS: Patient's data, clinical information and imagiological studies were reviewed retrospectively.

RESULTS: A 67-year-old patient underwent emergent open aortic repair due to ruptured abdominal aortic aneurysm (rAAA), with placement of an aorto-aortic polytetrafluoroethylene graft. It was complicated by early graft infection and patient started long-term suppressive antibiotic treatment. One year later, he presented to our emergency department with a one-week history of hematochezia and rectal bleeding, with large blood clots in stools. Patient was hemodynamically stable, but blood tests showed a significant decrease in hemoglobin levels (Hb 5.0 g/L at presentation). Patient underwent comprehensive investigation and computed tomography scan of the abdomen revealed signs of peri-aortic graft infection and graft-enteric fistula at the level of the duodenum. Considering all the patient's comorbidities, a multidisciplinary decision was made and a tubular endograft was percutaneously placed in the infra-renal aorta and extended to the aortic graft, with successful graft coverage and no signs of endoleaks. Patient was discharged one week later with suppressive antibiotic therapy.
At the one-month follow-up, there were no symptoms of gastrointestinal bleeding and hemoglobin levels have stabilized.

CONCLUSION: Secondary aortoenteric fistulas are often devastating conditions with a recurrence risk of up to 60% after repair. Patients should be closely monitored and receive life-long antibiotics. While open graft excision and aortic repair is considered the optimal definitive treatment, endovascular exclusion of sAEF might be a temporary solution specially in the emergency setting, which helps to gain time to further perform a planned and elective repair.

P45 A RARE CASE OF A NONTRAUMATIC PSEUDOANEURYSM OF THE PROXIMAL ULNAR ARTERY

Rita Piedade, José Miguel Vilas Boas, Paulo Pereira, Margareth Soares1, Tiago Costa Pereira, Tiago Moura, Lara Dias, Diogo Domingues Monteiro, Leandro Nóbrega, Joana Ferreira, Jorge Costa Lima, Armando Mansilha

ULS São João

INTRODUCTION: Pseudoaneurysms of the forearm arteries are rare and typically associated with trauma. We report a

case of a symptomatic spontaneous ulnar pseudoaneurysm and its surgical management.

METHODS: Clinical and imaging data were reviewed retrospectively.

CASE REPORT: A 75-year-old male patient was admitted to the emergency department with a painful pulsating mass on the right forearm that had enlarged over the course of 1 month. There was no history of local trauma, recent medical procedures, or unclear punctures. The patient's significant medical history includes a diagnosis of migratory polyarthritis, identified as a paraneoplastic syndrome associated with lung cancer on surveillance, and an atrial fibrillation on anticoagulant. On physical examination, a pulsating five centimeters mass was identified on the medial forearm, with normal hand perfusion and palpable radial pulse (Fig.1). Doppler ultrasound revealed arterial blood flow within the pulsatile mass without evidence of distal embolization (Fig.2). A positive Allen test confirmed the presence of a complete palmar arch. The symptomatic pulsating mass warranted surgical intervention. Due to small diameter of the cubital artery and a presence of a positive Allen test, ulnar artery ligation and excision of the mass was performed. Connective tissue was found to form the aneurysm wall, confirming the diagnosis of pseudoaneurysm (Fig.3). Postoperative course was uneventful and the patient was discharged four days later without ischemic complications.

CONCLUSION: Pseudoaneurysm results from a disruption or tear in the vascular wall, creating a false lumen. (1) They are commonly linked to trauma, intravenous drug abuse or iatrogenic causes. To the best of our knowledge, this represents the second case of a spontaneous ulnar pseudoaneurysm reported in the literature. (2) Spontaneous ulnar artery pseudoaneurysm are uncommon but may lead to severe consequences that include rupture, thrombosis, distal embolization, infection or compressive mass effect. (3) Early diagnosis is crucial to reduce morbidity and the usage of bedside ultrasonography is a valuable tool for early detection.

P46 AN UNUSUAL CASE OF ABDOMINAL AORTIC RUPTURE: DIAGNOSTIC CHALLENGES AND MANAGEMENT

João Marcelo Cabral, Mónica Bandeira, Samuel Cardoso, Miguel Queirós, Henrique Almeida, Andreia Pinelo, Ivone Silva, Carlos Veterano, Rui Machado

Unidade Local de Saúde de Santo António

AIM: This clinical case aims to discuss an uncommon presentation of abdominal aortic rupture, focusing on its etiology, diagnostic workup, and therapeutic approach.

METHODS: A retrospective analysis was conducted using electronic medical records and imaging studies retrieved from PACS.

RESULTS: A 73-year-old autonomous female, with no history of regular medical follow-up, presented with a one-week history of asthenia and anorexia, accompanied by lumbar pain and anuria starting the day before admission. Vital signs were stable and laboratory tests revealed acute kidney injury and elevated inflammatory markers.
Despite diuretic therapy, the patient remained anuric. Angio-CT scan was performed to investigate the underlying etiology of the renal injury revealing an occlusion of the proximal celiac trunk with distal repermeabilization, a patent superior mesenteric artery (SMA), and sub occluded renal arteries, with extensive bilateral renal infarcts. A suspicious image suggested dissection at the left iliac bifurcation without hemodynamic compromise.
Revascularization was deemed unfeasible due to prolonged ischemia and extensive infarcts. Anticoagulation and clinical monitoring were initiated.
The suspicion of nephrotic syndrome, combined with echocardiographic findings of amyloid deposits, raised the hypothesis of systemic amyloidosis.
One week follow-up CT scan revealed a contained rupture of the thoracic aorta at the left diaphragmatic pillar. Despite the absence of symptoms and hemoglobin decline, careful imaging analysis suggested a type B aortic dissection with a contained rupture.
Emergent endovascular repair was performed using percutaneous access through the right CFA and a surgical approach on the left CFA due to iliofemoral calcification. A GORE CTAG 28×28×100 mm stent-graft was deployed distal to the SMA. Post-deployment angiography confirmed successful rupture exclusion and SMA patency.
During device removal, a rupture in the posterior wall of the left external iliac artery was identified, requiring an 8 mm ePTFE bypass between the EIA and CFA. At a 2-year follow-up, the patient remained asymptomatic with no recurrence of issues related to the aortic rupture repair.

CONCLUSION: This case underscores the challenges of diagnosing and managing unusual abdominal aortic ruptures, highlighting the value of timely imaging and individualized, multidisciplinary care.

P47 MANAGEMENT OF A TRAUMATIC THORACIC AORTIC INJURY WITH TEVAR IN A POLYTRAUMATIZED PATIENT

Jorge Duarte Garrido Santos Costa, Maria Carmona, Luis Orelhas, Leonor Baldaia, Miguel Silva, Celso Nunes, Eduardo Silva, Luis Antunes, João Alegrio, Gabriel Anacleto, Manuel Fonseca

CHUC

Traumatic aortic injuries are life-threatening injuries associated with high-energy trauma. The most common site of injury being aortic isthmus, 80-90% of patients admitted, at the site of the ligamentum arteriosum, transition from the mobile aortic arch to fixed thoracic aorta. Mortality is high if not treated promptly, with up to 80% of patients

dying before their arrival at hospital. Majority of cases being asymptomatic with diagnosis on imaging only. We report a 63 years old patient, female with no significant comorbidities, that presents after a high-speed motorcycle collision. Polytrauma with identified injuries after trauma CT protocol: contained rupture of the descending thoracic aorta at the level of the isthmus after origin of the left subclavian artery and complex fractures of the pelvis. After communication with trauma team, first approach by orthopedic surgeons to stabilize the pelvis, then vascular intervention with TEVAR directed to the ruptured aortic lesion.
Decision on minimally invasive approach with endovascular stent graft deployment. TEVAR as demonstrated reduced morbidity/mortality compared to open repair, shorter hospital stays, and faster recovery. Patient was transferred after 35 days in our institution to another hospital having the patient's residence area in consideration. Re-evaluation after 2 months, with no complications associated.
In high speed polytraumatized patients with hemodynamic instability aortic rupture should be a suspected condition that needs emergent action. Early diagnosis is critical with TEVAR as the treatment of choice. In emergent cases with multiple injuries a multidisciplinary approach is crucial and collaboration between trauma, vascular, and radiology teams is essential for optimal outcomes.

P48 A TWO-STAGES SUPERIOR MESENTERIC ARTERY REVASCULARIZATION STRATEGY IN AN OLD PATIENT PRESENTING WITH ACUTE MESENTERIC ISCHEMIA – A CASE REPORT

José Miguel Vilas Boas, Rita Piedade, Paulo Pereira, Tiago Costa Pereira, Tiago Moura, Diogo Domingues Monteiro, Lara Dias, Leandro Nóbrega, José Almeida Lopes, Joana Ferreira, Armando Mansilha

ULS São João

AIM: Acute thrombotic superior mesenteric artery (SMA) occlusion requires emergent revascularization and recommendations on open vs endovascular treatments are not well established. We hereby present a case report of successful SMA revascularization in an old patient with acute mesenteric ischemia treated with SMA open thrombectomy followed by a second-staged endovascular revascularization.

METHODS: Patient's clinical data and imagiological studies were reviewed retrospectively.

RESULTS: An 82-year-old female patient presented to the emergency department with a two-weeks history of abdominal pain and vomiting. Abdominal pain and rebound tenderness in the lower quadrants were noted on physical examination. Blood tests showed elevation of C-reactive protein (223 mg/L) and leukocytosis (17.300/uL). Computed tomography angiography revealed SMA ostial thrombosis and heavily calcified aorta and visceral trunks. There were no conclusive radiographic signs of bowel infarction or necrosis. A multidisciplinary decision was made to offer patient emergent laparotomy to assess bowel necrosis and to perform SMA thrombectomy. An extensive thrombotic clot was removed, and no intestine resection was needed.
Patient was given intensive care and anticoagulation and abdominal symptoms improved mildly.
Two days post-surgery, to treat the underlying calcified occlusive lesion, patient underwent antegrade stenting of the SMA using a self expanding stent. There were no angiographic signs of distal embolization and morphological results were satisfactory.
Clinical improvement was even more remarkable, with abdominal symptoms resolving and patient achieving normal bowel function in the first week after revascularization.

CONCLUSION:
Managing acute SMA thrombotic occlusion is challenging and strong recommendations on open vs endovascular strategies are scarce.
Open thrombectomy helps improve arterial in- and out-flow, but it might be insufficient to resolve symptoms since the underlying stenosis is left untreated. Bypass from the abdominal aorta or the common iliac artery to the SMA is seldom possible in the presence of heavily calcified arteries, as found in our patient. Retrograde recanalization and stenting of the SMA is a safe alternative, but it is not widely available in an emergency setting.
A timely SMA thrombectomy followed by a second-staged SMA stenting demonstrated to be a successful option in the treatment of acute SMA thrombosis in our patient.