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SOCIEDADE PORTUGUESA DE ANGIOLOGIA E CIRURGIA VASCULAR

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Sociedade Portuguesa de ANGIOLOGIA E CIRURGIA VASCULAR

COMUNICAÇÕES ORAIS E POSTERS
ORAL COMMUNICATIONS AND POSTERS

17 JUNHO 2026 *17TH JUNE 2026*
08H30 | SESSÃO PRÉMIO 1 - COMUNICAÇÕES ORAIS
PRIZE SESSION 1 – ORAL COMMUNICATIONS

CO01 DOES THE INFRAMALLEOLAR DISEASE TELL US THE WHOLE TALE? – A PEDAL MODIFIER REAL WORLD ANALYSIS

Beatriz Guimarães, Luís Fernandes, Marta Machado, Francisco Basílio, Patrícia Carvalho, Leonor Baldaia, Ana Margarida Rocha, David Teixeira, Maria João Sousa, Andreia Coelho, Victor Martins, Alexandra Canedo

ULS Gaia e Espinho

AIM: The role of Global Limb Anatomic Staging System (GLASS) pedal modifier (PM) remains controversial and its usefulness as a prognosis factor lacks definite supporting evidence. Our aim was to evaluate the PM as a predictor of wound healing and major adverse limb events (MALE) after primary endovascular chronic limb-threatening ischemia (CLTI) revascularization.

METHODS: A retrospective observational single center study was conducted, including all patients with CLTI undergoing their first endovascular revascularization from 2020 to 2024. Patients with no available diagnostic angiography including the foot were excluded.
Patients were divided into three groups, according to their PM grade (P0; P1; P2). Adverse limb events were documented at 30-days, 3, 6 and 12 months and a survival analysis was performed to ascertain the relevance of this grading system on clinical outcomes.

RESULTS: A total of 298 limbs were included. Most (89.2%) presented with Rutherford 5 chronic limb ischemia. After stratification by PM (P0 29.9%, P1 59.1%, P2 11.1%), baseline characteristics were similar among groups and no correlation was found between PM and other GLASS staging components (femoropopliteal, infrapopliteal and stage). The median time-to-healing was 239 days (CI 95% 223-255) and 78.5% achieved ulcer healing at 12 months; although no significant differences were observed between pedal-modifier grades, multivariable analysis showed that renal replacement therapy and Rutherford category correlated inversely with healing. The MALE rates at one year were 33.3%, 22.1%, and 45.5% in the P0, P1, and P2 groups. P2 group presented higher amputation rates (21.2% vs. P0-1 9.4%; p=0.048); however, such difference was diluted on multivariate analysis, suggesting the presence of a confounding effect. The median time free-from-MALE was 281 days (CI 95% 264-299).

CONCLUSION: The PM appears to not influence healing and MALE-free survival, although a tendency towards higher amputation rates was observed. The PM may not be able to represent the complex nature of distal perfusion, and further research to ascertain the impact of inframalleolar disease and its role as a prognosis factor is needed.

CO02 MAP THE RISK: MEAN ARTERIAL PRESSURE AS AN INDEPENDENT PREDICTOR OF MAJOR ADVERSE LIMB EVENTS AFTER CLTI REVASCULARISATION

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BACKGROUND: Hypertension is highly prevalent in chronic limb-threatening ischaemia (CLTI), yet its haemodynamic expression and prognostic relevance after revascularisation remain poorly characterised. Mean arterial pressure (MAP), integrating both systolic and diastolic components, represents the most accurate surrogate of systemic perfusion pressure.

AIM: To evaluate the prognostic impact of admission blood pressure on major adverse limb events (MALE) following revascularisation for CLTI.

METHODS: Single-centre retrospective cohort of 283 consecutive patients (January 2022–December 2024) with CLTI undergoing first-time revascularisation (endovascular 54.8%, open 32.9%, hybrid 11.7%). MAP was calculated from the mean of two inpatient admission measurements, excluding acutely haemodynamically unstable patients and measurements in the emergency setting or on the day of surgery. MALE was defined as major limb amputation, loss of primary patency without reintervention, or reintervention to maintain patency. Cox regression identified independent predictors of MALE.

RESULTS: Mean age was 69 years (77% male); 81.3% had hypertension. MALE occurred in 82 patients (29%). On univariable analysis, MAP, systolic and diastolic blood pressure (SBP and DBP) were each associated with MALE; however, SBP and DBP lost significance when modelled together due to collinearity, while MAP remained independently significant (HR 0.975, 95% CI 0.957–0.993, p=.007). On multivariable analysis adjusted for Rutherford classification, cerebrovascular disease, and number of antihypertensive agents, MAP independently predicted MALE (HR 0.975, 95% CI 0.957–0.994, p=.009).
Kaplan-Meier analysis by MAP tertiles demonstrated significantly worse limb salvage in the lowest tertile (<84 mmHg; mean MALE-free survival 24.9 vs 31.4 months; log-rank p=.010).

CONCLUSION: To our knowledge, this is the first study addressing the prognostic impact of MAP on limb outcomes after revascularisation for CLTI. Patients developing MALE after revascularisation for CLTI present with lower baseline MAP, suggesting reduced systemic perfusion pressure is a key outcome determinant. In CLTI patients dependent on adequate perfusion pressure to overcome distal resistance, aggressive blood pressure reduction warrants critical reassessment. MAP is an overlooked variable, absent from current risk models such as WIfI and GLASS, that may redefine how perfusion pressure is considered in the CLTI management.

CO03 MOBILE C-ARM VERSUS FIXED HYBRID ANGIOGRAPHY IN COMPLEX ENDOVASCULAR AORTIC REPAIR: A COMPARATIVE STUDY OF ENDONAUT AND AZURION PLATFORMS

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BACKGROUND: Fenestrated/branched endovascular aortic repair (F/BEVAR) traditionally utilizes costly, fixed 3D fusion systems in hybrid suites. Mobile C-arm platforms with fusion software now offer a versatile, lower-cost alternative. We aimed to compare outcomes between a fixed platform (FP; Philips Azurion) and a mobile platform (MP; Ziehm C-arm with Endonaut) during complex endovascular aortic repair, hypothesizing similar outcomes but potentially lower MP radiation.

METHODS: We retrospectively reviewed consecutive patients treated for thoraco-abdominal (TAA) or complex abdominal aortic aneurysms (CAA) with F/BEVAR (2011–2025). Patients were stratified by setup (FP vs MP). Comparative analyses were performed with adjustment for anatomic complexity and device configuration.

RESULTS: A total of 237 patients were included, of whom 69.2% were treated using an FP (n=164) and 30.8% using an MP (n=73). Baseline demographics were similar between groups, with a median age of 73 years (IQR 68–78), and 88% (n=208) of patients were male.
The MP group had a higher proportion of urgent repairs (ruptured or symptomatic; p=0.027) and physician-modified endografts (p=0.002), but lower rates of hypertension (p=0.049), smoking (p<0.001), TAA (27% versus 45 % in CAA; p=0.010), and smaller aneurysm size (p=0.038). There were no differences in adjunctive procedures, aortic tortuosity, hostile access, number of target vessels, or use of fenestrations versus branches.
Adjusted analyses demonstrated similar outcomes between groups, including technical success (OR 0.85, p=0.79), in-hospital mortality (OR 0.30, p=0.18), major adverse events (OR 1.15, p=0.70), early endoleak (OR 0.93, p=0.86), and early reintervention (OR 1.44, p=0.64).
On long-term follow-up, Cox regression analysis showed no significant differences in overall mortality (HR 0.41, p=0.08), endoleaks (HR 1.42, p=0.39), late reintervention (HR 1.23, p=0.61), or target vessel patency (HR 2.21, p=0.25).
Regarding procedural metrics, no differences were observed in total operative time (p=0.92) or contrast volume (p=0.07). However, radiation exposure was significantly lower in the MP group [median total entry dose: FP 3300 mGy (IQR 2265–4700) versus MP 1516 mGy (IQR 1029–1986), p<0.001].

CONCLUSION: The use of a MP combining the Ziehm C-arm and Endonaut 3D fusion system represents a safe and effective alternative to conventional FP. Comparable clinical outcomes were achieved, with a significant reduction in radiation exposure in the MP group.

CO04 INFLUENCE OF PROGNOSTIC NUTRITIONAL INDEX ON OUTCOMES AFTER LOWER LIMB REVASCULARIZATION FOR CHRONIC LIMB-THREATENING ISCHEMIA

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INTRODUCTION: Chronic limb-threatening ischemia (CLTI is associated with high risk of limb amputation and high morbidity and mortality. The prognostic nutritional index (PNI), based on serum albumin and lymphocyte count, reflects inflammatory and nutritional status and has been associated with adverse outcomes along various chronic illness. This study aimed to evaluate the influence of PNI on outcomes in patients submitted to lower limb revascularization for CLTI.

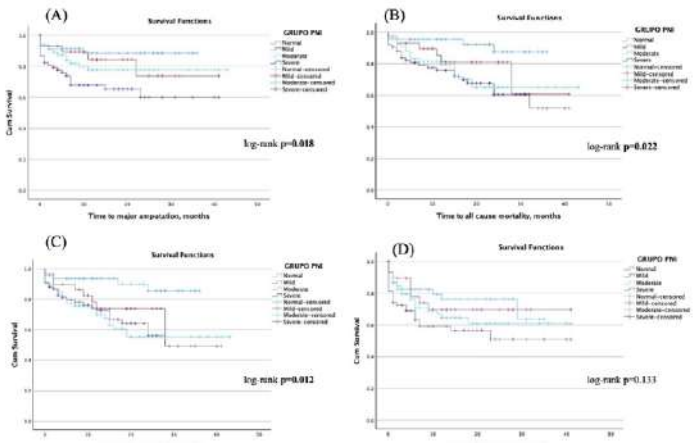
METHODS: This retrospective cohort study including consecutive patients that underwent surgical or endovascular revascularization for CLTI, between January 2022 and December 2024, in a tertiary center. PNI was calculated using serum albumin(g/L)+0.005 x total lymphocyte count(per mm3). Patients were stratified into four groups: normal PNI (>50), mild (50-46), moderate (45-40) and severe (<40). Baseline characteristics were compared

across groups. Time-to-event outcomes were assessed using Kaplan-Meier analysis, including major adverse limb events (MALE) (major amputation, major reintervention or untreated loss of patency), major adverse cardiovascular events (MACE) (all-cause mortality, stroke, myocardial infarction), major amputation and all-cause mortality. Multivariable Cox regression models were used to identify independent predictors of outcomes.

RESULTS: A total of 307 patients were analysed, 91 patients had missing laboratory data required for PNI calculation and were excluded, resulting in a final cohort of 216 patients. Some baseline characteristics significatively differed between PNI groups: age (p<0.001), Rutherford classification (p=0.008), smoking status (p<0.001), hypertension (p=0.033) and chronic kidney disease (p=0.022).
During follow-up (maximum of 43 months), 70 patients developed MALE, 64 experienced MACE, 46 underwent major amputation, and 53 died. Kaplan–Meier analysis showed that severe PNI was associated with higher risk of major amputation (p=0.018) and all-cause mortality (p=0.022), and with reduced MACE-free survival (p=0.012), while no significant differences were observed for MALE-free survival (p=0113). In multivariable analysis, severe PNI independently predicted major amputation (HR 3.11, 95% CI 1.11–8.72, p=0.030).

CONCLUSION: Severe PNI was associated with worse limb and cardiovascular outcomes, including reduced major amputation-free survival, MACE-free survival and overall survival. These findings highlight the potential role of nutritional and inflammatory status in limb prognosis and suggest that PNI may contribute to risk stratification in CLTI population.

Figure 1. Kaplan-Meier survival curves according to PNI groups.



(A) Time to major amputation; **(B)** Time to all-cause mortality; **(C)** MACE-free survival; **(D)** MALE-free survival

Table 1. Baseline characteristics of patients undergoing to revascularization for CLTI

	Overall (n = 216)	Normal PNI (value > 50) (n = 46)	Mild PNI (value 50 - 46) (n = 29)	Moderate PNI (value 45 - 40) (n = 66)	Severe PNI (value < 40) (n = 75)	p value
Patient characteristics						
Age (median, IQR), years	70 (61-76)	63 (56-71.3)	71 (60-75)	67.5 (60.8-77)	72 (65-78)	**< 0.001**
Male sex, n (%)	143 (80.1%)	39 (84.8%)	25 (86.2%)	52 (78.8%)	57 (76.0%)	0.583
Smoking status, n (%)						**< 0.001**
Never	80 (37.2%)	11 (5.1%)	8 (3.7%)	19 (8.8%)	42 (19.5%)	
Past smoking	60 (27.8%)	14 (30.4%)	14 (48.3%)	18 (27.3%)	14 (18.9%)	
Current smoking	75 (34.7%)	21 (45.7%)	7 (24.1%)	29 (43.9%)	18 (24.3%)	
Diabetes mellitus, n (%)						0.197
NIT	83 (38.4%)	19 (41.3%)	11 (37.9%)	22 (33.3%)	31 (41.3%)	
IT	58 (26.9%)	6 (13.0%)	7 (24.1%)	23 (34.8%)	22 (29.3%)	
Hypertension, n (%)	182 (84.3%)	33 (71.7%)	24 (82.8%)	61 (92.4%)	64 (85.3%)	**0.033**
Dyslipidemia, n (%)	164 (75.9%)	34 (73.9%)	22 (75.9%)	54 (81.8%)	54 (72.0%)	0.595
Coronary artery disease, n (%)	64 (29.6%)	12 (26.1%)	6 (20.7%)	24 (36.4%)	22 (29.3%)	0.434
Heart failure, n (%)	49 (22.7%)	8 (17.4%)	3 (10.3%)	22 (33.3%)	16 (21.3%)	0.061
Chronic kidney disease, n (%)	57 (26.4%)	5 (10.9%)	7 (24.1%)	19 (28.8%)	26 (35.1%)	**0.022**
Chronic obstructive pulmonary disease, n (%)	40 (18.5%)	8 (17.4%)	3 (10.7%)	14 (21.2%)	15 (20.0%)	0.685
Cerebrovascular disease, n (%)	43 (19.9%)	5 (10.9%)	8 (27.6%)	15 (22.7%)	15 (20.0%)	0.266
Disease characteristics						
Rfl classification, n (%)						**0.008**
4	45 (20.8%)	19 (41.3%)	5 (17.2%)	11 (16.7%)	10 (13.3%)	
5	133 (61.6%)	24 (52.2%)	20 (69.0%)	43 (65.2%)	46 (61.3%)	
6	38 (17.6%)	3 (6.5%)	4 (13.8%)	12 (18.2%)	19 (25.3%)	
Target arterial segment, n (%)						0.132
Aortoiliac	20 (9.3%)	10 (21.7%)	1 (3.4%)	3 (4.5%)	6 (8.0%)	
Femoropopliteal	84 (38.9%)	20 (43.5%)	12 (41.4%)	27 (40.9%)	25 (33.3%)	
Infrapopliteal	35 (16.2%)	3 (6.5%)	3 (10.3%)	12 (18.2%)	17 (22.7%)	
Aortoiliac+femoropopliteal	29 (13.4%)	7 (15.2%)	5 (17.2%)	7 (10.6%)	10 (13.5%)	
Aortoiliac+infrapopliteal	1 (0.5%)	0 (0%)	0 (0%)	0 (0%)	1 (1.3%)	
Femoropopliteal+infrapopliteal	46 (21.3%)	6 (13.0%)	8 (27.6%)	16 (24.2%)	16 (21.3%)	
Multilevel (three segments)	1 (0.5%)	0 (0%)	0 (0%)	1 (1.5%)	0 (0%)	
Revascularization strategy, n (%)						0.646
Open surgical		16 (34.8%)	13 (44.8%)	23 (34.8%)	26 (34.7%)	
Endovascular		21 (45.7%)	12 (41.4%)	36 (54.5%)	40 (53.3%)	
Hybrid (open + endovascular)		7 (15.2%)	4 (13.8%)	7 (10.6%)	9 (12.0%)	

Data are provided as n (%) or median (interquartile range)
PNI = Prognostic Nutritional Index; IQR = Interquartile Range; NIT = Non-insulin-treated diabetes; IT = Insulin-treated diabetes; Rfl = Rutherford

CO05 IMPACT OF SUPERVISED TRAINEE INVOLVEMENT ON POSTOPERATIVE OUTCOMES FOLLOWING ABOVE-KNEE AMPUTATION: A RETROSPECTIVE COHORT STUDY

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BACKGROUND: Above-knee amputation (AKA) is a high-risk procedure performed for chronic limb-threatening ischemia, infection, and trauma. AKA is often among the first major procedures performed by vascular surgery trainees, making it a key operation in surgical training. However, the impact of trainee involvement on postoperative outcomes remains debated. This study aimed to compare postoperative outcomes of consultant- and trainee-performed AKA.

METHODS: This single-centre retrospective cohort study included 400 consecutive patients undergoing AKA between January 2021 and December 2025. Patients were stratified according to whether the procedure was performed by consultants or supervised trainees acting as primary surgeons. Outcomes included wound dehiscence, hematoma, infection, reintervention, major adverse cardiovascular events (MACE), 30-day mortality, and length of hospital stay (LOS). Regression analyses were performed to adjust for potential confounding variables.

RESULTS: A total of 400 patients were included (consultant: n = 126; trainee: n = 274). Baseline characteristics were broadly similar, although antiplatelet therapy was more frequent in consultants (69.8% vs 45.6%, P = .001) and urgent procedures

were more common in trainees (65.3% vs 25.4%, P = .001). No significant differences were observed in wound dehiscence (19.8% vs 14.6%), hematoma (4.0% vs 8.8%), infection (14.3% vs 12.4%), reintervention (10.3% vs 6.2%), MACE (0.0% vs 1.8%), or 30-day mortality (14.3% vs 19.0%). LOS was shorter in the consultant group (6 vs 13 days, P < .001). In subgroup analysis, outcomes were similar in urgent and elective cases, except for shorter LOS in elective consultant-performed procedures. On multivariate analysis, trainee involvement (= 7.628, P < .001), trauma, ipsilateral revascularization, age, statin use, and antiplatelet therapy were associated with increased LOS, with no consistent predictors of complications.

CONCLUSIONS: Supervised trainee involvement in AKA was not associated with increased postoperative complications or mortality. The only consistent difference was prolonged hospital stay in trainee-performed cases, particularly in elective procedures. These findings suggest that, within a structured and supervised training environment, AKA can be safely performed by trainees and represents an appropriate procedure for progressive operative autonomy.

CO06 THE GUT MICROBIOME AND VASCULAR DISEASE: MECHANISTIC INSIGHTS AND IMPLICATIONS FOR VASCULAR SURGERY: A SYSTEMATIC REVIEW

Miguel Castro e Silva, Celso Nunes, Eduardo Silva, Leonor Baldaia, Luis Orelhas, Jorge Costa, Paula Dias, Beatriz Tavares, Manuel Fonseca

ULS Coimbra

INTRODUCTION: The gut microbiome has emerged as a critical modulator of cardiovascular health, with growing evidence linking microbial dysbiosis to vascular pathologies including atherosclerosis, aortic aneurysm, and peripheral arterial disease. Microbial metabolites such as trimethylamine N-oxide (TMAO), short-chain fatty acids (SCFAs), and lipopolysaccharide (LPS) influence vascular inflammation, endothelial function, and thrombosis. This systematic review synthesizes current evidence on gut microbiome-vascular disease interactions and their implications for vascular surgery.

METHODS: A systematic search of PubMed, MEDLINE, Embase, and Cochrane Library was conducted from inception through April 2024. Studies examining gut microbiome composition, microbial metabolites, and vascular disease outcomes in human subjects were included. Animal studies providing mechanistic insights were reviewed separately. Two independent reviewers performed screening, data extraction, and quality assessment using Newcastle-Ottawa Scale criteria. PRISMA guidelines were followed throughout.

RESULTS: Thirty-one studies comprising 12,458 patients met inclusion criteria. Elevated TMAO levels were consistently associated with major adverse cardiovascular events (HR 1.62, 95% CI 1.45–1.80), atherosclerotic burden, and adverse outcomes following vascular interventions. Patients with abdominal aortic aneurysm demonstrated distinct gut microbiome signatures with reduced diversity and depletion of butyrate-producing taxa. Perioperative microbiome disruption correlated with increased surgical site infections, prolonged inflammation, and impaired wound healing. Emerging evidence supports microbiome-targeted interventions including probiotics, dietary modification, and TMAO-lowering strategies in vascular patients.

CONCLUSION: The gut microbiome represents a novel therapeutic target in vascular disease management. Microbial metabolites influence atherosclerosis progression, aneurysm pathophysiology, and surgical outcomes. Integration of microbiome assessment and targeted interventions into vascular surgical practice may improve patient outcomes. Prospective clinical trials are needed to establish evidence-based protocols for microbiome modulation in vascular surgery patients.

CO07 SURGICAL VERSUS ENDOVASCULAR TREATMENT OF EXTRACRANIAL INTERNAL CAROTID ARTERY (ICA) ANEURYSMS: SYSTEMATIC LITERATURE REVIEW

Jorge Duarte Garrido Santos Costa, Luís Filipe Antunes, Miguel Silva, Luís Orelhas, PaulaDias, Beatriz Ferreira, Manuel Fonseca

ULS Coimbra

BACKGROUND: Extracranial internal carotid artery aneurysms (EICAAs) are rare vascular lesions and represent <1% of all peripheral aneurysms. They carry significant risk of thromboembolic stroke and cranial nerve compression. While both open surgical repair and endovascular techniques have been described, there are no randomized controlled trials, with evidence limited to retrospective case series. This systematic review compares 30-day stroke rates, overall mortality, and cranial nerve injury (CNI) between surgical and endovascular treatment of extracranial ICA aneurysms in adults.

METHODS: A structured search of PubMed and Web of Science was conducted for studies reporting outcomes of both surgical and/or endovascular treatment of extracranial ICA aneurysms in adult patients. Case reports, pediatric studies, and articles limited exclusively to intracranial or common carotid aneurysms were excluded.

RESULTS: A total of 330 records were identified. After screening by title, abstract, and full-text assessment, 14

studies were included with 541 patients. Open surgical repair was associated with 30-day stroke rates ranging from 0% to 6.3%, perioperative mortality of 0% to 3.3%, and cranial nerve injury rates of 4.8% to 25%. Endovascular repair demonstrated 30-day stroke rates of 0% to 1.8%, perioperative mortality of 0% to 4.1%, and cranial nerve injury rates of 0% to 0.5%. Cranial nerve injury was significantly more frequent after open surgery in comparative studies (p = 0.029 in the largest comparative series).

CONCLUSIONS: Both surgical and endovascular treatment of extracranial ICA aneurysms were associated with a low rate of complications. Endovascular repair offers a significant advantage in avoiding cranial nerve injury, while 30-day stroke and mortality rates are similar. The quality of available evidence remains low, and an international registry is needed to define optimal management.

16H30 | SESSÃO PRÉMIO 2 - COMUNICAÇÕES ORAIS

PRIZE SESSION 2 – ORAL COMMUNICATIONS

CO08 BOVINE AORTIC ARCH AND ITS IMPLICATIONS FOR AORTIC ARCH PATHOLOGY MANAGEMENT: A SYSTEMATIC REVIEW

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INTRODUCTION: The bovine aortic arch (BAA) is the most common branching variant of the aortic arch, characterized by a common origin of the brachiocephalic trunk and left common carotid artery. Despite its prevalence, the clinical implications of this anatomical variant for aortic pathology management remain incompletely understood. This systematic review aims to synthesize current evidence on the prevalence of BAA and its implications for the management of aortic arch pathologies.

METHODS: A systematic search was conducted across PubMed, MEDLINE, Embase, and Cochrane Library databases from inception through March 2024. Studies reporting on BAA prevalence, association with aortic pathologies, and surgical or endovascular management outcomes were included. Two independent reviewers screened articles, extracted data, and assessed quality using the Newcastle-Ottawa Scale. PRISMA guidelines were followed throughout.

RESULTS: Twenty-three studies comprising 15,847 patients met inclusion criteria. The pooled prevalence of BAA ranged from 7.2% to 27.4% in the general population, with significant regional variation (North America: 32.3%; Asia: 13.8%; Europe: 15.4%). BAA was significantly associated with thoracic aortic aneurysms (OR 1.89, 95% CI 1.42–2.51) and aortic dissection (OR 1.67, 95% CI 1.23–2.27). In type B aortic dissection, BAA prevalence reached 21.2%. Studies reported accelerated aortic growth rates, increased retrograde dissection following endovascular repair, and technical challenges in proximal landing zone selection during thoracic endovascular aortic repair.

CONCLUSION: represents a clinically significant anatomical variant associated with increased aortic pathology risk and management complexity. Recognition of BAA should prompt closer imaging surveillance and individualized treatment planning. Prospective multicenter studies are needed to establish evidence-based guidelines for managing aortic pathologies in patients with this variant.

CO09 TIMING OF CAROTID ENDARTERECTOMY IN SYMPTOMATIC CAROTID STENOSIS: A NATIONWIDE ANALYSIS

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*** Em nome dos Investigadores do Registo Nacional de Procedimentos Vasculares da Sociedade Portuguesa de Angiologia e Cirurgia Vascular[2]**

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BACKGROUND: Carotid endarterectomy (CEA) within 14 days of symptom onset is recommended for selected patients with symptomatic carotid stenosis to reduce early recurrent stroke risk.
However, real-world adherence and outcomes at a national level remain poorly characterized. This study assessed adherence to timing recommendations in Portugal and their clinical impact.

METHODS: A retrospective analysis of prospectively collected data from the RNPV (Registo Nacional de Procedimentos Vasculares) was conducted. Symptomatic patients undergoing CEA with available timing data were included and stratified by intervention timing. Primary endpoints were adherence to recommended timing (<14 days) and identification of high-adherence centers. Secondary endpoints included 30-day stroke, death, myocardial infarction, and one-year outcomes.

RESULTS: A total of 201 patients (42.1%) underwent CEA within 14 days (2% ≤48h, 20.9% 3–7 days, 77.1% 8–14 days). Significant inter-center variability was observed (mean delay 14.1±19.1 to 62.6±71.4 days; p=0.008), with only 1/14 centers achieving ≥70% compliance (p<0.001).
Patients treated within 14 days were referred earlier

(4.69±9.57 vs 21.93±33.84 days; p<0.001) and had shorter referral-to-surgery intervals (5.11±9.81 vs 19.57±34.42; p<0.001). Thirty-day stroke and stroke/death rates were 3.5% and 3.9% (≤14 days) vs 3.0% and 3.76% (>14 days), with no significant differences between centers. Most perioperative outcomes, length of stay, and functional status were similar, except intracranial hemorrhage, more frequent in late intervention (p=0.026), though rare.

CONCLUSION: Nationwide, timely CEA delivery remains inconsistent nationwide, with wide variability across centers. When performed early, outcomes meet guideline thresholds regardless of adherence level. Delays >14 days were largely driven by late referral, suggesting logistical or clinical factors. Interpretation is limited by lack of data on non-operated patients. Further work is needed to identify system barriers and optimize timely access to surgery.

CO10 CLINICAL AND IMAGING PREDICTORS OF SYMPTOMATIC CAROTID DISEASE: A PORTUGUESE TERTIARY CENTER CARE STUDY

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INTRODUCTION: The European Society for Vascular Surgery guidelines recommend multimodal imaging in the evaluation of carotid stenosis, particularly when surgical intervention is being considered. Although not routinely required, compute tomography angiography (CTA) is frequently used to further characterize plaque morphology. Identifying CTA-based vulnerability markers associated with symptomatic presentation may therefore provide additional value in patients already undergoing this examination. This study aimed to identify clinical and CTA-based determinants of symptomatic carotid disease.

METHODS: We conducted a retrospective observational study including all consecutive patients who underwent conventional carotid endarterectomy at a tertiary center between January 2023 and December 2025. Clinical predictors were analyzed in the full cohort (n=179) using multivariable logistic regression. For imaging predictors, only patients with available preoperative CTA were included (n=81). Carotid plaques were segmented using 3D Slicer® version 5.10, and plaque assessments were conducted by two independent observers, who reached consensus on all measurements. Imaging predictors were primarily analyzed using unadjusted ORs; variables reaching statistical significance were further adjusted for age, sex, and grade of carotid stenosis.

RESULTS: Among 179 patients, 72 (40.2%) were symptomatic. Male sex (adjusted OR 2.83, 95% CI 1.17–6.85, p=0.022) and prior modified Rankin score ≥2 (adjusted OR 4.94, 95% CI 1.72–11.70, p=0.002) were independently associated with symptomatic disease; no other clinical variables reached statistical significance (Table 1). In the imaging subgroup (n=81), ulceration (defined as the presence of a contrast-filled cavity extending ≥1 mm beyond the vascular lumen into the plaque) was the only significant CTA feature associated with symptomatic disease (adjusted OR 2.84, 95% CI 1.02–7.92, p=0.047). No significant associations were found for plaque size, morphology, composition, or other vulnerability markers (table 2).

CONCLUSION: In this cohort, male sex and baseline functional impairment were independent determinants of symptomatic carotid disease. Among patients in whom CTA was performed, plaque ulceration was the only imaging vulnerability marker associated with symptomatic presentation. While these findings do not support systematic CTA in all patients with carotid stenosis, ulceration may represent a useful additional marker in those already undergoing this examination, potentially assisting in the revascularization decision.

Table 1. Clinical predictors for symptomatic carotid disease (n=179)

Clinical predictors (n=179)	Symptomatic (N=72)	Asymptomatic (N=107)	Adjusted OR (95% CI)	p-value
Age, years	71.0 ± 8.2	70.1 ± 6.5	1.10 (0.97-1.07)	0.411
Sex, male	**63 (87.5%)**	**82 (76.6%)**	**2.83 (1.17-6.85)**	**0.022**
Diabetes mellitus	37 (51.4%)	47 (43.9%)	1.28 (0.68-2.42)	0.441
Hypertension	64 (88.9%)	88 (82.2%)	1.67 (0.65-4.32)	0.291
Hyperlipidemia	62 (86.1%)	91 (85.0%)	1.02 (0.42-2.51)	0.965
Chronic kidney disease	6 (8.2%)	13 (12.1%)	0.50 (0.17-1.43)	0.193
Smoking status, current or previous smoker	45 (62.5%)	65 (60.7%)	0.95 (0.48-1.84)	0.858
Symptomatic PAD	12 (16.7%)	38 (35.5%)	0.32 (0.15-0.70)	0.004
Previous peripheral revascularization	4 (5.6%)	10 (9.3%)	0.48 (0.14-1.65)	0.243
Symptomatic pulmonary disease	21 (29.2%)	23 (21.5%)	1.49 (0.73-3.02)	0.275
Symptomatic cardiac disease	20 (27.8%)	35 (32.7%)	9.68 (0.34-1.35)	0.265
Previous coronary revascularization	5 (6.9%)	15 (14.0%)	0.37 (0.12-1.11)	0.075
Contralateral carotid stenosis>50%	5 (6.9%)	15 (14.0%)	0.37 (0.20-0.71)	0.002
Previous contralsteral carotid revascularization	2 (2.8%)	8 (7.5%)	0.40 (0.08-1.95)	0.251
Previous Stroke more than 6 months ago	9 (12.5%)	16 (15.0%)	0.67 (0.27-1.67)	0.384
Previous TIA more than 6 months ago	1 (1.4%)	6 (5.6%)	0.20 (0.02-1.74)	0.144
Previous Stroke or TIA more than 6 months ago	10 (13.9%)	22 (20.6%)	0.50 (0.21-1.17)	0.110
Previous mRankin, ≥ 2	**18 (25.0%)**	**7 (6.5%)**	**4.94 (1.72-11.70)**	**0.002**
Grade of ipsilateral stenosis (NASCET), ≥ 90	13 (18.1%)	27 (25.2%)	0.65 (0.31-1.37)	0.260

Data are provided as n (%) or mean ± standard deviation.
Odds ratios are adjusted for age, sex, hypertension, dyslipidemia, diabetes mellitus, chronic kidney disease, smoking status, and grade of carotid stenosis (NASCET).

Table 2. Imaging (CTA) predictors for symptomatic carotid disease (n=81)

CT vulnerability markers (n=81)	Symptomatic (N=24)	Asymptomatic (N=57)	Unadjusted OR (95% CI)	*p*-value
Plaque location, ICA	11 (45.8%)	24 (42.1%)	1.16 (0.45-3.04)	0.757
Plaque length, mm	21.60 ± 8.19	19.73 ± 9.02	1.02 (0.97-1.08)	0.384
Maximum plaque thickness, mm	4.01 ± 1.47	3.80 ± 1.13	1.15 (0.79-1.69)	0.473
Maximum plaque area*, mm^2	26.33 ± 18.34	26.37 ± 14.16	1.00 (0.97-1.03)	0.992
Plaque type, concentric	19 (79.2%)	39 (68.4%)	0.57 (0.18-1.77)	0.331
Plaque circumference, >180°	10 (41.7%)	35 (61.4%)	0.45 (0.17-1.19)	0.106
Plaque surface morphology, irregular	14 (58.3%)	22 (38.6%)	2.23 (0.84-5.88)	0.106
Ulceration, present	**13 (54.2%)**	**17 (29.8%)**	**2.78 (1.04-7.43)**	**0.041**
- number of ulcers	10 (43.5%)	24 (42.1%)	0.61 (0.24-1.58)	0.314
- maximum ulcer depth, mm	2.22 ± 0.82	2.37 ± 1.24	0.87 (0.43-1.75)	0.687
- maximum ulcer length, mm	3.14 ± 2.01	2.46 ± 1.11	1.40 (0.79-2.47)	0.245
Plaque composition, calcified	12 (50.0%)	25 (43.9%)	0.61 (0.49-3.30)	0.613
Lipid-rich necrotic core (LNRC), present	21 (87.5%)	53 (93.0%)	0.53 (0.11-2.57)	0.429
Maximum LNRC area*, mm^2	10.83 ± 17.75	9.98 ± 8.12	1.00 (0.97-1.05)	0.765
LNRC ratio**	0.33 ± 0.27	0.42 ± 0.31	0.32 (0.55-1.85)	0.202
Thrombus, present	11 (45.8%)	20 (35.1%)	1.57 (0.59-4.13)	0.365
Remodeling ratio***	1.47 ± 0.29	1.36 ± 0.26	4.10 (0.67-25.15)	0.128

Data are provided as n (%) or mean ± standard deviation.
*Cross-sectional area
**LNRC ratio = maximum LNRC cross-sectional area / maximum plaque cross-sectional area
***Remodeling ratio = diameter at lesion site / diameter at reference site

CO11 ACUTE INTESTINAL ISCHAEMIA: CLINICAL FACTORS AND OUTCOMES IN A SINGLE-CENTER COHORT

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Hospital de Santa Marta

INTRODUCTION: Acute intestinal ischemia ranges from self-limited colonic ischaemia to life-threatening acute mesenteric ischemia (AMI), which remains associated with high morbidity and mortality. Diagnosis is often delayed, with adverse consequences. This study aims to analyse institutional experience and identify factors associated with poor outcomes.

METHODS: Retrospective, single-centre observational study including all patients admitted with acute intestinal ischemia (2020-2025). Patients were identified using ICD-10 diagnostic codes from the hospital administrative database. Inclusion required acute-onset abdominal pain (≤5 days) with confirmation of intestinal ischemia. Patients were stratified according to treatment strategy (non-operative vs operative). Surgically treated patients were further divided into revascularized (R) and non-revascularized (NR) groups. Primary endpoints were 30-day and in-hospital mortality. Secondary endpoints included bowel resection.

RESULTS: A total of 104 patients were included (median age 76 years; 54% female). Vascular occlusion was the most frequent aetiology (48%), followed by non-occlusive mesenteric ischemia (29%) and venous causes (5%). 17.3% were classified as indeterminate. Median time from symptom onset to hospital presentation was 26 hours, and from admission to diagnosis 5 hours. Overall, 58 patients underwent surgical treatment: R group included 40 patients (6 revascularization alone; 34 revascularization and abdominal exploration) and NR group 18 patients. Bowel resection was required in 33% (N=19/58) and reintervention in 48% (N=22/58). Revascularization rates increased significantly over time (p<0.001) and were predominantly performed by open surgery (80%).
Overall, 30-day and in-hospital mortality were 30% and 35%, respectively. Among surgically treated patients, NR group had significantly higher 30-day mortality compared with R group (67% vs 38%, p=.039) with a similar, but not significant, trend for in-hospital mortality (67% vs 40%, p=.127). Rates of bowel resection were comparable between groups (28% vs 35%, p=.588). Thirty-day mortality was significantly higher in patients with qSOFA ≥2 (p=.012), peritoneal irritation (p=.002) and lactate >5 mmol/L (p=.019) at admission.

CONCLUSION: Acute intestinal ischemia remains associated with substantial morbidity and mortality. Clinical severity at presentation strongly correlates with poor outcomes. These findings highlight the need for early recognition, risk stratification, and structured institutional pathways to improve outcomes.

CO12 ARE AORTIC ARCH HYBRID OR ENDOVASCULAR STRATEGIES ACCEPTABLE ALTERNATIVES FOR HIGH-RISK PATIENTS? A SINGLE-CENTRE RETROSPECTIVE STUDY

Adriana Ferreira, Emanuel Silva, Viviana Manuel, Luis Silvestre, Ruy Fernandes e Fernandes, Pedro Amorim, Augusto Ministro, Ryan Gouveia e Melo, Alice Lopes, Luis Mendes Pedro

Unidade Local de Saúde de Santa Maria

INTRODUCTION: Open surgery is the “gold standard” for most aortic arch pathology in lower risk patients. However, higher risk patients are often excluded, and hybrid / endovascular strategies expanded the treatment possibilities in this population. In this study we investigated the early outcomes of hybrid arch repair (HAR) and total endovascular aortic arch repair (EAR) in various types of disease of the aortic arch in high surgical risk patients, not suitable for open surgical repair, but with a reasonable life expectancy and a favourable anatomy.

METHODS: We performed a retrospective analysis of all consecutive patients treated with HAR or EAR in our centre since 2010. We describe the patient and treatment characteristics and clinical outcomes.

RESULTS: A total of 86 patients were included (median age, 71 years; 71 male) between January 2010 and March 2026. The

main indications for aortic arch repair included degenerative aortic arch or proximal descending aortic aneurysms requiring arch repair (n=34, 39.5%), dissection with or without aneurysms (n=23, 26.7%), penetrating aortic ulcers (n=8, 9.3%), chronic traumatic injury of the aortic isthmus (n=9, 10.5%) and type IA endoleak after previous TEVAR (n=6, 7.0%). Seventy-three cases (84.9%) were performed electively, and 13 cases (15.1%) were performed in an urgent setting. HAR was performed in 56 patients (65.1%), most of them corresponding to debranching of zone 2 (n=34, 60.7%). Total endovascular repair with fenestrations/scallop configurations was used in 3.5% (n=3), branched devices in 23.3% (n=20) and parallel-graft techniques in 4.7% (n=4). Among the branched endografts, 2 were single branch devices, 12 were double branched and 6 were triple branched devices. The major stroke incidence was 5.8% (n=5), three patients in the EAR group, and two in the HAR group. Early intra-hospital mortality rate was 15.1% (n=13), being six of them procedure-related (4 related to a major stroke event after procedure, 1 aorto-bronchial fistula and 1 respiratory failure due to type 1A endoleak). The mean follow-up period was 31,9 months (interquartile range, 2.0-60.5 months) with a mortality rate of 27.9% (n=24), two of them being procedure related deaths (endograft infection and retrograde type A aortic dissection, respectively).

CONCLUSION: HAR and EAR were valid alternatives to open surgery in a this high risk surgical group, with acceptable morbidity and mortality rates

CO13 SINGLE-CENTER 6-MONTH RESULTS OF THE AXESS HEMODIALYSIS CONDUIT: EXPERIENCE FROM THE VASCULAR SURGERY DEPARTMENT

Eduardo Cruz[1], Mickael Henriques[1], Andreia Ministro[1], Luís Mendes Pedro[1], Augusto Ministro[2]

[1] Vascular Surgery Department, Hospital Santa Maria, Unidade Local de Saúde de Santa Maria (ULSSM); Faculty of Medicine, University of Lisbon; Centro Cardiovascular da Universidade de Lisboa (CCUL@RISE), Lisbon Portugal.
[2] Single-Center 6-Month Results of the aXess Hemodialysis Conduit: Experience from the Vascular Surgery Department

INTRODUCTION: Vascular access remains a critical determinant of outcomes in end-stage renal disease (ESRD) patients undergoing hemodialysis. Conventional arteriovenous grafts (AVG) are associated with high reintervention rates, infection risk, and limited durability. The aXess conduit (Xeltis, Eindhoven, The Netherlands) is a novel restorative vascular access device based on Endogenous Tissue Restoration (ETR) platform technology, which utilizes an advanced polymer implant that regenerates the patient's own tissue before gradually being absorbed, leaving new, living, and long-lasting vessels in place. The first-in-human trial demonstrated 100% secondary patency, 78% primary assisted patency, and 0% infections at 12 months, representing a significant improvement over current standard of care. The aXess EU Pivotal Trial (NCT05473299) was subsequently initiated as a prospective, multicenter study across 18 European sites to confirm these findings at scale. The aim of this study is to report the single-center 6-month outcomes from our hospital, a participating site in the aXess EU Pivotal Trial.

METHODS: Adult ESRD patients deemed unsuitable for arteriovenous fistula creation were enrolled. We have a total of 32 patients evaluated, of whom 26 received aXess Hemodialysis Conduit. The primary endpoints assessed were primary patency (PP), primary assisted patency (PAP), and secondary patency (SP). Secondary endpoints included reintervention rate and infectious complications.

RESULTS: At 6-month follow-up, PP was 64%, PAP was 77%, and SP was 91%. The reintervention rate was 1.3 procedures per patient per year. There was one case of access-related infection, which resolved completely with antibiotic therapy, with no surgical intervention required. No device-related explants or major adverse events were recorded.

CONCLUSION: These single-center results are consistent with the broader EU Pivotal Trial findings, in which aXess demonstrated superior sustained patency across both primary and secondary outcomes compared to other AVGs, while requiring fewer interventions. The low infection burden observed at our center aligns with the multicenter data showing near-zero cannulation-infection related explants across the full trial population and a below 0.02% rate of bleeding complications across over 15,000 dialysis sessions. The aXess conduit represents a very promising vascular access solution for ESRD patients, potentially combining the immediacy of AVG with the durability and biocompatibility approaching that of a native fistula.

CO14 PREDICTORS OF ARTERIOVENOUS FISTULA MATURATION FAILURE IN A REAL-WORLD COHORT: A 3-YEAR SINGLE-CENTER STUDY

Miguel Castro e Silva, Pedro Fragoso, Celso Nunes, Eduardo Silva, Leonor Baldaia, Luis Orelhas, Jorge Costa, Paula Dias, Beatriz Tavares, Manuel Fonseca

ULS Coimbra

INTRODUCTION: Arteriovenous fistula (AVF) maturation failure remains a major obstacle in incident hemodialysis patients. Earlier studies focusing on AVF maturation failure relied on small, standardized cohorts, while real-world performance and generalizability remain poorly explored. We aimed to identify risk factors predicting AVF maturation failure in a large, real-world cohort, using routinely available clinical and ultrasound parameters.

METHODS: We retrospectively evaluated all adult patients undergoing AVF creation between July 2022 and June 2025. The primary outcome was unassisted functional maturation at 6 months, defined as successful cannulation for dialysis or meeting ultrasonographic/clinical criteria for cannulation without prior intervention. We performed univariate and multivariate logistic regression analyses to identify relevant associations between the preoperative demographic, clinical and ultrasound variables and the primary outcome. We evaluated the discriminatory ability of the model using the area under the ROC curve and the model´s calibration using the Hosmer-Lemeshow test.

RESULTS: A total of 819 AVF procedures were included in our cohort. The patient´s median age was 73 years (IQR 63–83), 59% were male, and 45% diabetic. Overall, 228 (27.8%) failed to achieve unassisted maturation at 6 months. On multivariable logistic regression analysis, female gender (OR 1.55, 95% CI 1.03–2.32), diabetes mellitus (OR 1.61, 95% CI 1.10–2.36), peripheral arterial disease (OR 2.18, 95% CI 1.22–3.97), radiocephalic configuration (OR 2.02, 95% CI 1.31–3.11), pre-operative arterial diameter < 2.0 mm (OR 2.77, 95% CI 1.59–4.92), and venous diameter < 2.5 mm (OR 2.35, 95% CI 1.34–4.12) constituted independent predictors of maturation failure. This model presented moderate discriminative capacity (AUC 0.74 95% CI 0.70–0.78) and adequate calibration (Hosmer-Lemeshow p = 0.41).

CONCLUSION: In this real-world 3-year cohort, a simple logistic model using routinely available parameters identified relevant predictors of AVF maturation failure, allowing clinically useful risk stratification to guide surveillance and patient counseling. External validation and standardized prospective testing are warranted.

18 JUNHO 2026 *18th JUNE 2026*
09H00 | SESSÃO PRÉMIO 3 - COMUNICAÇÕES ORAIS
PRIZE SESSION 3 – ORAL COMMUNICATIONS

CO15 TEMPORAL MUSCLE CROSS-SECTIONAL AREA AS A PREOPERATIVE RISK STRATIFICATION TOOL IN CAROTID ENDARTERECTOMY

Carolina Pardete, José Miguel Vilas Boas, Filipa Jácome, Joana Ferreira, Armando Mansilha

ULS São João

BACKGROUND: Sarcopenia is prevalent in vascular surgery patients and is associated with adverse outcomes after surgery. Temporal muscle cross-sectional area (TMA) has emerged as an accessible imaging surrogate marker for sarcopenia screening. However, its impact on postoperative outcomes after carotid endarterectomy (CEA) has not yet been established.

METHODS: We conducted a single-center retrospective cohort study including patients who underwent CEA between 2023 and 2025 with available preoperative CT/CTA imaging. Bilateral TMA (mm^2) and muscle density (Hounsfield units, HU) were measured on CT/CTA systematically at the level of the supraorbital margin, using Sectra workstation. Measurements were independently assessed by two investigators, and discrepancies were resolved by consensus. The primary outcome was 30-day major adverse cardiovascular events (MACE). Secondary outcomes were surgical site infection (SSI), cervical hematoma, reoperation, length of stay and a composite of surgical complications (SSI, hematoma, or reoperation).

RESULTS: Of 179 consecutive patients undergoing CEA, 101 with available preoperative CT/CTA were included. Mean age was 71 ± 7 years, 74% were male and 34% had symptomatic carotid stenosis. Mean TMA was 601 ± 169 mm^2 and density was 37.3 ± 11.2 HU. Perioperative cerebrovascular events occurred in 7 patients (6.9%) with no cases of myocardial infarction or death. TMA was not associated with MACE (p=0.878). In contrast, lower TMA was significantly associated with surgical wound complications: patients with SSI had 33% lower TMA (478 vs 596 mm^2, p=0.019). In an exploratory subgroup analysis of asymptomatic patients (n=67), a similar pattern was observed. Muscle density was not associated with any outcome.

CONCLUSION: While TMA was not associated with major cardiovascular events after CEA, lower TMA was significantly associated with surgical site infection and composite complications after CEA. TMA may represent a simple and readily available preoperative marker to identify patients at increased risk of frailty and wound complications who may benefit from optimization. It may also contribute to preoperative risk stratification, especially in asymptomatic patients, where the risk-benefit ratio of intervention is narrower, without additional cost or radiation.

CO16 INTERNAL VALIDATION OF THE PORTUGUESE NATIONAL REGISTRY OF VASCULAR PROCEDURES – ABDOMINAL AORTIC ANEURYSM CHAPTER

Gonçalo Araújo[1], Tiago Ribeiro[1], Gonçalo Queiroz[2], Mickael Henriques[3], Patrícia Machado[4], Frederico Bastos Gonçalves[1], Em nome dos Investigadores do Registo Nacional de Procedimentos Vasculares da Sociedade Portuguesa de Angiologia e Cirurgia Vascular

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INTRODUCTION: Medical registries are key tools for monitoring healthcare quality. In 2019, the Portuguese Society of Angiology and Vascular Surgery (SPACV) launched the *Registo Nacional de Procedimentos Vasculares* (RNPV), to collect nationwide data on vascular surgical procedures

within the Portuguese healthcare network. The initial chapter focused on abdominal aortic aneurysms (AAA) and has already completed 5-years. The value of interpreting such data is directly tied to its validity and completeness. Therefore, we aim to present the findings of the first internal validation of the RNPV–AAA chapter.

METHOD: Four of the 20 institutions included in the RNPV were visited by three independent validators. Data from procedures performed between 2021-2022 for AAA were evaluated. Registry data from 27 variables of 15 randomly selected cases per center were compared with data from individual patient records for internal validation. Primary endpoint was internal validity. Secondary endpoints were data discrepancy and missing data.

RESULTS: Sixty AAA cases across 4 institutions, totaling 405 data fields per centre and 1620 data fields across all cases were compared with the original registration. An internal validity of 96.0% was observed. Overall, 1.1% data fields were missing, and 3.0% of data discrepancy was observed. Baseline characteristics (4.6%) presented the highest rate of mismatch, followed by procedure-related (3.6%) and outcome data (1.4%). Mismatch was more common in continuous data, with 15.0% mismatch in pre-operative creatinine and 16.7% in largest aortic diameter. Follow-up data (not included in this internal validation) was missing in up to 54.5% of patients.

CONCLUSION: The first validation of the RNPV–AAA chapter revealed reassuring results with a high degree of correspondence. Although performed on a comprehensive group of variables, the missingness of long-term data remains noteworthy.
Continuous data is more likely related to mismatch records, though the clinical implications are uncertain. Further external validation is anticipated.

CO17 SEX-BASED DIFFERENCES IN OUTCOMES AFTER ENDOVASCULAR ABDOMINAL AORTIC ANEURYSM REPAIR: A NATIONAL REGISTRY ANALYSIS

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INTRODUCTION: Abdominal aortic aneurysm (AAA) is associated with significant morbidity and mortality. Being more prevalent in men, AAAs in women are often diagnosed later, exhibit faster growth, and carry a higher risk of rupture, even at smaller diameters.
Evidence also suggests worse outcomes in women undergoing endovascular aneurysm repair (EVAR). However, data on sex-based differences in outcomes after EVAR remain limited.

METHODS: We conducted a multicenter retrospective study based on the Portuguese National AAA Registry. Patients with infrarenal AAA undergoing elective or urgent EVAR were included. Demographic, clinical, anatomical, and procedural variables were analyzed. The primary outcome was perioperative mortality; secondary outcomes included perioperative complications, reintervention, and mid-term mortality.
Comparisons between sexes were performed using appropriate univariate tests, and multivariable logistic regression was applied to assess independent associations. Statistical significance is set at $p < 0.05$.

RESULTS: A total of 1,177 patients were included, with a predominance of male patients. Baseline characteristics and comorbidities were comparable between sexes ($p>0.05$); however, in urgent cases, females were significantly older ($p<0.001$). Female patients were more frequently admitted with ruptured AAA compared to males ($p< 0.001$). While no significant sex differences were found in aneurysm diameter in the urgent setting, men undergoing elective EVAR presented with significantly larger aneurysms at intervention.
Perioperative complications and early outcomes were similar between sexes in the elective setting. In ruptured AAA (n=225), females demonstrated significantly higher in-hospital and 30-day mortality ($p = 0.026$ and $p = 0.030$, respectively). In a logistic binary regression analysis, the sex difference in mortality was not significant after controlling for the older age in the female group.

DISCUSSION/CONCLUSION: In this analysis, women were treated more frequently with a ruptured AAA at an older age but reaching a similar aneurysm diameter at rupture compared to males (despite international guidelines (weak) recommendations for elective intervention at smaller diameters).
These data highlight a current difficulty in the timely diagnosis of AAA in females, which can only be (very) partially justified by the lack of screening recommendations. Lack of awareness for this pathology in women could have also played a part.

CO18 EUROPEAN REGIONAL DIFFERENCES IN ABDOMINAL AORTIC ANEURYSM GROWTH: INSIGHTS FROM THE VASCUL-AID-RETRO STUDY

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OBJECTIVE: Evaluate demographic, clinical and geographic factors associated with abdominal aortic aneurysm (AAA) growth and identify independent predictors of faster aneurysm expansion.

METHODS: A multicentre retrospective cohort study was performed, including patients with small aortic aneurysms under imaging surveillance and not subjected to any surgical intervention.
Patients were divided into two groups: a faster aneurysm growth group, if they had annual growth above the median, and a slower growth group, if annual growth was below the median.
A multivariable logistic regression analysis was conducted to identify independent predictors of faster aneurysm growth.

RESULTS: A total of 512 patients were included in the analysis. Baseline aneurysm diameter was independently associated with faster aneurysm growth (odds ratio (OR) 1.07 per mm increase, 95% confidence interval (CI) 1.03-1.12, p = .001). Diabetes mellitus was also significantly associated with aneurysm growth, showing different effects across subgroups, with insulin-dependent diabetes favouring faster-growth aneurysms (OR 2.384 95% CI 1.084-5.246, p = .031) and non-insulin-dependent diabetes showing a tendency to be associated with slower-growth aneurysms (OR 0.500, 95% CI 0.233-1.073, p = .075).
Sex was also associated with aneurysm expansion (OR 2.344, 95% CI 1.017-5.405, p = .046), with women showing a higher risk for aneurysm growth when compared to men. Finally, patients from Eastern Europe exhibited faster aneurysm growth than those from Western Europe (OR 10.01, 95% CI 3.67-27.47, p < .001).

CONCLUSION: These findings may contribute to improved risk stratification and surveillance strategies in patients with AAA.

CO19 WHAT CHANGED IN THE LAST 22 YEARS IN THE MANAGEMENT OF TYPE B AORTIC DISSECTION IN A TERTIARY CENTER?

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INTRODUCTION: The Type B Aortic Dissection (TBAD) approach has changed with the evolution of endovascular techniques, but clinical presentation and time since onset remain the main drivers of treatment and outcomes. Also, a global shift to an endovascular-first strategy occurred.

OBJECTIVE: This review aimed to assess TBAD management over 22 years, focusing on the evolution of treatment options, major treatment determinants and main outcomes.

Methods: We conducted a retrospective study in a single Portuguese tertiary vascular center, dividing the sample into three periods of 7, 6 and 7 years (2003–2010, 2011–2017 and 2018–2025), with the first preceding implementation of the endovascular program for TBAD. Results were stratified by temporal classification and treatment strategy. Statistical analysis was conducted using SPSS software.

RESULTS: We included 144 patients (77.8% males) with a mean age of 60.0±12.6 years. The annual number of cases admitted increased across the three periods, respectively 5.4, 6.3 and 9.7 cases per year. Based on timing of evolution, 65.3% were admitted in the acute/subacute phases and 34.7% in the chronic phase. Patients in the early phases had complicated dissections in 34% of cases. The most common complication was lower limb malperfusion (62.1%) followed by renal (48.3%) and intestinal (41.4%) ischemia. The ratio of complicated cases seemed to remained stable across periods (31.6%, 26.3% and 26.5%, p=0.147). Intervention rates were 50%, 81.6% and 61.7% in each period respectively, with a clear trend toward more endovascular-first strategy (2.6% vs. 23.7% vs. 44.1%, p=0.001), in both acute and chronic phases. Open surgery as first option decreased but remained significant (47.4%, 57.9% and 17.6%, p=0.001). In-hospital mortality was 10.4% and the all-cause mortality in the overall period was 17.3%. Chronic TBAD (mostly post-dissection aneurysms) had a higher mortality (chronic 30.0% vs. acute 10.6%, p=0.003), mainly due to mortality in chronic TBAD treated with open surgery. In fact, mortality in the chronic phase decreased between the second and third periods (38.5% vs. 12.5%, p=0.071), due to reduced open surgery in chronic cases. Open surgery showed a higher mortality in both phases (open 32% vs. endovascular 9.5%).

CONCLUSION: Our center treated more TBAD over time with a shift toward endovascular treatment. Mortality was

higher in chronic cases and after open surgery, supporting the role of endovascular therapy.

CO20 REINTERVENTION AFTER FENESTRATED/BRANCHED ENDOVASCULAR AORTIC REPAIR – A RETROSPECTIVE SINGLE-CENTER STUDY

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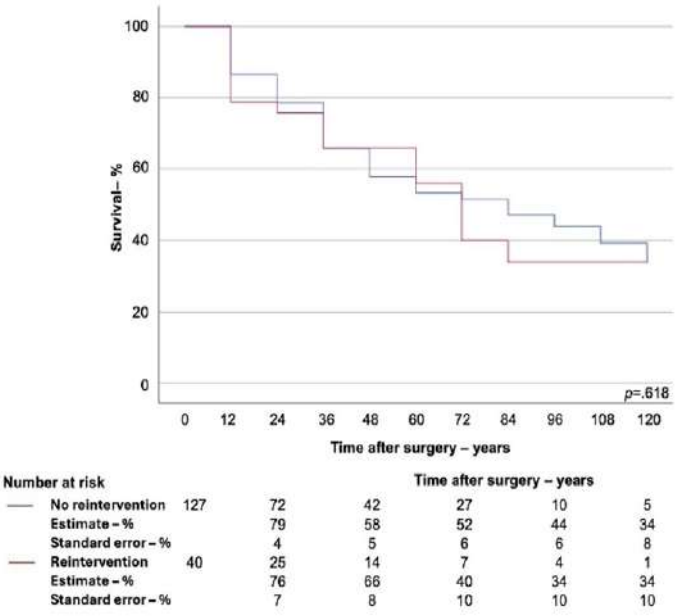
INTRODUCTION: Fenestrated and/or branched endovascular aortic repair (F/B-EVAR) is currently the most widely used technique to treat the thoraco-abdominal aortic segment. However, reinterventions (REIs) are required during the follow-up periods to maintain adequate endograft integrity and target vessel patency. The aim of this study was to evaluate the early and long-term reinterventions after F/B-EVAR.

METHODS: A single center retrospective study was conducted in a tertiary care center including all patients who underwent F/B-EVAR from June 2010 to February 2026. Variables were collected extracted from a prospectively maintained institutional database. REI was defined as any aneurysm-, device-, target vessel- or access-related intervention after the index procedure and was categorized by indication (access-, aortoiliac- or target vessel-related). A subgroup analysis was performed comparing patients who underwent a reintervention procedure (REI group) versus those who did not (no-REI group).

RESULTS: A total of 167 patients (91% male) underwent a F/B-EVAR procedure in an elective (93%) or urgent (7%) setting. During a median follow-up period of 28 months (IQR 18-60), 40 patients (24%) underwent a total of 49 REI procedures, accounting for 53 interventions. Seven patients (4%) required more than one reintervention. Indications for reintervention were access-related in 21%, aorto-iliac related in 45% or associated with target vessels in 34% of cases. 20 REIs (41%) occurred during the early follow-up period (within the first 30 days). Cumulative freedom from reintervention rate at 1 and 5 years was 80% and 70%, respectively. Subgroup analysis revealed a higher REI rate in F/B-EVARs performed for thoraco-abdominal aneurysms (48% vs. 36% in REI and no-REI groups) and type Ia endoleak after EVAR (18% vs. 3% in REI and no-REI groups) – p<.001. Among thoraco-abdominal aneurysms, reinterventions were more frequent in Crawford type IV aneurysms (41% vs. 16% - p<.001). No significant differences were found in long-term mortality (p=.618), although 30-day mortality was higher in the REI group (8% - p=.007).

CONCLUSION: Reinterventions are necessary procedures after F/B-EVAR mostly required to maintain patency and sealing in the aorto-iliac segment and in target vessels, without apparent significant effect on long-term survival but may impact early mortality. Strategies to improve distal iliac sealing and component junction integrity seem necessary to reduce reintervention rate.



CO21 SUPRA- VERSUS INFRACELIAC SEALING IN FENESTRATED EVAR FOR JUXTA-/PARARENAL AORTIC ANEURYSMS: DOES INCREASED COMPLEXITY AFFECT OUTCOMES?

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INTRODUCTION: Fenestrated endovascular aneurysm repair (FEVAR) has become the standard treatment for juxta- and pararenal aortic aneurysms (J/PAA). While infraceliac sealing configurations (IC-FEVAR) have historically predominated, anatomy-driven adoption of supraceliac sealing configurations (SC-FEVAR) has increased, to improv proximal seal durability. However, the added complexity of SC-FEVAR may increase perioperative risk. This study compared short- and mid-term outcomes between IC-FEVAR and SC-FEVAR.

METHODS: A retrospective analysis (2011-2025) included consecutive patients undergoing elective FEVAR for J/PAA. Patients were stratified by proximal seal. Primary endpoints included technical success, 30-day mortality, and in-hospital complications. Outcomes between groups were compared using logistic regression adjusting for baseline differences, aneurysm extent and procedural complexity.

RESULTS: A total of 129 patients (93.8% male; median age 74 years, IQR 69–79) were included; 78.3%(n=101) had juxtarenal and 21.7%(n=28) pararenal aneurysms. Overall, 21.7%(n=28) underwent IC-FEVAR and 78.3%(n=101) SC-FEVAR. Baseline characteristics were well-matched between groups, including cardiovascular risk factors, prior aortic surgery, aneurysm diameter or urgent repair rate(10.8% overall). Low-profile devices were more frequent in the SC-FEVAR group(p=0.011). The median number of fenestrations/scallops was 3 in IC-FEVAR (typically two renal fenestrations and one SMA scallop) versus 4 in SC-FEVAR.
The two groups had similar technical success (p=0.62), major adverse events(p=0.68), early endoleaks(p=0.34), or early reinterventions(p=0.19). In-hospital mortality was slightly higher, but not significant, in the IC-FEVAR group(p=0.08). SC-FEVAR required significantly longer operative times(p=0.002) and higher radiation dose(p<0.001), while contrast volumes were similar(p=0.21). At mid-term follow-up [median 13.8 months (IQR 4.4-28.7)], overall survival(HR 1.04, p=0.92), freedom from reintervention(HR 2.95, p=0.15) and target vessel patency(HR 1.19, p=0.83) remained comparable between groups.

CONCLUSION: Despite increased procedural complexity, longer operative times, and higher radiation exposure, SC-FEVAR demonstrated comparable technical success, perioperative safety, and mid-term durability, including target vessel patency and freedom from reintervention, relative to IC-FEVAR.
These findings support SC-FEVAR, when indicated, to improve sealing zones, providing multicenter studies to define its risk-benefit profile.

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RP01 SURGICAL OUTCOMES OF HEAD AND NECK PARAGANGLIOMA RESECTION: A SINGLE-CENTRE EXPERIENCE

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INTRODUCTION: Surgical resection remains the mainstay of treatment for head and neck paragangliomas. This study aimed to evaluate surgical outcomes and functional morbidity after head and neck paragangliomas ressection in a single-centre experience.

METHODS: Retrospective, single-centre observational study including all patients undergoing surgical resection of head and neck paragangliomas between January 2017 and January 2026. Patients were identified from a prospectively maintained institutional database and stratified into carotid body (CBP) and vagal paragangliomas (VP) for outcome comparison. Demographic, clinical, tumour, and perioperative variables were collected. The primary endpoint was postoperative functional morbidity, defined as cranial nerve deficits. Secondary endpoints included 30-day stroke, 30-day mortality, and tumour recurrence. Comparative analyses between groups were performed.

RESULTS: 17 patients were included (median age 47 years; 65% male), with a median follow-up time of 21 months. At presentation, 65% were symptomatic, most commonly with isolated cervical swelling or pain. CBP accounted for 65% (N=11) and VP for 35% (N=6). Median maximum tumour diameter was 41 mm (range 20 - 110mm). Among CBP, Shamblin class II was most frequent (73%). Preoperative embolization was performed in 94% of cases. Carotid bifurcation reconstruction was required in 18%, and median surgical tumour removal time was 111 minutes. Overall, postoperative ICU admission occurred in 24%, and median hospital stay was 7 days, being significantly longer in VP (14 days vs 6 days; p=.005).Temporary feeding tube dependence occurred in 24% without significant differences between groups (p=.057). Overall, functional morbidity was observed in 35.3% (N=6/17), most commonly due to vagus nerve injury, either isolated or combined with other cranial nerves (accessory or hypoglossal) or the sympathetic chain. This was significantly more frequent in VP (N=5/6, 83% vs 1/11, 9% in CBP; p=.011). Permanent neurological deficit was limited to voice changes. One perioperative stroke (6%) was recorded, with no 30-day mortality or tumour recurrence.

CONCLUSION: In this series, tumour location was the main determinant of postoperative outcomes, with functional morbidity occurring predominantly in vagal paragangliomas. In contrast, carotid body tumours were managed with low rates of neurological complications. These findings highlight the importance of tailored surgical strategies and careful preoperative counselling, particularly in vagal lesions.

RP02 AORTIC DISSECTION IN PORTUGAL: INCIDENCE, MORTALITY, AND REGIONAL DISPARITIES FROM A NATIONWIDE POPULATION-BASED STUDY (2010–2018)

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INTRODUCTION: Aortic dissection (AD) is a life-threatening condition associated with high mortality, heterogeneous clinical presentation, and frequent delays in diagnosis and treatment.
Epidemiological data are essential to improve disease awareness and optimize resource allocation. This study aimed to determine the incidence and epidemiological patterns of AD in Portugal.

METHODS: We conducted a nationwide population-based retrospective study using administrative data from the Base de Dados de Morbilidade Hospitalar (BDMH), including all hospital admissions for AD in Portugal between 2010 and 2018. Cases were identified using ICD-9 codes for AD and related subtypes. Surgical procedures and in-hospital outcomes were also captured. Incidence rates were calculated per 100,000 person-years using Portuguese census data, with 95% confidence intervals derived from Poisson models. Analyses were stratified by sex, age group, and geographic region. Age-standardized incidence rates (ASIR) were computed using the European standard population (ESP 2013) and the Portuguese population (PT2021). Incidence rate ratios (IRR) were estimated using Poisson regression.

RESULTS: A total of 2,516 AD cases were identified during the study period, with a median of 300 cases per year. The overall crude incidence rate was 3.61 per 100,000 person-years (95% CI: 3.46–3.77).
The mean age at diagnosis was 68±14 years, with women presenting older than men (72 vs. 67 years, p<0.001). Incidence was higher in men (IRR 2.39; 95% CI: 2.04–2.79; p<0.001) and increased with age, peaking at 75–94 years. In-hospital mortality was 20.3% (range: 14.4%–23.0%). Regional analysis showed higher incidence in the Centre and South regions compared with the North (IRR Centro vs Norte: 2.62; Sul vs Norte: 2.21).
The pooled ASIR adjusted to PT2021, using inverse-variance weighting, was 4.43 per 100,000 person-years (95% CI: 4.24–4.62). The ASIR adjusted to ESP 2013 was 3.87 per 100,000 person-years (95% CI: 3.71–4.04).

CONCLUSION: Aortic dissection in Portugal had a crude incidence of 3.61 per 100,000 person-years, predominantly affecting older individuals and men, with substantial in-hospital mortality. Age-standardization to the current Portuguese population suggests a higher contemporary burden. Regional disparities highlight the need for improved awareness, earlier diagnosis, and optimized healthcare strategies.

RP03 APRI AS A PREDICTOR OF EARLY COMPLICATIONS AFTER ENDOVASCULAR REVASCULARIZATION IN PERIPHERAL ARTERIAL DISEASE

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INTRODUCTION: Peripheral arterial disease (PAD) is a prevalent condition, with significant morbidity and remains associated with adverse cardiovascular and limb-related events despite advances in endovascular therapy. The identification of simple and reliable prognostic markers is essential for improving risk stratification and guiding clinical decision-making.
The Aspartate Aminotransferase to Platelet Ratio Index (APRI), initially validated as a non-invasive marker of hepatic fibrosis, has emerged as a surrogate marker of systemic inflammation and endothelial dysfunction, and has been linked to worse cardiovascular outcomes in various clinical settings. However, its role in patients undergoing endovascular treatment for PAD remains poorly defined. This study aims to evaluate the association between an elevated APRI value and 30-day complications following endovascular revascularization.

METHODS: A retrospective observational single-center study of a non-consecutive case series of patients with PAD undergoing endovascular revascularization was conducted. Patients were stratified according to APRI values (>0.5 vs ≤0.5).
The primary endpoint was the occurrence of 30-day postoperative complications. A comparative analysis between groups was performed.

RESULTS: A total of 57 patients were included, of whom 7 (12.3%) had an APRI >0.5.
In this group, complications occurred in 3 patients (42.9%), compared with 8 patients (16.0%) in the APRI ≤0.5 group (n=50). This corresponds to an approximately 2.7-fold higher complication rate among patients with elevated APRI, although this difference did not reach statistical significance (p=0.123).

CONCLUSION: An APRI >0.5 was associated with a higher rate of early complications following endovascular revascularization in patients with PAD, suggesting a potential role as a preoperative risk stratification tool. However, as this difference did not reach statistical significance, these findings require confirmation in larger cohorts. Given its simplicity, low cost, and wide availability, APRI may represent a useful adjunct in preoperative risk assessment.

RP04 BARRIERS TO CLINICAL TRANSLATION OF SMALL-DIAMETER TISSUE-ENGINEERED VASCULAR GRAFTS IN PERIPHERAL RECONSTRUCTION

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OBJECTIVE: To provide a comprehensive review of small-diameter (<6 mm) tissue-engineered vascular grafts for peripheral vascular applications, examining mechanisms of graft failure, emerging biomaterial and fabrication strategies, and key considerations for clinical translation.

METHODS: A comprehensive literature review was performed using PubMed, Scopus, and Web of Science through January 2026. Studies were selected based on relevance to peripheral vascular surgery, with emphasis on preclinical and clinical outcomes, biomaterial performance, fabrication approaches, and translational considerations, prioritizing recent studies while including seminal work.

RESULTS: Despite over four decades of research, small-diameter synthetic grafts continue to demonstrate poor patency in infrainguinal bypass, with expanded polytetrafluoroethylene and Dacron achieving 25–50% patency at five years compared with 60–80% for autologous saphenous vein in below-knee applications. Up to 20% of patients experience graft thrombosis within six months, with early failure associated with increased amputation rates. Graft failure is driven by acute thrombosis, intimal hyperplasia related to compliance mismatch and chronic inflammation, and incomplete endothelialization. Emerging strategies include multilayered scaffold architectures, hybrid biomaterials incorporating extracellular matrix components and bioactive molecules, advanced manufacturing techniques such as melt electrowriting, and immunomodulatory approaches promoting constructive remodeling. Recent preclinical studies report high patency rates approaching 100%, with complete endothelialization and minimal intimal hyperplasia in animal models. However, translation remains limited by inadequate study design, with median graft lengths of ~5 cm and follow-up periods of ~56 days, which do not reflect clinical scenarios where grafts often exceed 30 cm.

CONCLUSIONS: Clinically viable small-diameter tissue-engineered vascular grafts for peripheral vascular reconstruction will require integrated optimization of hemocompatibility, endothelialization, biomechanical properties, and inflammatory response. Advances in biomaterials, manufacturing technologies, and mechanistic understanding suggest that grafts meeting clinical benchmarks may be achievable, but progress will depend on rigorous preclinical evaluation using clinically relevant models and endpoints.

RP05 PREDICTIVE ABILITY OF NONHOME DISCHARGE SCORE IN PERIPHERAL ARTERY DISEASE AFTER REVASCULARIZATION – SINGLE CENTER ANALYSIS

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INTRODUCTION: Nonhome discharge (NHD) after surgery increases health care costs and contributes to decreased quality of life. The Ianuzzi NHD risk score, incorporating age, sex, ethnicity, poor ambulation, insulin dependency, anemia, and tissue loss, was developed for prediction of NHD after infra-inguinal lower extremity bypass. The aim of this study was to evaluate the predictive ability of this score in a cohort of peripheral artery disease after revascularization.

METHODS: A retrospective analysis was conducted of all patients who underwent primary revascularization for infra-inguinal PAD (femoro-popliteal, distal, or combined) from 2022 to 2024 at a tertiary care institution. Patient characteristics, comorbidities, ankle-brachial index (ABI), and outcomes were collected. NHD score was calculated as follows: age 60-69 years (2 points), 70.79 years (4 points), age ≥80 (6 points), white female (1 point), nonwhite male (2 points), nonwhite female (3 points), ambulation deficit (3 points), tissue loss (3 points), anemia (2 points) and insulin dependence (2 points). Patients were stratified by NHD score as low risk (0-4 points), moderate risk (5-9 points) and high risk (≥10 points).

RESULTS: Of 282 patients, 12 (4.3%) experienced NHD. NHD patients had longer hospital stays (median 65 vs 19 days, p<0.001), higher rates of hybrid revascularization (50% vs 11%, p<0.001), coronary artery disease (58% vs 24%, p=0.045), and living alone prior to admission (50% vs 15%, p=0.007). NHD score distribution differed across groups (p=0.062): low risk (21% home discharge vs 8.3% NHD), moderate (47% vs 25%), high (32% vs 67%). On multivariable analysis, NHD score was not independently predictive. Independent predictors included hybrid revascularization and living alone prior to admission.

CONCLUSION: The Ianuzzi NHD score, in our cohort, demonstrated limited independent predictive ability for non-home discharge after infra-inguinal PAD revascularization. Hybrid procedures and social factors like living alone emerged as predictors, suggesting the need for revascularization-specific risk models incorporating procedural and socioeconomic variables.

RP06 CKD STAGES PREDICT MACE AND LIMB LOSS AFTER PAD REVASCULARIZATION - A SINGLE CENTER STUDY

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INTRODUCTION: Peripheral arterial disease (PAD) shares risk factors with chronic kidney disease (CKD). CKD, defined by GFR <60 mL/min, associates with higher cardiovascular morbidity. This study evaluates CKD's impact on major adverse cardiovascular events (MACE) and major amputations in a contemporary cohort of PAD patients submitted to revascularization.

METHODS: A retrospective analysis was conducted of all patients who underwent primary revascularization for infra-inguinal PAD (femoro-popliteal, distal, or combined) from 2022 to 2024 at a tertiary care institution. Patient characteristics, comorbidities, ankle-brachial index (ABI), and outcomes were collected. Patients were CKD staged by GFR: no CKD (GFR ≥60, n=227), mild-moderate (30-59, n=29), severe (15-29/stage 5, n=26), dialysis (n=12). Univariate comparisons used chi-square, Wilcoxon, or Fisher tests. Cox regression assessed MACE (death, MI, stroke) and major amputation, adjusting for age, sex, diabetes, HTA, HF, AF.

RESULTS: CKD patients were older (median 73 [67-79] vs 66 [60-75] years, p<0.001), with higher incidence of diabetes (77% vs 44%, p<0.001), HTA (96% vs 77%, p<0.001), and HF (43% vs 13%, p<0.001). In multivariate Cox analysis, advanced CKD stage independently predicted MACE (HR 1.37, 95%CI 1.19-1.56, p<0.001) and major amputation (HR 1.21, 95%CI 1.01-1.44, p=0.034). Age (HR 1.03, 95%CI 1.00-1.06, p=0.024) also drove MACE risk. Kaplan-Meier curves revealed worse MACE-free and amputation-free survival across CKD stages (p<0.001).

CONCLUSION: CKD worsens prognosis in revascularized PAD patients, acting as an independent driver of both MACE and major amputation regardless of diabetes or heart failure status. This finding reinforces the need to integrate eGFR-based CKD staging into PAD risk stratification tools.

RP07 RISK STRATIFICATION IN TASC II D AORTOILIAC OCCLUSIVE DISEASE UNDERGOING REVASCULARIZATION: VALIDATION OF THE CHA_2DS_2-VA SCORE FOR LONG-TERM OUTCOMES

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INTRODUCTION: Patients with extensive aortoiliac occlusive disease (AIOD) are at high risk of long-term cardiovascular events despite successful revascularization. The CHA_2DS_2-VA score originally developed for thromboembolic risk assessment in atrial fibrillation, has shown prognostic value in several cardiovascular settings, but its long-term predictive ability in aortoiliac disease remains poorly defined. This study aimed to evaluate the association between the CHA_2DS_2-VA score and long-term cardiovascular as well as limb-related outcomes in patients undergoing aortoiliac revascularization.

METHODS: A prospective cohort study was conducted including patients who underwent elective aortoiliac revascularization for TransAtlantic Inter-Society Consensus (TASC) II type D lesions between 2013 and 2024 at two centers. The CHA_2DS_2-VA score was calculated preoperatively and patients were stratified according to a predefined cut-off (≤1 vs. ≥2 points). Short-term (30-day) and long-term (60 months) outcomes were assessed, including major adverse cardiovascular events (MACE), acute heart failure (AHF), stroke, acute myocardial infarction (AMI), major adverse limb events (MALE), and all-cause mortality. Time-to-event analyses were performed using Kaplan–Meier estimates and log-rank testing. Multivariable Cox proportional hazards regression was used to identify independent predictors of long-term outcomes.

RESULTS: A total of 180 patients were included, predominantly males (92.6%), with a mean age of 62.5 ± 9.0 years and a median follow-up of 80 months (95% CI 74.2–85.8), with a follow-up index of 93.9%, A CHA_2DS_2-VA score ≥2 points was significantly associated with reduced AHF-free survival (log-rank p = 0.028) and stroke-free survival (log-rank p=0.026). No significant associations were observed between CHA_2DS_2-VA score categories and AMI, MALE, overall MACE, or all-cause mortality.
On multivariable analysis, the CHA_2DS_2-VA score, when analyzed as a continuous variable, was independently associated with an increased risk of MACE. Additionally, a CHA_2DS_2-VA score ≥2 points was a strong independent predictor of stroke. The score did not independently predict limb-related outcomes.

CONCLUSIONS: The CHA_2DS_2-VA score suggests a clinically relevant long-term prognostic value, particularly for acute heart failure and stroke, in patients undergoing revascularization for extensive AIOD. Its simplicity and reliance on readily available clinical variables make it a useful tool for cerebro- and cardiovascular risk stratification.

RP08 CONTEMPORARY OUTCOMES OF ISOLATED COMMON FEMORAL ENDARTERECTOMY IN THE ENDOVASCULAR ERA

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BACKGROUND: Common femoral endarterectomy (CFE) remains the reference treatment for common femoral artery (CFA) occlusive disease, yet contemporary real-world data focused specifically on isolated CFE remain limited. This study aimed to evaluate the clinical profile, operative characteristics and outcomes of isolated CFE performed in a tertiary vascular surgery center, with particular emphasis on postoperative complications, reintervention, restenosis or occlusion and the possible influence of wound closure technique and hemostatic adjunct use on local morbidity.

METHODS: A retrospective observational study was conducted including consecutive patients who underwent isolated CFE between January 2013 and December 2023. Baseline characteristics, clinical presentation, lesion complexity, operative details, postoperative complications, reinterventions and the occurrence of postoperative stenosis or occlusion were analyzed. Lesions were classified according to TASC II.
Exploratory logistic regression was used to assess factors associated with postoperative stenosis or occlusion and Fisher's exact test was used to explore associations between wound closure technique, hemostatic adjunct use and postoperative complications.

RESULTS: A total of 96 patients underwent 100 isolated CFE. Mean age was 68.5 ± 9 years, 89% were male and 63% presented with chronic limb-threatening ischemia. Most lesions were classified as TASC A–B (68%).
Early postoperative complications were infrequent and predominantly local, including groin hematoma (4%), lymphatic leakage (4%), lymphocele (5%) and pseudoaneurysm (2%).
Overall, 18% of procedures required reintervention, most commonly by an open approach and postoperative stenosis or occlusion occurred in 9% of cases. TASC C–D lesions showed a numerically higher rate of stenosis or occlusion than TASC A–B lesions (12.5% vs 7.4%; OR 1.80), although this difference was not statistically significant (p = 0.462). Neither intradermal wound closure nor the use of a hemostatic adjunct was significantly associated with a reduction of postoperative complications.

CONCLUSIONS: Isolated CFE remain a safe and effective treatment for CFA occlusive disease, with low rates of early local complications, acceptable reintervention rates and good durability in tertiary-center practice.
These findings support their continued role as the reference treatment for common femoral artery disease in the endovascular era.

RP09 IVUS IN ILIAC ARTERY STENTING: ADDED VALUE OR OVERUSE OF TECHNOLOGY?

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INTRODUCTION: Endovascular therapy is the first-line treatment for aortoiliac occlusive disease; however, the role of intravascular ultrasound (IVUS) as an adjunct to angiography remains uncertain. Unlike angiography, which provides a two-dimensional lumen silhouette, IVUS enables high-resolution cross-sectional vessel assessment. This review synthesizes current evidence regarding the clinical utility and economic viability of IVUS-guided iliac stenting.

METHOD: A comprehensive literature review was conducted, including prospective and retrospective studies, registry analyses, cost-effectiveness studies, and consensus statements published through 2025 evaluating IVUS use in iliac and aortoiliac interventions.

RESULTS: Evidence for IVUS in iliac interventions is primarily observational and characterized by significant heterogeneity. Technically, IVUS-guided interventions consistently demonstrate superior lesion assessment compared to angiography alone, particularly in identifying vessel morphology and post-deployment complications such as suboptimal stent expansion, malapposition, and occult dissections. These intraprocedural insights facilitate more accurate treatment decisions and stent optimization, especially within complex aortoiliac reconstructions.
While these technical advantages are clear, the translation to clinical outcomes is more nuanced. Several studies report improved long-term patency and a reduction in major adverse limb events (MALE), including lower amputation rates. However, some registry data indicate no consistent reduction in intermediate-term restenosis compared to angiography-only cohorts.
From an economic perspective, data suggest that the higher upfront cost of IVUS may be offset by reductions in downstream healthcare utilization and repeat revascularizations. Literature is currently limited by a lack of iliac-specific cost-effectiveness models and a reliance on expert consensus rather than high-quality, randomized evidence.

CONCLUSION: IVUS enhances procedural precision and may improve limb-salvage rates in complex aortoiliac disease. However, the lack of high-quality randomized controlled trials (RCTs) limits definitive conclusions regarding routine use. Further prospective studies incorporating clinical and

economic endpoints are needed to define its role in iliac artery stenting.

RP10 TWENTY YEARS EXPERIENCE IN THE MANAGEMENT OF EXTRACRANIAL CAROTID ARTERY ANEURYSMS: A SINGLE CENTER RETROSPECTIVE COHORT STUDY

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INTRODUCTION: Extracranial carotid artery aneurysms (ECAAs) account for less than 1% of all carotid pathologies. However, cautious treatment decisions should be taken due to the relatively significant morbidity and mortality associated with this condition. In this single-center, retrospective study, we aim to report our center experience in the last twenty years regarding their various management strategies, post operative and long term complications.

METHODS: A total of 20 consecutive patients, who underwent treatment for ECAAs between January 2005 and December 2025, were included in this study. They were anatomically categorized using the Attigah classification. The study outcomes were intra-hospital morbidity (ipsilateral stroke and cranial nerve injury) and need for re-intervention.

RESULTS: Twenty ECAAs were treated over a 20-year period. Patients were stratified into three groups according to the management strategies employed: surgical (n=17, 85.0%), endovascular (n=2, 10.0%), and hybrid (n=1, 5.0%). Mean age at diagnosis was 69 years. Almost half of the patients were female (45.0%). The majority of the ECAAs were an incidental finding (n=11, 55.0%), but a palpable, pulsatile mass was the most common clinical sign (n=5, 25.0%). Atherosclerosis was the leading etiology (30.0%), but other causes were found, as previous carotid artery surgery (n=3, 15.0%), previous cervical trauma (n=3, 10.0%), previous neck radiation (n=2, 10.0%) and fibromuscular dysplasia (n=1, 5.0%). Attigah type I ECAAs (n = 9, 45.0%) were the most common type of aneurysm. Among the patients treated with open surgery, aneurysm excision and reconstruction with end-to-end anastomosis was performed in the majority of the patients (n=8, 47.1%), aneurysm excision and interposition with polytetrafluoroethylene was performed in 6 patients (35.3%), and in 3 (17.6%) interposition with great safenous vein was choosen. Two patients (10.0%) were treated with a covered stent and in one patient a Gore Hybrid Vascular Graft was used. Cranial nerve injuries were noted in four patients (20.0%) after open surgery. An ipsilateral major stroke occurred in the patient that was submitted to the hybrid procedure due to occlusion of the stent in the early post operative period and re-intervention was needed. No procedure related deaths occured after any of the surgical options.

CONCLUSION: Our center follows the tendency previously seen in the latest case series, presenting open surgery as a safe option for ECAAs with relatively low post operative morbidity and mortality rates.

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SESSION RAPID PACE COMMUNICATIONS 2

RP11 INTERHOSPITAL TRANSFER AND OUT-OF-HOURS CARE: IMPACT ON MORTALITY AFTER RUPTURED ABDOMINAL AORTIC ANEURYSM REPAIR

Pedro Freitas, José Vilas-Boas, Lara Dias, Joel Sousa, Marina Neto, Leandro Nóbrega, Joana Ferreira, Armando Mansilha

ULS São João

INTRODUCTION: Ruptured abdominal aortic aneurysm (rAAA) is associated with high morbidity and mortality1. The impact of interhospital (IH) transfer and out-of-hours (OH) care on mortality after rAAA repair remains uncertain1,2, with limited and outdated evidence3,4, particularly from Portugal5,6. We aimed to assess the impact of IH transfer (transferred vs directly admitted) on 30-day or in-hospital mortality after rAAA repair. Secondarily, we evaluated the effect of admission and intervention timing (in-hours vs OH [20h-8h]) at a tertiary center.

METHODS: We conducted a retrospective cohort study including consecutive patients undergoing rAAA repair between January 2012 and December 2025 at a tertiary center. Data on demographics, transfer status, timing, and mortality were collected by two independent investigators. The primary outcome was 30-day or in-hospital mortality (whichever occurred first). Uni- and multivariable analyses were performed, adjusting for age, hemodynamic instability (shock; altered mental status; systolic arterial pressure <70 mmHg), and intervention approach. Subgroup analyses were stratified by transfer status.

RESULTS: We included 157 patients (mean age: 75 years; 92% male; 63% hemodynamically unstable), of whom 72% were transferred (median 33 km, IQR 33-54). Overall mortality was 47%, with comparable baseline characteristics between transfer groups.
Time from diagnosis to surgery (TDS) was just over twofold longer in transferred patients (3.68h [IQR 2.55–5.15] vs 1.83h [IQR 1.08-3.13];p<0.001) but was not associated with early mortality. Transfer status, OH admission, and OH surgery were not significantly associated with mortality, including in subgroup analyses. Age (OR 1.98 per 10 years, 95% CI 1.34–3.11;p=0.001) and hemodynamic instability (OR 2.40, 95% CI 1.13–5.11;p=0.023) were independently associated with the outcome.

CONCLUSION: Limited international data have compared treatment-capable centers3,4; however, in our setting, transfer was unavoidable due to limited referring hospital resources. Few Portuguese studies have evaluated IH transfer alone5,6. In the present study, we simultaneously evaluated IH transfer and OH care. Although TDS was significantly longer in transferred patients, this was not associated with the main outcome, in line with previous reports5,6.

In this study, neither transfer nor timing of care influenced early mortality. Larger multicenter studies are warranted.

RP12 PHYSICIAN-MODIFIED ENDOGRAFTS IN COMPLEX AORTIC ANEURYSMS: A SINGLE-CENTER EXPERIENCE

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INTRODUCTION: Custom-made devices (CMDs) require time for planning and manufacturing, making them unsuitable in urgent cases. Physician-modified endografts (PMEG) appears as an alternative in such settings, enabling the use of fenestration and branch technology when immediate treatment is required. The aim of this study is to present our current practical experience and technical details with PMEGs.

METHODS: We conducted a single-center observational study based on a retrospective descriptive analysis of consecutive patients treated for complex aortic aneurysms using PMEGs. Data regarding device modification techniques, technical success, and short- and long-term outcomes were analyzed.

RESULTS: A total of 11 patients were treated with PMEGs, of whom 9 were male, with a mean age of 76.4 ± 8.6 years. Nine patients had juxtarenal aneurysms and 2 had pararenal aneurysms. Indications for treatment included 4 symptomatic aneurysms, 3 large aneurysms (>8 cm), 1 large aortic ulcer, 1 ruptured juxtarenal aneurysm with an aortocaval fistula, 1 rapidly growing juxtarenal anastomotic pseudoaneurysm, and 1 rapidly expanding aneurysm with type Ia endoleak following EVAR.
All procedures were planned using COOK endografts (10 ZDEG platform and 1 ZISL graft), with a median of 4 fenestrations (IQR 3–4). Technical success was achieved in 10 of 11 cases (90.9%). The unsuccessful case was due to failure to catheterize the left renal artery because of a pre-occlusive calcified stenosis; the corresponding fenestration was successfully occluded using a stent and coils.
There was no 30-day or in-hospital mortality. Spinal cord ischemia occurred in one patient, with partial recovery. Early reintervention (within 30 days) was required in four patients: two target vessel relining procedures due to stent stenosis, one case of main graft infolding (secondary to excessive oversizing) treated with balloon dilatation under protection of target vessel stents, and one covered endovascular reconstruction of the iliac bifurcation (CERIB) due to partial coverage of the right hypogastric artery.
During follow-up (median 2.4 months, IQR 1.1–8.0), freedom from mortality, target vessel patency, and freedom from reintervention were all 100%.
CONCLUSION: PMEGs require a high level of expertise, including meticulous preoperative planning and precise intraoperative device modification. In our experience, this approach represents a valuable alternative for selected patients who cannot wait for a CMD but remain sufficiently stable to undergo a complex endovascular procedure.

RP13 PROTOCOLO DE GESTÃO DO DOENTE COM TROMBOSE VENOSA DOS MEMBROS INFERIORES NO SERVIÇO DE URGÊNCIA – RESULTADOS PRELIMINARES DA SUA APLICAÇÃO

Maria João Madeira-Cardoso, Gabriela Teixeira, Luís Gamas, João Vasconcelos, Miguel Maia, João Almeida Pinto, José Carlos Vidoedo

ULS Tâmega e Sousa

INTRODUÇÃO: A suspeita de TEV dos MI representa cerca de 1–3% das admissões no SU. Mas apenas 10–25% dos doentes apresentam TV confirmado. O diagnóstico de suspeição é clínico e laboratorial mas o diagnóstico definitivo implica confirmação imagiológica, habitualmente através de ecodoppler(ED), cuja disponibilidade no SU é limitada.

OBJETIVO: Avaliar a fiabilidade/segurança do protocolo nos 1ºs 3 meses após a sua implementação.

MATERIAIS E MÉTODOS: O Protocolo tem como objetivo assistir na gestão dos doentes que necessitam de terapêutica antitrombótica e estabelecer critérios de ED se TV suspeita. Este acenta na avaliação do risco de TV pelo Score de Wells(SW) e doseamento de D-Dímeros(DD). Se SW≥2 e DD+ o doente deve ser hipocoagulado e referenciado para realização de ED≤72h. Foram avaliados todos os doentes referenciados para ED entre Abril-Junho de 2025.

RESULTADOS: N=77 doentes, 63.6% do género feminino, idade média 63,0±16,7 anos, tempo mediano entre o início de sintomas e a observação no SU 3 dias, IQR 1-7. 46% dos doentes triados por "dor/edema do membro". PCR média 26,7±21,3mg/dL, valor médio de DD 1532±2566ng/mL. SW mediano 1; IQR 1-2. 98.7% realizaram ED em <72h, tempo mediano entre referenciação e ED 1 dia, IQR 1-2. Confirmação de TV em ED 19.4% (n=11 TVP, n=4 TVS). 74% doentes hipocoagulados. 26 doentes SW≥2 e DD+, todos

realizaram ED em <72h. Sem registo de complicações trombóticas/hemorrágicas até ED. Taxa de confirmação de TV com SW≥2=22%. Taxa de confirmação de diagnóstico em ED 19.4%. Desempenho do algoritmo: Sensibilidade 100%, VPP 14.5% e VPN 100%. Quando comparados os doentes com TV comprovada (n=15) (TV+) com os restantes (n=62) (TV-), verificam-se valores significativamente mais elevados de DD e SW em TV+ (p<0.05). Quando comparado o grupo TV+ com os doentes com SW≥2 e DD+ mas TV-, verifica-se a mesma tendência em relação aos DD (p<0.05). Análise ROC do valor de DD na amostra (n=63) – DD>1800ng/dL com adequada capacidade discriminativa para TV (AUC=0.895), quando comparado com o cut-off >500ng/dL.

CONCLUSÕES: Este algoritmo permite uma abordagem estruturada e segura na suspeita de TV se indisponibilidade imediata de ED. Premite identificar casos com elevada probabilidade clinica de TV e iniciar hipocoagulação de forma segura até confirmação por ED. A taxa de confirmação de TV ~ 21% é concordante com a literatura. Sugere-se que DD>1800ng/dL apresentem maior sensibilidade e especificidade para TV. No entanto, este resultado deve ser interpretado cuidadosamente, dado reduzido tamanho amostral e natureza observacional do estudo.

RP14 THREE-DIMENSIONAL PRINTING IN VASCULAR SURGERY: WHEN DOES IT ADD VALUE?

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BACKGROUND: Endovascular and surgical management of complex visceral and aortic pathologies requires precise understanding of vascular anatomy. Conventional two-dimensional imaging may be insufficient in cases involving tortuous vessels, branch involvement, or unclear spatial relationships. Patient-specific three-dimensional (3D) printed models have emerged as a potential adjunct to enhance anatomical visualisation and support procedural planning. This study describes our centre's initial experience with 3D-printed models and aims to identify the clinical scenarios in which they provide added value over conventional imaging.

METHODS: A retrospective case series of patients with visceral artery or complex aortic pathologies in whom patient-specific 3D-printed models were produced was conducted. Patient selection was based on the surgeon's discretion. Models were generated from CTA data in DICOM format using 3D Slicer segmentation software, by a radiologist with more than 20 years of experience and printed using a Bambu Lab printer. All models were reviewed and discussed at our departmental meetings, where their impact on anatomical understanding and treatment planning was individually assessed.

RESULTS: Five models were produced (three visceral artery aneurysms, one juxtarenal aortic aneurysm, and one thoracic penetrating aortic ulcer). Indications for model production were: endovascular procedural planning, enhanced anatomical characterisation, clarification of discrepant prior imaging findings and educational purposes. All models were produced at 1:1 scale using polylactic acid (PLA), thermoplastic polyurethane (TPU 95A) was additionally used in one case. Production time, costs, and number of attempts were higher for visceral artery aneurysms (19.58 vs 8.75 hours; 8 vs 2€; 3.3 vs 1). 3D printing proved most valuable in visceral artery aneurysms. In a splenic artery aneurysm, the model resolved diagnostic uncertainty and supported a surveillance decision. In a complex renal artery aneurysm, it enhanced anatomical characterisation and guided successful coil embolisation. In a patient with Ehlers-Danlos syndrome, it clarified superior mesenteric artery aneurysm geometry and branch relationships, aiding risk assessment. In both aortic cases, 3D printing offered no additional information beyond CTA.

CONCLUSION: In this initial experience, 3D printing appears to add value in anatomically complex visceral artery aneurysms, particularly where diagnostic uncertainty or challenging vessel geometry is present.

	Case 1	Case 2	Case 3	Case 4	Case 5
Patient Data:					
Sex / Age	M / 61	F / 47	M / 59	M / 70	M / 73
Presentation	Self-limited epigastric pain	Recurrent renal colic	Asymptomatic	Asymptomatic (incidental AAA found by GP)	CLTI - left lower limb
Relevant comorbidities	HTN	Solitary kidney (right nephroureterectomy for pyelonephritic kidney)	Ehlers-Danlos syndrome	Smoker	Smoker, HTN, DM type 2, DLP
Vascular Pathology:					
Diagnosis and lesion characteristics	Uncertain: pancreaticoduodenal aneurysm (19 mm) vs. splenic aneurysm (29 mm)	Left renal artery aneurysm, 15×13 mm	Superior mesenteric artery (SMA) aneurysm, 41×28 mm	Juxtarenal AAA, 65×59 mm	Thoracic penetrating aortic ulcer (PAU)
Imaging Protocol:					
Equipment	Somatom go.Up scanner (Siemens Healthineers)	Somatom go.Up scanner (Siemens Healthineers)	Somatom go.Up scanner (Siemens Healthineers)	Somatom go.Up scanner (Siemens Healthineers)	Somatom go.Up scanner (Siemens Healthineers)
Acquisition phases & slice thickness	Unenhanced + arterial phases; axial reconstructions at 3 mm and 1–1.5 mm	Unenhanced + arterial phases; axial reconstructions at 3 mm and 1.5 mm	Unenhanced + arterial phases; axial reconstructions at 3 mm and 0.75 mm	Unenhanced + arterial phases; axial reconstructions at 3 mm and 0.75 mm	Unenhanced + arterial phases; axial reconstructions at 3 mm and 1 mm
3D Model Production:					
Segmentation software	3D Slicer	3D Slicer	3D Slicer	3D Slicer	3D Slicer
Segmentation time	8 h	3 h	10 h	4 h	4 h
Printer	Bambu Lab X1C	Bambu Lab X1C	Bambu Lab X1C	Bambu Lab X1C	Bambu Lab X1C
Print material	PLA + TPU 95A	PLA	PLA	PLA	PLA
Print time	19 h	3 h	12 h	5 h	3 h
Printing attempts	4	1	5	1	1
Post-processing time	1 h	45 min	2 h	1 h	30 min
Total model production time	28 h	6:45 h	24 h	10 h	7:30 h
Scale	1:1	1:1	1:1	1:1	1:1
Costs (€)	15	1.5	7.5	2	2
Added Value of the 3D Model:					
Clinical utility	Improved anatomical understanding (aneurysm localization) and therapeutic decision-making	Improved anatomical understanding; supported planning of endovascular intervention	Improved anatomical understanding and therapeutic decision-making; the 3D model helped clarify the complex vascular anatomy and the associated risk of intestinal ischaemia, which precluded endovascular embolisation.	The 3D model did not add information beyond what CTA had already provided.	The 3D model did not add information beyond what CTA had already provided.
Treatment decision	Surveillance	Coil embolisation	Surveillance	Referred for FEVAR	Referred for TEVAR

Abbreviations: AAA – Abdominal Aortic Aneurysm; AMS/SMA – Superior Mesenteric Artery; CLTI – Chronic Limb-Threatening Ischaemia; FEVAR – Fenestrated Endovascular Aortic Repair; HTN – Hypertension; DM – Diabetes Mellitus; DLP – Dyslipidaemia; PLA – Polylactic Acid; TEVAR – Thoracic Endovascular Aortic Repair; TPU – Thermoplastic Polyurethane.

RP15 CONTEMPORARY OUTCOMES FOR INFRARENAL ABDOMINAL AORTIC ANEURYSM REPAIR: A SINGLE-CENTER EXPERIENCE

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INTRODUCTION: Abdominal aortic aneurysm (AAA) repair has undergone a paradigm shift with the widespread adoption of endovascular techniques (EVAR), although open surgical repair (OSR) remains essential in selected patients. Robust real-world data reporting contemporary institutional

outcomes are essential to contextualize results and assess quality of care. The aim of this study was to analyze the institutional outcomes of infrarenal AAA repair.

METHODS: A single-centre retrospective analysis was conducted including all patients undergoing elective or urgent infrarenal AAA repair in our centre between May 2012 and January 2026. The cohort was analysed for demographic aspects, treatment indication, aneurysm anatomic characteristics and type of intervention (EVAR and OSR). The primary endpoint was 30-day mortality. Secondary outcomes included postoperative complications, length of stay and 30-day reinterventions.

RESULTS: A total of 147 patients were intervened, 93% (136/147) underwent elective procedures, and 77% (113/147) were submitted to OSR. Patients were predominantly male (91%, 134/147), with a median age of 72 (IQR 10) years. The overall median AAA diameter was 60 mm (IQR 11), which was significantly larger in urgent cases (88 mm [IQR 27] vs. 58 mm [IQR 10], p <0.0001). The overall postoperative length of stay was 6 days (IQR 4). This was significantly longer in the OSR group (7 days [IQR 2] vs. 2 days [IQR 3], p <0.0001), but showed no difference between elective and urgent settings (6 days (IQR 3) vs. 9 days (IQR 5), p = 0.116). The rate of major postoperative complications did not differ significantly between EVAR and OSR (12% [4/33] vs. 17% [19/109], p = 0.595). A 30-day reintervention rate of 8% (12/143) was observed, with no significant difference between groups (EVAR 9% [3/33] vs. OSR 8% [9/110], p = 1.000). 30-day mortality rate was 2% (2/133) in the elective group, with no significant difference between EVAR and OSR (3% [1/33] vs. 1% [1/100], p = 0.436). In the urgent group, 30-day mortality rate was 27% (3/11).

CONCLUSION: OSR and EVAR demonstrated comparable outcomes, despite a longer hospital stay with OSR. Elective AAA repair resulted in low early mortality rates, while urgent cases presented with larger aneurysms and markedly higher 30-day mortality. These findings underscore the critical importance of early diagnosis, structured surveillance and timely elective intervention, reinforcing the need to preserve surgical expertise in both operative techniques to optimize patient outcomes.

RP16 PREDICTORS AND OUTCOMES OF VASCULAR ACCESS COMPLICATIONS AFTER TRANSFEMORAL TRANSFEMORAL TAVI: A 10-YEAR SIN

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INTRODUCTION: Vascular access complications following transfemoral TAVI remain a relevant source of morbidity. Data on predictors, reintervention patterns, and long-term outcomes remain limited. This study aimed to characterise vascular access complications, identify associated procedural factors, and evaluate treatment strategies.

METHODS: Single-centre retrospective cohort study including patients undergoing transfemoral TAVI (2016-2026) who developed vascular access complications requiring treatment. Data were obtained from a prospectively maintained database and electronic records. Complication severity were classified according to VARC-3 criteria. Associations between vascular calcification, sheath-to-artery ratio, and closure device with complication patterns were analysed. Treatment strategies were compared. Primary endpoints were acute limb ischaemia (ALI), major limb amputation, and reintervention rates. Secondary endpoints included minor amputation rates.

RESULTS: From 1456 TAVI procedures performed during the study period, 119 patients were identified with vascular access complications requiring intervention (median age 83 years, 34.5% male; median follow-up 29.5 months). The reported complications were pseudoaneurysm (25.8%), bleeding (3.4%), thrombosis (21.7%), and closure device failure (37.8%). Most patients presented VARC-3 major complications (81.5%). Although moderate-to-severe vascular calcification showed a trend towards increased risk of major complications (OR 2.86, p=.120), no significant associations were found between anatomical features (sheath-to-artery ratio or calcification) and complication type or severity. Endovascular treatment was the main treatment modality (thrombosis, p=.026; device failure, p=.037; bleeding, p=.005). The median time to access related intervention was 0 days. ALI occurred in 10 patients with thrombotic complications (38.4%), while minor amputation was rare overall (0.8%). No major limb amputations were reported. Reintervention rates increased early (8.7% at 72 hours, and 12.5% at 15 days), with a plateau thereafter (13.7% at 1 year). Among patients treated with stents, no ischaemic limb symptoms were reported.

CONCLUSION: Endovascular treatment predominates in vascular access complications after TAVI. Reintervention occurs mainly early after the index procedure, supporting intensive initial surveillance. These findings support the implementation of a structured follow-up strategy, including duplex ultrasound assessment of stent patency, currently being implemented to better define long-term outcomes.

RP17 ÁCIDO ACETILSALICÍLICO NOS SÍNDROMES AÓRTICOS AGUDOS NÃO TIPO A: TERAPÊUTICA OU RISCO IATROGÉNICO?

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ULS Coimbra

INTRODUÇÃO: Os síndromes aórticos agudos (SAA) não tipo A, incluindo dissecção tipo B, hematoma intramural e úlcera aterosclerótica penetrante, constituem entidades clínicas heterogéneas com abordagem predominantemente médica ou endovascular. O papel do ácido acetilsalicílico (AAS) neste contexto permanece incerto.

MÉTODOS: Revisão narrativa da literatura nas bases de dados PubMed/MEDLINE, Scopus, Web of Science e Cochrane Library, incluindo estudos até 2025. Foram utilizados os termos: *acute aortic syndrome, type B aortic dissection, intramural hematoma, penetrating aortic ulcer, aspirin, acetylsalicylic acid e antiplatelet therapy.*

RESULTADOS: Após exclusão de estudos centrados em dissecção tipo A, foram incluídos 2 estudos observacionais retrospetivos, 1 estudo prospetivo não randomizado e 1 documento de consenso em contexto de reparação endovascular (TEVAR). Não foram identificados ensaios clínicos randomizados.

CONCLUSÃO: A evidência disponível é escassa e heterogénea. Nos doentes com dissecção tipo B submetidos a reparação endovascular, o uso de AAS em baixa dose demonstrou um perfil de segurança aceitável, sem aumento de complicações major. Estudos adicionais sugerem que a terapêutica antiagregante não influencia o remodelling aórtico após TEVAR. Não foram encontrados dados robustos que sustentem benefício do AAS na evolução clínica de hematoma intramural ou úlcera aterosclerótica penetrante. Globalmente, não há evidência de efeito modificador da doença. O ácido acetilsalicílico não demonstra benefício nos SAA não tipo A, podendo ser utilizado com segurança em contextos selecionados, nomeadamente após intervenção endovascular ou por indicação cardiovascular concomitante. A evidência permanece limitada, sendo necessários estudos prospetivos dedicados.

RP18 FROM SILENCE TO RUPTURE: IS THERE A NEED FOR A SCREENING PROGRAM?

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INTRODUCTION: Abdominal aortic aneurysm (AAA) remains a significant cause of morbidity and mortality, particularly when presenting with rupture. Early identification and appropriate surveillance are essential to prevent urgent and emergent presentations. This study aimed to evaluate the factors associated to acute presentations.

METHODS: This single-centre, observational and retrospective study included all patients (pts) undergoing urgent or emergent treatment for AAA at our centre between December 2019 and December 2025. Data were collected from the National Abdominal Aortic Aneurysm Registry of SPACV and hospital clinical records. Patients were divided into two groups according to clinical presentation: aortic or iliac rupture (group A) and symptomatic without rupture (group B). Several clinical and demographic variables were analysed, including the presence of prior diagnosis and loss of follow-up as key variables, as well as co-morbidities, type of treatment and in-hospital mortality.

RESULTS: A total of 499 pts treated for AAA were recorded in the Registry during the study period, of whom 97 underwent urgent treatment; Of these, 61 (62.9%) in group A and 36 (37.1%) in group B. The mean age was higher in the rupture group (72.0 vs 69.7 years). There was a predominance of male pts in both groups (85.2% vs 83.3%). No significant differences were observed between groups regarding prior cardiac disease (55.7% vs 50.0%; p=0.58), symptomatic pulmonary disease (26.2% vs 22.2%; p=0.66), cerebrovascular disease (14.8% vs 11.1%; p=0.75) or preoperative creatinine levels (1.31 vs 1.18 mg/dL; p=0.21). No significant differences were observed between groups regarding aneurysm anatomical extent, with a predominance of infra-renal aneurysms in both groups (55.7% vs 66.7%). Most patients had no prior diagnosis of AAA, both in group A (73.8%) and group B (66.7%). Loss to follow-up after a diagnosis of AAA occurred in 10 pts (10.3%), being slightly more frequent in group A (11.5% vs 8.3%). No statistically significant differences were observed between groups regarding prior diagnosis or loss to follow-up. In-hospital mortality was significantly higher in the rupture group (32.8% vs 5.6%, p<0.01).

CONCLUSION: Most patients undergoing urgent treatment for AAA, whether presenting with rupture or symptoms, don't have a prior diagnosis. Rupture is associated with significantly higher in-hospital mortality, reinforcing the importance of screening strategies and appropriate surveillance to prevent emergency situations.

RP19 THE FEASIBILITY, EFFICACY, AND SAFETY OF UZIT®: SINGLE-ARM CLINICAL TRIAL IN PATIENTS WITH SYMPTOMATIC CHRONIC VENOUS DISEASE

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OBJECTIVES: Devices designed to aid lower limb drainage at home often use wedge-shaped supports or electric/manual platforms that elevate only the legs, but these can cause persistent low back pain with prolonged use, which may reduce long-term adherence to the treatment.

Innovative devices like UZit®, a novel inflatable limb elevation device placed under a traditional mattress, which creates a 5% incline over the entire body, help overcome these adverse effects by providing consistent limb elevation, while maintaining a stable and proper position overnight.

METHODS: This single-arm clinical trial evaluated the effect of UZit® on symptoms in patients with chronic venous disease (CVD) of the lower limbs. Seventeen symptomatic patients used UZit® overnight for one week in addition to their usual CVD care. Qualityof-life (QoL), measured by the CIVIQ-14 questionnaire, was the primary outcome, while secondary outcomes included ankle circumference, adverse events, and patient satisfaction.

RESULTS: After one week, the CIVIQ-14 total score significantly improved from 64 to 90 ($p < 0.001$), with the largest gains in the social domain. The median morning ankle circumference was smaller after drainage with UZit® than before sleep (median 22.71 cm, IQR 2.77 versus 23.03 cm, IQR 2.98; $p < 0.001$). Furthermore, during the non-intervention week, no relevant differences were observed between morning and bedtime measurements. Patient satisfaction was high, with no reports of lumbar pain and only one minor adverse event (worsened sporadic heartburn).

CONCLUSION: This study supports UZit® as a well-tolerated, effective adjunct therapy to improve QoL and limb swelling in mild CVD, which may promote a more consistent long-term treatment adherence. These results highlight the importance of novel devices in complementing conventional disease management. Further randomized controlled trials and longer studies are needed to confirm sustained benefits and evaluate utility in more advanced stages of the disease.

RP20 REINTERVENTION AFTER FENESTRATED/BRANCHED ENDOVASCULAR AORTIC REPAIR – A RETROSPECTIVE SINGLE-CENTER STUDY

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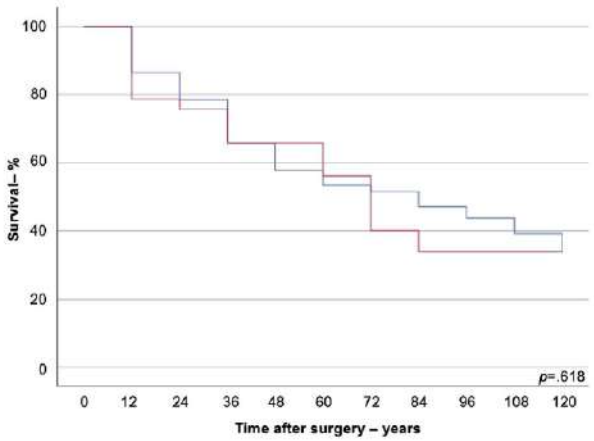
INTRODUCTION: Fenestrated and/or branched endovascular aortic repair (F/B-EVAR) is currently the most widely used technique to treat the thoraco-abdominal aortic segment. However, reinterventions (REIs) are required during the follow-up periods to maintain adequate endograft integrity and target vessel patency. The aim of this study was to evaluate the early and long-term reinterventions after F/B-EVAR.

METHODS: A single center retrospective study was conducted in a tertiary care center including all patients who underwent F/B-EVAR from June 2010 to February 2026. Variables were collected extracted from a prospectively maintained institutional database. REI was defined as any aneurysm-, device-, target vessel- or access-related intervention after the index procedure and was categorized by indication (access-, aortoiliac- or target vessel-related). A subgroup analysis was performed comparing patients who underwent a reintervention procedure (REI group) versus those who did not (no-REI group).

RESULTS: A total of 167 patients (91% male) underwent a F/B-EVAR procedure in an elective (93%) or urgent (7%) setting. During a median follow-up period of 28 months (IQR 18-60), 40 patients (24%) underwent a total of 49 REI procedures, accounting for 53 interventions. Seven patients (4%) required more than one reintervention. Indications for reintervention were access-related in 21%, aorto-iliac related in 45% or associated with target vessels in 34% of cases. 20 REIs (41%) occurred during the early follow-up period (within the first 30 days). Cumulative freedom from reintervention rate at 1 and 5 years was 80% and 70%, respectively. Subgroup analysis revealed a higher REI rate in F/B-EVARs performed for thoraco-abdominal aneurysms (48% vs. 36% in REI and no-REI groups) and type Ia endoleak after EVAR (18% vs. 3% in REI and no-REI groups) – p<.001. Among thoraco-abdominal aneurysms, reinterventions were more frequent in Crawford type IV aneurysms (41% vs. 16% - p<.001). No significant differences were found in long-term mortality (p=.618), although 30-day mortality was higher in the REI group (8% - p=.007).

CONCLUSION: Reinterventions are necessary procedures after F/B-EVAR mostly required to maintain patency and sealing in the aorto-iliac segment and in target vessels, without apparent significant effect on long-term survival but may impact early mortality. Strategies to improve distal iliac sealing and component junction integrity seem necessary to reduce reintervention rate.



18 JUNHO 2026 *18th JUNE 2026*
18H30 | SESSÃO PRÉMIO - MELHOR POSTER
PRIZE SESSION – BEST POSTER

P01 SALVAGE OF A RUPTURED PARARENAL AORTIC ANEURYSM WITH AORTO-CAVAL FISTULA USING AN URGENT PHYSICIAN-MODIFIED ENDOGRAFT

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INTRODUCTION: Urgent repair of complex abdominal aortic aneurysms (AAA) remains highly challenging. Open repair carries substancial mortality, while standard endovascular aneurysm repair is often not feasible due to an inadequate proximal neck. Physician-modified endografts(PMEGs) represent a versatile endovascular solution that may enable timely and effective repair of these anatomically complex cases while reducing perioperative risk. We report the urgent use of a PMEG for salvage of a ruptured pararenal AAA complicated with aorto-caval fistula (ACF).

CASE REPORT: A 62 y.o. male presented with abdominal pain, bilateral lower limb oedema and dyspnoea. Medical history included coronary artery disease, atrial fibrilation, active smoking, chronic obstructive pulmonary disease, dyslipidaemia and hypertension. CT scan showed a ruptured 70mm pararenal AAA associated with an ACF. The patient was haemodynamically stable.
Given the complex anatomy and comorbidity burden, an endovascular approach was chosen. A PMEG was planned with proximal sealing above the celiac trunk. The device was created from a Cook ZGEG tapered graft 32–24–158mm. Fenestrations were designed using the arc-distance formula based on inner vessel diameters, created with a cold ophthalmic cautery and reinforced with 2 EnSnare loops fixated with a running double 5.0 prolene suture. Temporary diameter-reducing ties were placed at the 6 o'clock position using a proximal fixation wire and overlapping self-releasing knots. The graft was then carefully re-sheathed.A Cook ZIMB 26–84mm bifurcated graft was also modified by partial back-table deployment, proximal fixation release, suprarenal barb removal and re-sheathing. Both grafts were soaked in Rifampicin before implantation.All modifications were performed on the back table prior and during anaesthesia induction.
The procedure was performed via bilateral percutaneous femoral access without intraoperative complications.The patient was extubated immediately and symptoms resolved promptly. Postoperative course was complicated by acute kidney injury and hyperbilirubinaemia, both attributed to the haemodynamic effects of the ACF, without evidence of high-output cardiac failure. Both resolved with conservative management.Follow-up CT angiography showed complete aneurysm exclusion, no endoleak and occlusion of ACF.

CONCLUSION: In this rare and complex case, rapid graft modification and careful endovascular planning enabled successful exclusion of the aneurysm and ACF with favourable outcomes.

P02 BEYOND RE-ENTRY TECHNIQUES: MODIFIED VAST AS A BAILOUT STRATEGY IN COMPLEX INFRAINGUINAL LESIONS

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INTRODUCTION: Failure to achieve lesion crossing and true lumen re-entry remains one of the main technical limitations in endovascular treatment of complex infrainguinal arterial disease. The Venous Arterialization Simplified Technique (VAST), originally described for percutaneous deep venous arterialization, enables controlled puncture between adjacent vascular structures using fluoroscopic snare alignment. We present 3 cases where a modification of VAST was used as bailout strategy for arterial recanalization when conventional techniques fail.

TECHNIQUE: The modified VAST (MVAST) is used after unsuccessful antegrade and retrograde crossing or re-entry attempts. Snares are positioned from antegrade and retrograde accesses within adjacent vascular planes. Under fluoroscopic guidance, the C-arm is adjusted to achieve precise overlap of both wide opened snares, creating a single target. A percutaneous puncture is performed through the aligned snares, allowing passage and sequential externalization of a 0.014-inch guidewire and establishing through-and-through access, allowing for subsequent treatment.

CASE SERIES: Three patients with chronic limb-threatening ischemia were treated using this technique. Case 1: Heavily calcified occlusion of the proximal peroneal artery. Antegrade crossing was unsuccessful, and although retrograde subintimal crossing was achieved, true lumen re-entry failed. MVAST enabled through-and-through access, followed by bailout stenting, restoring distal flow. Case 2: Popliteal and proximal peroneal artery occlusion. Antegrade crossing failed, and retrograde subintimal crossing did not allow re-entry into the true lumen. MVAST enabled connection between planes and successful revascularization after POBA. Case 3: Occlusion of infragenicular femoropopliteal bypass (prosthetic graft with a superficial femoral artery (SFA) cuff), performed for chronic SFA occlusion. The graft was catheterized, and retrograde crossing of the native SFA occlusion was achieved. The MVAST technique was used to create a controlled connection between the bypass graft and the proximal SFA. This enabled deployment of proximal short covered stent and distal long BMS, restoring inline flow.

CONCLUSION/DISCUSSION: The modified VAST technique represents a last resource adjunct for endovascular crossing of complex infrainguinal occlusions when conventional crossing and re-entry techniques fail. It allows technical success in otherwise very challenging PAD patterns.

P03 DISSECTION ENTRY CLOSURE USING A VASCULAR PLUG IN THE ASCENDING AORTA – PUSHING THE LIMITS OF ENDOVASCULAR REPAIR

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INTRODUCTION: Persistent false lumen (FL) perfusion after open repair of Stanford type A aortic dissection is associated with progressive aneurysmal degeneration and risk of rupture.
Although open surgical reintervention is often considered the standard approach, endovascular techniques, including targeted closure of entry tears with vascular plugs, have emerged as less invasive alternatives.

CASE REPORT: We present a case of a 46-year-old male, with a prior history of smoking and hypertension, who had previously undergone type A aortic dissection repair with ascending aortic and aortic valve replacement. One-month follow-up computed tomography angiography (CTA) showed residual dissection from the aortic arch to the right common iliac artery, with a maximum descending thoracic aortic (DTA) diameter of 40mm. One year later, aneurysmal degeneration of the FL had occurred, with enlargement of DTA to 52mm and a proximal entry tear of 3mm at the junction between the native ascending aorta and the graft. To avoid an open reintervention, an endovascular approach was proposed after multidisciplinary discussion. Bilateral percutaneous femoral access was obtained. The FL was catheterized through a distal re-entry at the right common iliac artery, and a 0.014" guidewire was advanced retrogradely through the FL into the ascending aorta, crossing the proximal entry tear into the true lumen (TL). A pigtail catheter was advanced through the contralateral femoral access, to obtain imaging of the proximal TL. A 16x12mm Amplatzer Vascular Plug (AVP) II was advanced through the sheath and deployed across the proximal entry tear using a "sealing button" technique. Under rapid pacing, the first disc was opened in the TL and retracted until it was firmly seated against the intimal defect. The second and third discs were then deployed within the FL, achieving mechanical occlusion of the entry. Subsequently, an additional plug was placed in the FL of the left subclavian artery. One- and six-months follow-up CTAs showed thrombosis of most of the FL and stabilization of DTA diameter, leading to a conservative strategy with continued imaging surveillance.

CONCLUSION: Endovascular closure of proximal entry tears using the AVP II in patients with prior ascending aortic repair can be a feasible and minimally invasive alternative to open re-sternotomy. However, careful follow-up is essential, as additional interventions may be needed to achieve complete exclusion of the FL.

P04 SIMULTANEOUS ACUTE VISCERAL AND BILATERAL LIMB ISCHEMIA AFTER FENESTRATED/BRANCHED ENDOVASCULAR AORTIC REPAIR – A CASE REPORT

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INTRODUCTION: Acute thrombosis of the target vessel stents is a rare but devastating complication after fenestrated/branched endovascular aortic aneurysm repair (F/B-EVAR). When combined with acute aortic occlusion, mortality rates are exceedingly high. We report the case of a patient with simultaneous acute visceral and bilateral limb ischemia after F/B-EVAR successfully treated with a hybrid approach.

CASE REPORT: A 73-year-old male patient with past medical history of asthma, hyperlipidemia and former smoking underwent repair of a Crawford extent 1 thoraco-abdominal aneurysm by endovascular repair using a custom-made fenestrated/branched endograft with a celiac branch and fenestrations for the superior mesenteric artery (SMA) and both renal arteries, extending the repair from Ishimaru zones 2 to 9. Five years after the initial procedure, the patient was readmitted due to bilateral acute limb ischemia (Rutherford IIb), bowel ischemia and acute kidney injury AKIN 2 with 72 hours of evolution. CT angiography revealed bilateral renal and SMA stent thrombosis with free-floating thrombus in the visceral segment of the endograft, along with acute occlusion of the aortic bifurcation. He reported having stopped acetylsalicylic acid days prior for a dental procedure. He underwent emergent repair using a hybrid approach. After surgical exposure of both femoral arteries, proximal thrombectomy was performed using bilateral ("kissing") 5 Fr Fogarty catheters, with advancement limited to 25 cm per side. Then, a retrograde 7Fr right femoral access was obtained. After selective catheterization of the SMA and both renal stents, relining using balloon-expandable covered stents was performed. Prophylactic bilateral leg fasciotomies were required due to compartment syndrome. Kidney function improved postoperatively without the need for renal replacement therapy despite right renal stent

rethrombosis detected on a CT angiography performed on postoperative day 5. The patient was discharged after three weeks with improved kidney function, without clinically apparent bowel ischaemia and walking independently. At 5-months follow-up, kidney function had returned to baseline and endograft, target vessels and aortoiliac patency was maintained.

CONCLUSION: A hybrid approach combining surgical thrombectomy and target vessel relining is a feasible option for simultaneous visceral stent and aortoiliac thrombosis after F/B-EVAR, allowing rapid flow restoration and favourable clinical recovery.

P05 PHYSICIAN-MODIFIED CANDY-PLUG IN RUPTURED POST-DISSECTION THORACIC AORTIC ANEURYSM: A CASE REPORT

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INTRODUCTION: Ruptured post-dissection thoracic aortic aneurysms represent a major challenge. Effective endovascular repair requires exclusion of both true and false lumens (FL) to achieve haemorrhage control. When an adequate distal landing zone is lacking, adjunctive FL occlusion techniques become essential. We report the use of a physician-modified candy-plug (CP) for urgent FL occlusion.

CASE REPORT: A 73-year-old female presented with acute chest pain and haemodynamic instability. CT angiography revealed a ruptured post-dissection thoracic aortic aneurysm involving the FL, causing near-complete left lung collapse and haemothorax. A 65 mm ascending aortic aneurysm with a short proximal segment (38 mm at the level of the left common carotid [LCC] and left subclavian arteries) and a dissected visceral aorta precluded adequate landing zones. Open surgery was deemed unsuitable, and an endovascular approach was performed. Access was obtained via bilateral femoral punctures, LCC cutdown, and left brachial access. Both lumens were catheterised. A zone 1 TEVAR was performed using two tapered thoracic stent-grafts (Cook ZTA-PT-46-42-233 proximally and Cook ZDEG-PT-42-34-160-PF distally), landing above the celiac trunk with 1:1 true lumen sizing. A chimney graft to the LCC (Viabahn 8×50 mm) was placed, and the left subclavian artery was occluded with a 12 mm Amplatzer Vascular Plug II. Due to the absence of a distal landing zone, a physician-modified CP was created from a Cook ZTA stent-graft (ZTA-P-38-117), oversized 30% to the FL. Two circumferential "napkin-ring" sutures (3-0 prolene) were applied at mid-graft level, creating a controlled constriction (~10 mm). The device was re-sheathed and deployed in the FL, aligned with the distal end of the true lumen graft. An 18 mm Amplatzer Vascular Plug II was deployed within the constrained segment to achieve complete occlusion. A right renal artery stent was also placed. Completion angiography confirmed absence of FL perfusion.
The patient was extubated within 24 hours. Follow-up CT confirmed complete aneurysm exclusion and lung re-expansion. She was referred for elective ascending aortic repair but died from postoperative complications unrelated to the endovascular procedure.

CONCLUSION: In ruptured post-dissection aneurysms, addressing both lumens is critical. A physician-modified CP provided effective FL occlusion in an emergency setting without off-the-shelf solutions. This technique represents a feasible salvage option, though further studies are needed.

P06 MULTIMODAL TREATMENT OF A COMPLEX GLUTEAL ARTERIOVENOUS MALFORMATION WITH RECURRENT BLEEDING

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Arteriovenous malformations (AVMs) may remain asymptomatic, or they can present abruptly with pain, swelling, or potentially life-threatening hemorrhage. Gluteal AVMs are rare and challenging due to the complex pelvic vascular anatomy and the significant bleeding risk. Embolization is considered first-line therapy; however, extensive lesions with multiple feeding vessels may require surgical excision when feasible.
We report the case of a 53-year-old with a known left gluteal vascular malformation, previously treated several times before with left hypogastric artery embolization and excision of angiodysplastic tissue. He presented with progressive left gluteal swelling, without skin compromise. The anatomic location of the swelling interfered severely with his quality of life and work.
Duplex ultrasound revealed a large gluteal mass consistent with hematoma, without evidence of arteriovenous fistula but with increased flow velocity in the iliac arteries. CT angiography demonstrated a large lobulated left gluteal lesion measuring 21 cm, associated with a vascular nidus supplied by branches of the left internal iliac artery, volumous hematoma, and signs of active bleeding.
Selective embolization of a branch of the lateral sacral artery using DMSO and Onyx achieved angiographic success. However, follow-up imaging showed hematoma enlargement and new active extravasation from internal iliac branches, prompting repeat embolization of branches of the superior gluteal and lateral sacral arteries with

microcoils. Despite hemodynamic stability and absence of hematoma progression, the patient experienced persistent pain, particularly while sitting. CT excluded active bleeding, while MRI suggested possible low-flow hemorrhage.
Given the significant clinical impact, a multidisciplinary decision was made to proceed with surgical excision of the left gluteal vascular malformation with V-Y flap reconstruction. Histopathological analysis revealed vessels of varying calibers, including arteries and veins with CD31-positive endothelial cells, numerous pseudomeissnerian bodies, mixed inflammatory infiltrate, and areas of recent and old hemorrhage, confirming the diagnosis of arteriovenous malformation. The patient had a favorable postoperative course, with marked improvement in pain and quality of life.
This case highlights the diagnostic and therapeutic complexity of gluteal AVMs, the risk of recurrent hemorrhage despite repeated embolization, and the importance of a combined endovascular and surgical approach for definitive management.

P07 SHAMBLIN III CAROTID BODY PARAGANGLIOMA WITH HIGH-RISK GENETIC FEATURES: IMPLICATIONS FOR LONG-TERM FOLLOW-UP

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BACKGROUND: Carotid paragangliomas (CPGLs) are rare neuroendocrine tumours arising from the carotid body. Pathogenic variants are identified in up to 45% of patients most commonly involving SDHD and SDHB and are associated with earlier onset, higher recurrence rates, and an increased likelihood of multifocal disease. Shamblin III tumours, characterised by extensive encasement of the carotid bifurcation, present a significant surgical challenge. Nevertheless, complete surgical resection remains the primary treatment modality.

CASE REPORT: A 54-year-old man with hypertension, type 2 diabetes, and dyslipidaemia presented with presyncope and right upper limb sensory symptoms. Initial evaluation excluded cerebrovascular disease. Computed tomography angiography and subsequent magnetic resonance imaging confirmed a right-sided Shamblin III carotid body tumour. Plasma free metanephrines were normal, consistent with a non-functional lesion.
Following multidisciplinary discussion, the patient underwent surgical resection via a cervical approach. The procedure was completed without complications, and no cranial nerve deficits were observed postoperatively. Histopathological analysis confirmed a carotid body paraganglioma with a typical zellballen pattern and low proliferative index. Immunohistochemistry demonstrated loss of SDHB expression with preserved fumarate hydratase. Microscopic margin involvement (R1) was identified.
Despite the absence of a family history, the patient was referred for comprehensive genetic evaluation, including germline and somatic mutation testing, as well as genetic counselling for family members. At 4-week follow-up, no evidence of recurrence was detected.

CONCLUSION: This case illustrates that resection of Shamblin III CPGLs can be safely achieved with low perioperative morbidity. However, the presence of SDHB deficiency and an R1 resection margin places the patient at high risk for recurrence and multifocal disease. Therefore, lifelong multidisciplinary surveillance is recommended, including regular (every 2–3 years) cervical magnetic resonance imaging, endocrinological assessment, and review within an interdisciplinary tumour board.

P08 RE-COARCTATION AND POST-AORTIC COARCTATION ANEURYSM: WHEN BOTH COMPLICATIONS MEET IN ONE PATIENT

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INTRODUCTION: Long-term complications after aortic coarctation repair remain frequent and clinically relevant. The authors aim to present a case of combined re-coarctation and post-coarctation aneurysm, successfully treated using a hybrid approach.

METHODS: A retrospective collection of medical information was performed under patient's consent using electronic records and image archiving systems.

RESULTS: A 42-year-old male, with a past medical history of hypertension, diabetes mellitus, smoking and aortic coarctation surgery two decades ago, was admitted in our emergency department complaining of progressively worsening hoarseness, fatigue, dyspnea and thoracic pain. Computed tomography angiography (CTA) showed an aortic re-coarctation and a descending thoracic post-coarctation aneurysm measuring 75 mm of maximum diameter. The patient was admitted for clinical monitoring, symptomatic and blood pressure control, and surgical planning. After a multidisciplinary discussion with vascular and cardiac surgeons, a hybrid procedure was planned.
After bilateral ultrasound-guided common femoral artery access was obtained, guidewires were advanced across the re-coarctation segment into the ascending thoracic aorta. A hybrid prosthesis was then inserted using the Frozen Elephant Trunk (FET) technique. Subsequently, percutaneous

transluminal angioplasty of the re-coarctation segment was performed using both 9 and 18 mm balloons. A 22x37 mm balloon-expandable covered stent was deployed across the re-coarctation segment. Thereafter, a 24x105 mm thoracic stent graft was advanced and deployed at the level of the aneurysm, followed by balloon molding of the endograft. Finally, an ultrasound-guided left brachial artery access was obtained, and a 12 mm vascular plug was deployed in the proximal segment of the left subclavian artery. Completion angiography demonstrated correct device positioning, resolution of the re-coarctation, and aneurysm sealing without evidence of endoleaks. Those findings were also confirmed by the six-month follow-up CTA.

CONCLUSION: Lifelong surveillance is essential in patients previously submitted to aortic coarctation repair, so that late complications can be early recognized and promptly treated through patient-tailored approaches, which includes open, endovascular and hybrid strategies.

P09 TRANSCATHETER ELECTROSURGICAL SEPTOTOMY FOR CHRONIC POST-DISSECTION AORTIC ANEURYSMS – A CASE SERIES

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INTRODUCTION: Endovascular repair of chronic post-dissection thoraco-abdominal aortic aneurysms (PD-TAAAs) has many challenges. These include true lumen (TL) compression, limited space for target vessel incorporation, persistent FL perfusion and inadequate sealing zones. Transcatheter electrosurgical septotomy (TES) is a technique recently described to overcome some of these challenges. Possible indications include creation of adequate proximal and/or distal landing zones in aortic segments without significant aneurysmatic degeneration to limit aortic coverage (A); luminal gain to facilitate stent graft deployment (B); and communication between TL and FL to facilitate catheterization and target vessel incorporation (C). We aim to describe the technique and report its clinical application in these different indications in three patients.

CASE REPORTS: To perform TES, access of both TL and FL is achieved by a percutaneous retrograde femoral access. Then, a guidewire (GW) is pre-shaped in a trapeze configuration in its mid-portion and denuned from its coating in this segment and distally to expose its core. The pre-shaped GW is snared from the TL to the FL (or vice versa) through a pre-existent or newly created septum fenestration and confirmed with IVUS. Catheters are placed from both ends up to the denuded mid-portion of the GW. The distal end of the GW is attached to a surgical electrocautery set to cutting mode. With simultaneous tension on both ends of the GW, slicing of the dissection septum along the desired length is achieved using the 3trapeze portion of the electrified GW.
TES was performed in three patients in our center. Patient A, a 58-year-old male, underwent a left carotid-subclavian bypass followed by TES and TEVAR to achieve a distal sealing zone above the celiac trunk (indications A and B). Patient B, a 46-year-old male, underwent TES and branched TEVAR (1 left subclavian artery branch), to similarly achieve a distal sealing zone above the celiac trunk (indications A and B). Lastly, patient C, a 59-year-old male with a frozen elephant trunk performed 15 years prior, underwent a F/B-EVAR (1 renal branch and 4 fenestrations) preceded by TES to expand a compressed TL and facilitate incorporation of a right renal artery with origin from the FL (indications B and C).

CONCLUSION: A minimally invasive and effective adjunct procedure in the management of PD-TAAAs that improves the feasibility of an endovascular repair in more challenging anatomies.

P10 PMEG AS A TIMELY SOLUTION FOR COMPLEX JUXTARENAL ANEURYSMS: TWO CHALLENGING CASES

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INTRODUCTION: *Physician-modified endografts* (PMEG) are a prompt alternative for complex Juxtarenal Aortic Abdominal Aneurysms (JAAA) in patients unfit for open surgery or unable to wait for custom devices. Their use requires meticulous planning and high surgical expertise.

CASE REPORTS: We present two cases treated electively at a tertiary, high volume vascular surgery center. The first concerns an 86-year-old male with severe aortic valve stenosis and stable coronary disease, admitted to the emergency department with an asymptomatic 10cm JAAA. A four fenestration PMEG was designed in the back table (ZDEG-32-24-148 COOK®). Distance to top and clock position was as follows: CT 37mm at 12:30 o'clock; SMA 60mm at 12 o'clock; LRA 74mm at 2:30 o'clock, and 84mm at 10:15 o'clock. All arteries were stented with BeGraft stents (Renals:5x28mm; CT:8x27mm; SMA:7x27mm). Repair was completed with an EVAR COOK®. Control CT angiography (CTA) showed aneurysm exclusion, patent target vessels without endoleaks. Transferred on postoperative day 4 for aortic valve replacement.
The second case involves an 83-year-old female with a prior

infrarenal aortic pseudoaneurysm, submitted to endovascular exclusion in 2020 with a Begraft Aortic Bentley® (16x58mm) followed by a Begraft Peripheral Bentley® (10x57mm) stent to ensure adequate sealing. CTA initially showed aneurysm exclusion without endoleaks. In 2025, a type IA and III endoleaks with a 10mm sac growth were detected. Given the risk of rupture, we decided to modify a commercially available endograft (ZISL-20-59 COOK®). A fenestration for the left renal artery (LRA) was created 9mm from the graft top and stented (BeGraft 5x22mm Bentley®). Control CTA confirmed exclusion without endoleaks. Discharged on postoperative day 12 on single antiplatelet therapy. In both cases, all fenestrations were crafted using thermocautery and reinforced with a double snare sutured with 4/0 Vycril. Reducing ties were created with 5/0 Prolene on the posterior surface of the graft.

CONCLUSION: PMEGs are effective for complex JAAA, allowing timely and individualized treatment. More complex and larger aneurysms require a detailed and sometimes imaginative planning. Endograft tapering with reducing ties, clock orientation, distance between fenestrations, all are critical steps that need to be planned and re-checked, as millimetric differences matter. Elderly patients with major comorbidities and complex aneurysms are the best candidates.

E-POSTERS EXHIBITION

P11 STENTING DA ARTÉRIA RENAL EM RIM ÚNICO COM HIPERTENSÃO REFRATÁRIA: IMPACTO CLÍNICO E DESAFIOS HEMODINÂMICOS PÓS-PROCEDIMENTO

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INTRODUÇÃO: A estenose da artéria renal é uma causa potencialmente reversível de hipertensão arterial secundária, particularmente relevante em doentes com hipertensão resistente ao tratamento médico. Embora a aterosclerose seja a etiologia mais frequente, a displasia fibromuscular assume importância em doentes mais jovens ou com envolvimento multifocal.
As recomendações atuais sugerem abordagem endovascular em casos selecionados, nomeadamente na presença de hipertensão refratária, deterioração da função renal ou em contexto de rim único. Nestes doentes, a estenose pode induzir ativação marcada do sistema renina-angiotensina-aldosterona, sendo descrita melhoria clínica após revascularização.

OBJETIVO: Descrever um caso de estenose da artéria renal em doente com rim único submetido a tratamento endovascular e o seu impacto clínico.
MATERIAL E MÉTODOS: Mulher de 59 anos, com antecedente de nefrectomia esquerda aos 20 anos por suspeita de displasia fibromuscular, apresenta-se com hipertensão arterial refratária sob múltiplos anti-hipertensores (rilmenidina, nebivolol, indapamida e amlodipina), com valores sistólicos de 140–155 mmHg. Associadamente, apresentava ainda insuficiência cardíaca secundária a hipertensão. Foi referenciada por estenose significativa do óstio da artéria renal direita documentada em angioRMN, de provável etiologia aterosclerótica. Creatinina basal de 1,24 mg/dL.

RESULTADOS: A angiografia confirmou estenose suboclusiva da artéria renal direita. Foi realizada angioplastia com implantação de stent expansível por balão, sem estenose residual. No pós-operatório verificou-se normalização da creatinina (0,9 mg/dL) e melhoria significativa do perfil tensional (PAS 110–120 mmHg). Contudo, a doente apresentou hipotensão ortostática sintomática, com necessidade de suspensão da terapêutica anti-hipertensora e reforço hídrico. Teve alta ao 3º dia. Ao 1º mês, apresentava stent permeável em angioTAC, perfil tensional normal sem medicação, mantendo alguma limitação ao esforço.
Discussão e conclusão: Este caso reforça o papel da revascularização em doentes selecionados com estenose da artéria renal e rim único. A hipotensão pós-procedimento poderá refletir reversão de um estado dependente do sistema renina-angiotensina-aldosterona. A normalização tensional permite reduzir a carga terapêutica e prevenir nefropatia isquémica. Destaca-se a importância da vigilância hemodinâmica no pós-procedimento, sobretudo em doentes com adaptação crónica à hipertensão.

P12 SUPERIOR MESENTERIC ARTERY SEPTIC EMBOLIZATION: FROM OCCLUSION TO FALSE ANEURYSM – A CASE REPORT

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INTRODUCTION: Infectious superior mesenteric artery (SMA) aneurysms are rare entities with an unclear natural history and prognosis. Although uncommon, they may lead to life-threatening complications, such as thrombosis and bowel ischemia, or hemorrhage. Here we present the case of a 74-year-old female with infective endocarditis and multisystemic embolization, complicated by two SMA pseudoaneurysms, successfully treated with surgical excision and revascularization.

CASE REPORT: A 74-year-old female with a two-year history of aortic valve replacement presented to the emergency department with fever and altered mental status. Physical examination revealed a systolic heart murmur and left-sided abdominal pain. Laboratory workup showed markedly elevated inflammatory markers. Thoracoabdominopelvic computed tomography angiography (CTA) demonstrated a proximal SMA occlusion and a 13mm pseudoaneurysm in one of its branches. Blood cultures grew Streptococcus gallolyticus, and transesophageal echocardiography revealed valve thickening and a periprothesic abscess, without evidence of vegetations, confirming the diagnosis of prosthetic valve infective endocarditis. Intravenous antibiotics were initiated promptly and later adjusted according to susceptibility testing. Give the distal localization and small size of the aneurysm, conservative management with serial imaging was initially pursued. At two-months follow-up, repeat CTA showed stability of the described SMA branch aneurysm but identified a new 25mm pseudoaneurysm at the site of the previous SMA occlusion, prompting surgical intervention. The SMA aneurysm was resected, and the artery was reconstructed with a end-to-end venous interposition graft using reversed great saphenous venous. The branch aneurysm was also resected, and the vessel was ligated proximally and distally. The postoperative period was uneventful, and the patient was discharged five days after surgery. At two-year follow-up, serial ultrasound and CTA demonstrated a patent graft without significant stenosis, and no evidence of bowel ischemia or recurrent infection.

CONCLUSION: Infectious SMA aneurysms have an unpredictable clinical course, and surgical treatment enables effective infection control while preventing serious complications. Given the uncertainty of their natural history, all infectious aneurysms should be considered for surgical management.

P13 MORTALITY AFTER MAJOR LOWER LIMB AMPUTATION DUE TO NON-TRAUMATIC CAUSES: A RETROSPECTIVE ANALYSIS IN PONTA DELGADA

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BACKGROUND: Major lower limb amputation in a non-traumatic setting remains associated with poor prognosis and severe systemic comorbidity. Data from Portugal, particularly from the Azores, remain limited.

OBJECTIVES: To estimate mortality after non-traumatic major lower limb amputation in Ponta Delgada and to identify factors associated with overall mortality.

METHODS: We conducted a retrospective observational study including all patients undergoing major lower limb amputation (below-knee amputation [BKA] or above-knee amputation [AKA]) between January 1, 2017 and December 31, 2019 at Hospital do Divino Espírito Santo, Ponta Delgada. Demographic, clinical, and laboratory data were obtained from electronic records. Overall survival was analyzed using the Kaplan-Meier method. Univariable and multivariable Cox proportional hazards models were used to assess factors associated with all-cause mortality. Patients were followed until death or December 8, 2025.

RESULTS: Ninety-six patients were included (mean age 72.8 ± 12.2 years; 67.7% male). Overall 30-day and 90-day mortality were 16.7% and 21.9%, respectively. Estimated survival was 59.3% at 1 year, 39.2% at 3 years, and 25.4% at 5 years. Median survival was 762 days. During follow-up, 28 patients (29.2%) underwent a subsequent major amputation, with a median time to reamputation of 60 days (IQR, 27-545 days). In univariable Cox analysis, older age, hypertension, chronic kidney disease, hemodialysis, ASA class, pre-operative neutrophil-to-lymphocyte ratio (NLR) ≥5, and AKA versus BKA were associated with mortality. In multivariable analysis, older age (HR 1.04; 95% CI 1.01-1.06; p=0.002) and pre-operative NLR ≥5 (HR 1.96; 95% CI 1.25-3.03; p=0.004) remained independently associated with mortality, while chronic kidney disease and AKA versus BKA showed borderline associations.

CONCLUSIONS: Non-traumatic major lower limb amputation in Ponta Delgada was associated with very high long-term mortality. Older age and elevated pre-operative NLR were independently associated with worse survival, while chronic kidney disease and above-knee amputation showed borderline associations after adjustment.

P14 INTRA-OPERATIVE STENT MIGRATION IN FENESTRATED ENDOVASCULAR AORTIC REPAIR – A CASE REPORT

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ULS São João

INTRODUCTION: Fenestrated and branched endovascular aortic repair (F/BEVAR) has been increasingly used in the treatment of complex aortic aneurysms, with good 30-day and midterm outcomes. Careful planning is needed in order to incorporate visceral vessels, and the procedure can be technically demanding. Due to the complexity of the procedure, operators should also be able to adapt to unexpected intra-operative events. We report a case of an intra-operative migration of a renal stent in FEVAR.

CASE REPORT: A 55-year-old male was submitted to an elective FEVAR due to an asymptomatic pararenal aneurysm. After deployment of the fenestrated cuff, and due to a short length of the main left renal artery before bifurcating, a 6mm diameter and 16mm length Advanta V12 stent was placed. However, on confirming angiography, the stent was visible in the infra-renal aorta. Multiple attempts of retrieval of the stent using a snare were made. However, the snare crushed the stent structure, rendering it unable to fit in the largest diameter sheath (20Fr). In order to not compromise the graft and risk laceration of the vessels, a decision was made to exclude the crushed stent with the bifurcated endograft. The remaining procedure continued without issues. On post-operative imaging, the stent is visible outside of the endograft, without any sign of complication.

CONCLUSION: Unexpected events can occur in complex EVAR, and the operator must have a comprehensive knowledge of endovascular bail-out techniques to deal with such issues. This case highlights a rare complication of FEVAR and the techniques employed in order to solve it

P15 ENDOVASCULAR CORRECTION OF A TYPE IIIC ENDOLEAK DUE TO DECOUPLING OF VISCERAL STENTS IN INNER-BRANCH BEVAR USING SNARE-RIDE TECHNIQUE – A CASE REPORT

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INTRODUCTION: EComplex endovascular aortic repair (EVAR), using branched and fenestrated grafts, allowed for the endovascular treatment of complex aortic pathology. However, increasing complexity also increases the risk of reinterventions. We report a case of a type IIIc endoleak on an inner-branch EVAR (BEVAR), with decoupling of both the celiac and mesenteric artery stent, which was successfully corrected using endovascular techniques.

CASE REPORT: A 76-year-old female patient was submitted to an inner-branch BEVAR, with 4 branches (E-nside, Artivion, Kennesaw, GA, USA) due to a type I thoracoabdominal aneurysm. Routine imaging performed two years after the index procedure revealed a large type IIIc endoleak with decoupling of both the celiac and mesenteric stents from the main body of the BEVAR, with considerable deviation from the stents and corresponding inner-branch. The patient was then scheduled for endovascular relining of both stents. Using both percutaneous left femoral and right open axillar access, a guidewire was placed using through-through technique and a 12Fr sheath was advanced from axillar access to the visceral level. A 7Fr steerable sheath was placed using the femoral access. Multiple unsuccessful attempts to catheterize the mesenteric stent using the mesenteric inner branch were made, due to the deviation between these and the lack of support of the stent free edge, with was free in the aorta. However, it was possible to catheterize the mesenteric stent using the celiac inner branch. Therefore, using a snare-ride technique, a guidewire was placed in the mesenteric branch, and an Indy snare was advanced from the celiac branch and, after snaring the mesenteric guidewire, was advanced into the mesenteric stent successfully. A bridging 7mm covered stent (Begraft peripheral, Bentley InnoMed, Hechingen, Germany) was then placed between the previous stent and the inner branch. From the axillar access, the celiac stent was catheterized, and a similar bridging stent was placed. Final angiography revealed successful exclusion of the endoleak, confirmed by post-operative CT-scan.

CONCLUSION: Type IIIc endoleak in BEVAR can be challenging to repair, especially in tortuous anatomies. Multiple endovascular techniques might be needed. This case highlights the use of snare-ride technique in order to catheterize and place a bridging stent in a deviated and decoupled mesenteric stent in a previous BEVAR.

P16 WHEN CONTRAST IS NOT AN OPTION: IVUS LEADS THE WAY

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BACKGROUND: Chronic limb-threatening ischemia (CLTI) is the most advanced form of peripheral arterial disease (PAD) and is associated with high rates of limb loss and mortality. Revascularization is essential and is usually guided by iodinated contrast angiography. However, alternative imaging strategies are required in patients with severe contrast hypersensitivity. Intravascular ultrasound (IVUS) provides high-resolution vessel imaging without contrast and may facilitate endovascular intervention in high-risk patients.

REPORT: We report the case of a 67-year-old male presenting with a necrotic fifth toe and severe ischemic rest pain refractory to opioid analgesia. His medical history included type 2 diabetes mellitus with target organ damage, hypertension, dyslipidemia, alcoholic liver cirrhosis, severe microcytic anemia, and a prior cardiorespiratory arrest during myelography, consistent with a severe contrast reaction. Duplex ultrasonography demonstrated multilevel arterial disease, including proximal iliac stenosis, occlusion of the superficial femoral and tibial arteries, and a patent peroneal artery.

Given advanced CLTI and high surgical risk, a hybrid revascularization strategy was planned. The procedure included femoral thromboendarterectomy with profundoplasty, followed by IVUS-guided endovascular treatment of the iliac lesion using balloon-expandable stents without iodinated contrast. Distal revascularization was achieved with a femoro-popliteal bypass using a prosthetic graft due to the absence of suitable vein conduit. Additionally, a ray amputation of the fourth and fifth metatarsals was performed. The postoperative course was uneventful, with restoration of distal perfusion.

CONCLUSION: This case demonstrates that IVUS-guided, contrast-sparing hybrid revascularization is a feasible approach in selected patients with CLTI and severe contrast hypersensitivity. This strategy allows precise endovascular intervention while avoiding iodinated contrast exposure and may represent a valuable option for limb salvage in high-risk patients with complex multilevel arterial disease.

P17 BEYOND CAROTID CUTDOWN: TRANSAXILLARY BRANCH-TO-BRANCH-TO-BRANCH CATHETERIZATION FOR ENDOVASCULAR AORTIC ARCH REPAIR — FIRST INSTITUTIONAL EXPERIENCE

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INTRODUCTION: Endovascular repair of complex aortic arch disease ia a safe alternative to open surgery in high-risk patients. Traditional triple-branch arch repair (TBAR) requires surgical carotid cutdown for branch cannulation—a step risking hematoma, nerve injury, and prolonged operative time. Adapted from Prendes et al., we report our initial experience with the transaxillary branch-to-branch-to-branch carotid catheterization technique (3BRA-CCE IT), which enables cannulation of all supra-aortic vessels through a single femoral and axillary access, eliminating carotid exposure.
After triple-branch endograft deployment and innominate artery (IA) bridging via right axillary access, a 12Fr sheath is advanced transfemorally through the retrograde left subclavian artery (LSA) branch. A guidewire is advanced through the left common carotid artery (LCCA) antegrade branch into the ascending aorta, and snared from the axillary access, establishing a branch-to-branch-to-branch through-and-through configuration. A pull-and-push maneuver then loops the axillary sheath through the IA branch, redirecting it toward the LCCA branch to provide stability for catheterization and bridging. LSA bridging follows standard fashion.

CASE REPORTS: The first patient, a 67-year-old morbidly obese male, presented with a penetrating aortic ulcer (PAU) of the arch inner curvature (25x12mm), unfit for open repair. To avoid carotid cutdown, TBAR was performed using the 3BRA-CCE IT under the Munich Valsalva Implantation Technique. The postoperative course was uneventful; discharge CTA confirmed complete PAU exclusion and supra-aortic vessels patency.
The second patient, an 86-year-old male, underwent TBAR as the first step of a planned staged treatment for a type I thoracoabdominal aortic aneurysm, with TEVAR extension to zone 5. Given his advanced age and comorbidity burden, the endovascular approach with the 3BRA-CCE IT was selected to minimize surgical trauma and avoid carotid exposure. The patient was discharged on postoperative day 6 without major complications.

CONCLUSION: This two-case series provides early evidence that the 3BRA-CCE IT is a safe and feasible technique for TBAR, enabling complete supra-aortic vessel cannulation through just two access points, avoiding carotid surgical cutdown and its associated morbidity. While the limited case volume precludes definitive conclusions regarding generalizability, our initial institutional experience is promising and warrants further evaluation in larger series before broader adoption can be recommended.

P18 AN ANEURYSM NEVER COMES ALONE...

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INTRODUCTION: Aortic aneurysmal disease is increasingly recognized as a diffuse pathology with potential involvement of multiple aortic segments, which may influence treatment priorities and timing of interventions. As so, if complete aortic assessment is not consistently performed, relevant lesions may remain undetected.
We report a case of synchronous thoracic and abdominal aortic aneurysms managed with a staged fully endovascular approach.

CASE REPORT: An 82-year-old male with a prior history of smoking and chronic kidney disease presented with a three-week history of dysphonia. Computed tomography angiography (CTA), performed for suspected pulmonary malignancy, revealed a 67 mm thoracic aortic saccular aneurysm in Ishimaru's zone 3.Given this finding, a complete aortic CTA was undertaken, showing a huge infrarenal abdominal aortic aneurysm (AAA) with 111 mm of maximum diameter and a unique "pouch-like" morphology. In the context of multisegmental disease and atypical morphology, a PET-CT scan was performed and excluded an infectious etiology.

Considering the patient's advanced age, comorbidities, and anatomical features, a staged fully endovascular strategy was planned. Due to its size and morphology, the infrarenal AAA was treated first with an EVAR, and two months later the patient underwent TEVAR using a Thoracic Branch Endoprosthesis for the left subclavian artery, allowing its preservation without the need for adjunctive surgical revascularization.
Follow-up CTAs have confirmed adequate exclusion of both aneurysms, with maintained branch patency and no evidence of endoleaks.

CONCLUSION: This case highlights the importance of systematic evaluation of the entire aorta in patients with aneurysmal disease, as synchronous lesions may affect therapeutic strategy.
Beyond its size, the unusual "pouch-like" morphology of the infrarenal AAA represented a key high-risk feature, leading to the decision of performing an early intervention. A staged endovascular approach, guided not only by aneurysm size but also by its unique morphological characteristics, enabled effective management of this complex multisegmental disease, particularly in an elderly patient.

P19 SECONDARY RUPTURE DUE TO A TYPE II ENDOLEAK... AT THE POPLITEAL ARTERY?

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ULSGE

INTRODUCTION: Popliteal artery aneurysm (PAA) rupture is a rare but serious complication. Even more anecdotal is PAA rupture years after proximal and distal ligation with medial bypass due to retrograde flow from genicular branches, mimicking a type II endoleak mechanism. We report a case of late expansion and rupture of a supposed excluded PAA.

CASE REPORT: A 74-year-old male underwent right PAA exclusion (proximal and distal ligation) and superficial femoral artery to tibioperoneal trunk great saphenous vein bypass in 2019. Unfortunately he was lost to follow-up. Six years later, the patient presented to the emergency department with right lower limb pain, swelling and ecchymosis. Computed tomography angiography revealed significant expansion and rupture of the previously excluded right PAA, with compression of the venous bypass graft by the aneurysm sac. Given that the patient was therapeutically anticoagulated, a staged approach was selected to minimize intraoperative bleeding risk. First, we performed coil embolization of the two major genicular branches supplying the aneurysm sac. Subsequently, the patient underwent aneurysm sac drainage and partial excision with ligation of residual collaterals, preserving the bypass. At 9-month follow-up the patient is completely asymptomatic, with a patent graft.

CONCLUSION: This case presents an extremely rare PAA sac rupture due to a type II endoleak-like mechanism. This also highlights a precise and elegant way to deal with genicular collaterals that can be troublesome to control and ligate during open surgery, particularly in the event of a rupture. This two-stage procedure allowed a more controlled surgery with minimal blood loss. Continuous image follow-up after PAA medial approach can prevent catastrophic events like this.

P20 CULOTTE TO THE RESCUE: SALVAGING THE INTERNAL ILIAC ARTERY AFTER AN ILIAC BIFURCATION COMPLICATION

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ULSGE

INTRODUCTION: Endovascular treatment of external iliac artery (EIA) atherosclerotic disease is widely performed and generally considered safe. However, complications may still occur, including arterial rupture, especially in females with small diameter arteries. This complication can be promptly solved with covered stenting, but may come at the cost of thrombus displacement or stent-coverage of the ostium of the internal iliac artery (IIA), leading to significant morbidity, especially in younger patients. Advanced endovascular techniques, such as the culotte technique, may offer a valuable solution in these complex scenarios. We report a case of successful use of the culotte technique to revascularize an IIA following thrombotic occlusion during covered stent deployment in order to treat an EIA rupture.

CASE REPORT: A 40 year-old female former smoker presented to the outpatient clinic with life-limiting left lower limb claudication despite best medical therapy. Computed tomography angiography revealed thrombotic occlusion of the left EIA, and endovascular treatment was proposed. Despite progressive balloon dilations, arterial rupture occurred at the level of the EIA. An urgent self-expandable covered stent was deployed, successfully sealing the rupture. Despite all the caution not to cover the IIA, thrombotic material was displaced toward the iliac bifurcation during stent release, occluding the IIA and limiting flow to the EIA. Thromboaspiration was unsuccessful, and a balloon expandable bare-metal stent was placed across the IIA to restore limb perfusion. Considering the patient's young age and the importance of preserving pelvic circulation, we proceeded with IIA revascularization through a culotte

stenting technique with an excellent angiographic result. At 6-month follow-up, the patient remains asymptomatic, with both stents patent.

CONCLUSION: Although IIA occlusion is often well tolerated in older and sedentary patients, it may result in significant morbidity in younger and more active individuals. This case illustrates that the culotte technique, despite its technical complexity, may represent an effective bailout strategy for inadvertent branch occlusion during stenting at arterial bifurcations.

P21 FROM DIALYSIS TO DISASTER: SAVING A PERFORATED ILIAC VEIN

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ULSGE

INTRODUCTION: Urgent placement of temporary dialysis catheters in central venous access is frequently needed in critically ill patients. The femoral approach is rapid and generally safe. However, this procedure is not without complications, including potentially life-threatening venous perforation. We present a near-fatal case of left iliac vein bifurcation perforation following common femoral vein catheterization.

CASE REPORT: A 53-year-old female was admitted with subarachnoid hemorrhage due to a right middle cerebral artery aneurysm rupture, treated by endovascular coiling. Three days later, she developed a type A aortic dissection, repaired with a Bentall procedure. Due to acute kidney injury, US-guided catheterization of the left common femoral vein was performed without reported difficulty. Three hours later, hemodialysis was initiated and within minutes the patient developed severe hypotension and tachycardia, progressing to cardiac arrest. After successful resuscitation, computed tomography angiography revealed a large retroperitoneal hematoma (20x12x10cm) and catheter malposition extending into the retroperitoneal space, consistent with perforation of the left iliac vein bifurcation. After stabilization (RBC, plasma and platelet replacement), catheter removal under fluoroscopic guidance was performed with open surgery as a backup plan. A guidewire was introduced through the dialysis catheter, which was then carefully withdrawn to an intraluminal position within the external iliac vein. Subsequently, the left common iliac vein and inferior vena cava were catheterized. The dialysis catheter was then removed and angiography demonstrated contrast extravasation to the retroperitoneal space. Balloon tamponade (10 minutes, low pressure) with external compression was performed. Final angiography revealed minor leakage, and the procedure was concluded. The patient remained stable, and CTA at day 3 revealed no leakage.

CONCLUSION: Although femoral venous catheterization is generally safe, potentially life-threatening complications may occur and be difficult to recognize. This case highlights the need for high index of suspicion, even after apparently uneventful initial procedures. While open surgery remains the mainstay of treatment in most case reports, in this patient with a likely undiagnosed connective tissue disorder and a large retroperitoneal hematoma that may have aided hemostasis, a minimally invasive approach was considered the best option.

P22 OCULAR ISCHEMIC SYNDROME (OIS) AS A MANIFESTATION OF GREAT VESSEL OCCLUSION: CASE REPORT

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Ocular ischemic syndrome (OIS) is a rare manifestation of carotid arterial disease that can lead to irreversible vision loss. The disease is related to ocular hypoperfusion secondary to carotid stenosis. Carotid endarterectomy (CEA), carotid artery stenting (CAS) and bypass surgery present as three different possibilities when treating this disorder. In this case report, we present a case of a 68-year-old female patient that was referred to the emergency department due to central vision loss of the left eye with one week of duration. She was an active smoker with a history of a symptomatic left carotid artery stenosis being previously submitted to a left carotid artery endarterectomy in 2021. Visual acuity on the left (0.05/10) was much worse compared with the right eye (8/10). Ocular biometry revealed an anterior segment of the eye without changes and normal intraocular pressure was found. Fundus examination of the left eye revealed optic disk with arteries easily compressible with some arteriolar narrowing, cotton-wool spots and scattered midperipheral intraretinal dot-blot haemorrhages. Optical Coherence Tomography and Fundus Autofluorescence revealed signs of focal retinal hypoperfusion (cotton-wool spots). Fundus Fluorescein Angiography showed a marked delay in arterio-venous transit time (43 seconds), cotton-wool spots and profound areas of capillary fall-out at the peripheral retina. No changes in the right eye were noted. Carotid duplex showed occlusion of left common carotid artery and a patent internal carotid artery with low-amplitude flow velocities and spectral broadening and patent external carotid and vertebral arteries but both with inversion of flow direction. Computed tomography

angiography revealed occlusion of the proximal portion of both the left common carotid artery and the left subclavian artery. The patient was referred to vascular surgery and urgent right common carotid artery – left carotid bifurcation bypass was performed. She was discharged with resolution of visual symptoms and during the follow-up her visual acuity improved substantially (0.05/10 to 10/10), and she had complete resolution of both the cotton-wool spots and retinal haemorrhage on ophthalmologic evaluation.

P23 STAGED ENDOVASCULAR MANAGEMENT OF A RUPTURED RESIDUAL AORTIC DISSECTION USING TEVAR, EVAR, AND OFF-THE-SHELF T-BRANCH REPAIR

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BACKGROUND: Management of complex aortic dissections, particularly in the setting of rupture and prior surgical repair, remains highly challenging. Persistent false lumen perfusion after initial endovascular treatment is associated with ongoing pressurization and risk of re-rupture, often requiring rapid and adaptive strategies. We present a case of staged endovascular management of a ruptured residual aortic dissection using advanced techniques.

METHODS: A 64-year-old woman with a history of type A aortic dissection treated with a Bentall procedure (2014), presented with acute thoracic pain. Computed tomography angiography (CTA) revealed a ruptured residual type B aortic dissection. She underwent urgent TEVAR with a stent graft deployed from zone 2 to the celiac trunk, achieving initial exclusion.
Despite hemodynamic stability, early postoperative imaging showed persistent false lumen perfusion, raising concern for ongoing pressurization. Due to persistent symptoms, a second urgent intervention was performed consisting of EVAR combined with false lumen embolization using an Amplatzer Vascular Plug II. This resulted in partial reduction of flow; however, residual perfusion persisted, likely via visceral fenestrations. Given the high risk of rupture and anatomical complexity, and without time for custom-made devices, a third urgent procedure using an off-the-shelf T-branch endograft was undertaken. Through combined femoral and axillary access, sequential catheterization and stenting of visceral branches were achieved. Adjunctive techniques, including kissing balloon angioplasty, were used to optimize true lumen expansion. Final angiography confirmed patency and satisfactory exclusion.

RESULTS: The patient had an uneventful recovery, with resolution of symptoms and stable hemodynamics. She was discharged asymptomatic under anticoagulation and antiplatelet therapy. At one-month follow-up, she remained clinically well, with imaging showing a minor lumbar branch endoleak without compromise.

CONCLUSION: This case highlights the dynamic nature of aortic dissection and limitations of single-stage interventions. Persistent false lumen perfusion may require escalation to advanced techniques. A staged, flexible approach tailored to anatomy can achieve favorable outcomes in urgent settings.

P24 EVAR INDUCED SUPERIOR MESENTERIC ARTERY STENOSIS: A CASE REPORT

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OBJECTIVES: To report a rare case of chronic mesenteric ischemia development following urgent endovascular aneurysm repair (EVAR) for a rapidly expanding infrarenal abdominal aortic aneurysm (AAA), produced by coverage of the superior mesenteric artery (SMA) osteum by the suprarenal stent.

METHODS: We present the case of a 63-year-old man with a history of valvular and ischemic heart disease, atrial fibrillation, asthma, and arterial hypertension. In December 2024, an infrarenal AAA measuring 3.6cm was diagnosed. Rapid aneurysm expansion was observed, reaching 5.5cm in January 2025, and elective EVAR was scheduled. Five days later, at hospital admission, the aneurysm measured 6.0 cm and was associated with acute lumbar pain, prompting urgent EVAR. Over the subsequent four months after the procedure, the patient developed postprandial abdominal pain. Computed tomography angiography demonstrated significant ostial stenosis of the SMA, likely related to interaction with the suprarenal stent struts.

RESULTS: Given the clinical presentation consistent with chronic mesenteric ischemia and the anatomical relationship between the SMA ostium and the suprarenal fixation system, endovascular revascularization of the SMA was undertaken. A balloon-expandable covered stent (BeGraft Plus) was selected due to increased radial force and crush resistance, and was successfully deployed through the suprarenal stent struts, achieving adequate restoration of mesenteric flow.
Completion angiography confirmed good stent apposition and patency. The patient experienced complete resolution of

postprandial abdominal pain and remained asymptomatic during follow-up.

CONCLUSIONS: This case reinforces previously reported observations that suprarenal fixation may lead to visceral artery compromise, even in the absence of immediate post-EVAR complications. Suprarenal bare-metal struts may interfere with visceral artery ostia, particularly in the presence of hostile proximal aortic anatomy and atherosclerotic disease. Careful preoperative planning, close post-EVAR surveillance, and a high index of suspicion for mesenteric ischemia are essential. Endovascular SMA stenting with a balloon-expandable covered stent through suprarenal struts is a safe and effective therapeutic option.

P25 ANEURISMA DA CARÓTIDA COMUM PROXIMAL - ABORDAGEM HÍBRIDA OU COMO UM LAÇO BLALOCK OFERECE UM ACESSO PROTETOR

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INTRODUÇÃO: Os aneurismas envolvendo a carótida extracraniana são raros e compreendem <1% de todas as intervenções carotídeas. A sua etiologia mais frequente é a infecciosa nas idades pediátricas e a degenerativa, o trauma e a displasia fibromuscular na idade adulta. Podem apresentar-se como assintomáticos ou causar manifestações neurológicas focais como AVC (acidente vascular cerebral), lesão de nervos periféricos, massa pulsátil cervical ou mais raramente manifestações por rotura. Têm indicação cirúrgica pelas possíveis complicações associadas.

MATERIAIS E MÉTODOS: Os autores apresentam o quadro clínico de um doente, sexo masculino, 61 anos, antecedentes de tabagismo, DPOC (doença pulmonar obstrutiva crónica) e diabetes mellitus tipo 1. Realiza TC (tomografia computorizada) torácica na sequência de estudo de nódulo pulmonar neoplásico, que revela um aneurisma sacular do terço proximal da carótida comum esquerda com cerca de 3cm de maior diâmetro e extensão de 4cm.

RESULTADOS: O doente foi submetido a exclusão do aneurisma através da implantação de 2 stents cobertos 10x58mm por via retrograda, cruenta. A proteção cerebral foi conseguida com clampagem direta da carótida interna com uma referência vascular e o local da punção arterial foi encerrado por uma rafia simples.

CONCLUSÕES: São pouco mais de 3000, os casos de aneurismas envolvendo a carótida extra-craniana descritos na literatura mundial, desde o 1º report por A. Cooper em 1836. Mais frequentes no sexo masculino (3:1) e habitualmente unilaterais (7:1). Em cerca de metade dos casos são diagnosticados na sequência de eventos neurológicos focais. As opções cirúrgicas vão desde a aneurismorrafia, angioplastia com patch, ressecção e reconstrução topo-a-topo ou interposição de enxerto, exclusão e bypass e implantação de endoprótese, dependendo da sua localização e acessibilidade cirúrgica convencional. A taxa de complicações cirúrgicas major (AVC ou morte) ronda os 5%, valor que sobe para os 70% quando não tratados. Os resultados são persistentes, com >80% dos doentes livre de eventos neurológicos em 20 anos de follow-up. A abordagem híbrida, aqui descrita, providenciou quer uma via de abordagem direta, rápida, simples e segura para exclusão do aneurisma, quer um meio simultâneo de proteção cerebral. O doente apresentava uma neoplasia pulmonar com indicação cirúrgica, que foi realizada, sem atraso, 1mês após a intervenção do aneurisma.

P26 A RARE SUPERIOR MESENTERIC ARTERY BRANCH ANEURYSM MANAGED BY LAPAROSCOPIC RESECTION: A CASE REPORT

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OBJECTIVES: Visceral artery aneurysms (VAA) are uncommon vascular entities with an incidence ranging from 0.01% to 2%, with aneurysms arising from branches of the superior mesenteric artery (SMA) being particularly rare. Due to their potential risk of rupture, timely diagnosis and appropriate management are crucial. We present a case of an incidentally diagnosed SMA branch aneurysm managed by laparoscopic surgical resection.

METHODS: A 49-year-old woman with no significant cardiovascular risk factors underwent abdominal and pelvic computed tomography angiography during the investigation of recurrent urinary tract infections. Imaging revealed a 48×43mm paramesenteric lesion located in the upper abdominal quadrant, with aneurysmal morphology and limited contrast opacification, and suspected origin from a branch of the superior mesenteric artery. Given the size of the lesion and intimate relationship with the small bowel, elective laparoscopic ligation was decided after multidisciplinary discussion between the Vascular and General Surgery teams.

RESULTS: The patient underwent laparoscopic resection of the aneurysm. Due to intimate involvement with the adjacent bowel, a segment of proximal jejunum viability

was compromised. Therefore, a resection of approximately 20cm of the proximal jejunal was required, followed by a mechanical side-to-side anastomosis. The procedure was completed without intraoperative complications and postoperative recovery was uneventful. Histopathological examination confirmed the diagnosis of an arterial aneurysm, with replacement of the normal vessel wall by dense fibrous connective tissue. These findings were compatible with chronic inflammatory degeneration of the arterial wall, cicatricial remodeling and secondary calcification.

CONCLUSIONS: This case highlights the rarity of SMA branch aneurysms and reinforces the need for individualized management strategies. While endovascular treatment is considered first-line for most VAAs, complex anatomy and impossibility to assess bowel ischaemia may favor surgical resection in selected patients. A laparoscopic approach provides the benefits of minimally invasive surgery, while allowing to perform associated procedures, like bowel resection or histological examinations, making it a valuable and safe option in the treatment of visceral artery aneurysms.

P27 TAILORED MANAGEMENT OF COMPLEX AORTOILIAC OCCLUSIVE DISEASE: A PATTERN-BASED APPROACH

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INTRODUCTION: Management of complex aortoiliac occlusive disease (AIOD) remains challenging, particularly in multilevel disease. Endovascular techniques have expanded treatment options.

APPROACH: Our strategy for AIOD is guided by anatomical and clinical patterns. In multilevel chronic limb-threatening ischemia (CLTI), staged revascularization is conducted. Vascular access is tailored to lesion complexity, frequently combining bilateral femoral and upper limb access to allow through-and-through control and sometimes using occluded femoral arteries as access vessels immediately after undergoing balloon angioplasty. Subintimal recanalization is commonly required. Lesion preparation includes predilation, intravascular lithotripsy for heavily calcified segments, and pharmacomechanical thrombectomy for thrombus-containing lesions. Aortoiliac reconstruction is preferentially performed using covered stents, most commonly using a CERAB configuration. Adjunctive procedures, including femoral endarterectomy or infrainguinal angioplasty, are used as required to optimize outflow. CFA Supera stent angioplasty is allways performed if occluded endarterectomy.

CASE SERIES: We present four LF IV CLTI cases illustrating these principles: two cases with combined aortoiliac and infrainguinal disease (case 1 and 2), and two other cases with prior aortoiliac reconstruction undergoing native recanalization (case 3 and 4). Case 1 – Staged infrainguinal recanalization of occluded CFA and SFA followed by aortoiliac revascularization and reconstruction using a CERAB configuration.; Case 2 – Hybrid approach with bilateral femoral endarterectomy combined with CERAB.; Case 3 – Endovascular redo in a patient with occluded aortobifemoral bypass and prior aortoiliac and femoropopliteal stents, combining pharmacomechanical thrombectomy and covered stent relining of the aortoiliac segment with infrainguinal recanalization of occluded CFA and SFA.; Case 4 – Native aortoiliac recanalization following lesion preparation with intravascular lithotripsy, performed as a bridging strategy in a patient with secondary aortoenteric fistula.

DISCUSSION/CONCLUSION: These cases highlight the importance of a pattern-based approach. CERAB provides effective inflow reconstruction but is rarely enough by itself in LF IV CLTI treatment, often requiring infrainguinal procedures. A pattern-based strategy integrating endovascular and hybrid techniques enables effective management of complex AIOD across diverse clinical scenarios, particularly challenging in the presence of severe CFA and infrainguinal PAD.

P28 INFLOW ARTERY DEGENERATION AFTER ARTERIOVENOUS ACCESS: DEEP BRACHIAL ARTERY INVOLVEMENT

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INTRODUCTION: Despite their benefits, autologous arteriovenous fistulas (AVFs) can be associated with significant and often underestimated complications. The development of inflow artery aneurysms is a rare but important complication, particularly in patients with a history of renal transplantation. Late aneurysmal degeneration of inflow arteries occurs most frequently in the brachial artery.

OBJECTIVE: To present a clinical series of four patients with degenerative involvement of the deep brachial artery.

RESULTS: All patients had a history of longstanding high-flow AVFs on the same side as the findings. In all cases, arteriomegaly and elongation of the deep brachial artery with prominent communicating branches to the forearm arteries were observed.

Case 1: A 42-year-old male with a left brachiocephalic AVF created in 1995 and renal transplantation in 2010. After AVF ligation in 2012, developed diffuse aneurysmal degeneration of the brachial artery with occlusive thrombosis in the distal half of the arm. The proximal brachial aneurysm was embolized with coils in 2016.

Case 2: A 46-year-old man with a left brachiocephalic AVF created in 1998, ligated in 1999 and reconstructed in 2012, and a history of two renal transplants. After AVF ligation in January 2026, progressive enlargement of the brachial artery with mural thrombus formation occurred. In April 2026, aneurysmectomy and interposition bypass using a 6mm ePTFE graft were performed.

Case 3: A 62-year-old male with a left brachiocephalic AVF created in 2006 and renal transplantation in 2007. Doppler ultrasonography revealed a mean flow of 5000 mL/min in the axillary artery. CT angiography demonstrated diffuse aneurysmal degeneration involving both the brachial and deep brachial arteries.

Case 4: A 63-year-old male with a left brachiocephalic AVF created in January 1999 and renal transplantation in December 1999. After AVF ligation in 2025, Doppler ultrasonography revealed a saccular aneurysm of a lateral branch of the deep brachial artery and thrombosis of communicating branches between the deep brachial, radial and interosseous arteries.

CONCLUSION: This case series highlights the dynamic vascular changes associated with longstanding high-flow AVFs in the context of post-transplant immunosuppression. To our knowledge, this is the first report describing aneurysmal degeneration of the deep brachial artery as an inflow artery complication.

P29 ACUTE LOWER LIMB ISCHEMIA IN A YOUNG PATIENT WITH BEHÇET'S DISEASE: A DIAGNOSTIC AND THERAPEUTIC CHALLENGE

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INTRODUCTION: Acute limb ischemia in young patients is a rare and diagnostically challenging condition. Vascular involvement in Behçet's disease (BD) is uncommon in young patients, and its overlap with vasospastic, vasculitic, and psychosomatic etiologies further complicates management. We hereby report a case of acute lower limb ischemia in an 18-year-old female with BD submitted to endovascular treatment.

CASE REPORT: An 18-year-old female with known BD, on azathioprine and infliximab, presented to our emergency department with a two-day history of progressive pain, coolness, pallor, and impaired hallux elevation of the left foot, without associated trauma. Vascular examination revealed absent pedal and posterior tibial pulses, prolonged capillary refill time, and sensory and motor neurological deficits located to the toes and forefoot. Arterial duplex ultrasound and initial digital subtraction angiography demonstrated absent contrast filling of the plantar arch, suggestive of acute distal thrombosis (Rutherford IIb). Given the severity of limb threat, a multidisciplinary decision involving vascular surgery and rheumatology was made to initiate catheter-directed thrombolysis (CDT) with alteplase (0.5 mg/h). After 24 hours of CDT, repeat angiography demonstrated improved plantar arch filling, with concurrent clinical improvement in both foot perfusion and neurological deficits, prompting elective discontinuation of fibrinolysis. The patient was subsequently transitioned to therapeutic anticoagulation and corticosteroids. Thrombophilia screening and autoimmune serology panel were negative. Electromyography was normal, and imaging excluded thromboembolic sources. Clinical improvement was progressive, with restored pulses and substantial neurological recovery at discharge.

CONCLUSION: This case highlights the diagnostic complexity of acute limb ischemia in young patients with systemic inflammatory disease, underscoring that such complex cases demand a coordinated multidisciplinary strategy integrating both vascular surgery and rheumatology expertise. In the setting of a likely multifactorial etiology — encompassing distal thrombosis, vasospastic, and vasculitic mechanisms — and an immediately threatened limb (Rutherford IIb), CDT represented a valid and clinically justified intervention for prompt limb salvage.

P30 PSEUDOANEURYSM OF THE PROFUNDA FEMORIS ARTERY FOLLOWING A GUNSHOT WOUND: A CASE REPORT

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AIMS: Vascular injury of the lower limbs is an uncommon complication of trauma but requires expedite diagnosis and

treatment in order to preserve limb function. These injuries can be arterial or venous alone, and are combined in up to 36% of patients. We report a case of a pseudoaneurysm of the profunda femoral artery requiring surgical treatment.

CASE REPORT: A 31-year-old male with no previous medical history was transported to our emergency department after a close-range gunshot wound to the upper left thigh after an attempted robbery. At arrival, he was hemodynamically stable, only complaining of lower limb pain. Contrast enhanced CTA revealed a pseudoaneurysm of the left profunda femoral artery with 16x7mm and active bleeding. The patient was then successfully submitted to coil embolization of distal profunda femoral artery. Using contralateral femoral access, the pseudoaneurysm was identified and multiple 3 to 5mm Tornado coils (COOK Medical) were deployed. Post-operative course was uneventful, having the patient received a week of prophylactic antibiotic. He remains asymptomatic during follow-up, with palpable distal pulses.

CONCLUSION: Vascular injury, while uncommon, can have considerate morbidity and carry the risk of amputation if not properly identified and treated. Diagnosis can be made using doppler ultrasound in the emergency department. Treatment is more commonly surgical, but endovascular treatment has also been reported.

P31 EFICÁCIA E SEGURANÇA DO SISTEMA ROTAREX EM OCLUSÕES FEMOROPOPLITEIAS: EXPERIÊNCIA RECENTE DE UM CENTRO

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OBJETIVO: Avaliar a eficácia e segurança do sistema Rotarex™ no tratamento de oclusões femoropoplíteias no nosso centro.

INTRODUÇÃO: O Sistema Rotarex™ combina trombectomia mecânica e aterectomia rotacional, indicado na isquémia aguda dos membros inferiores, oclusões femoropoplíteias e re-estenose intra-stent, sendo frequentemente associado com balão com fármaco DCB. Permite uma recanalização rápida e redução da carga trombótica, deve ser evitado na dissecção ou perfuração arterial, tortuosidade extrema ou calcificação significativa. Os principais riscos são embolização distal 1,2-1,4%, perfuração e hemorragia.

MÉTODOS: Entre Set/25 e Abr/26 analisaram-se retrospetivamente 10 casos de oclusão femoropoplíteia submetidos a trombectomia percutânea com RotarexTM, 4 homens e 6 mulheres, com idades entre os 48 e 93 anos (mediana 79). Verificou-se doença arterial obstrutiva periférica DAOP prévia em 70% dos doentes, a maioria Rutherford 3, com 3 casos previamente revascularizados. Clinicamente registaram-se 3 casos de isquemia aguda, 5 sub-aguda e 2 crónica, com evolução de 2-24 semanas (mediana 3.5). Relativamente à gravidade, nos casos de isquemia aguda foram registados 2 grau IIa e 1 grau IIb; nos sub-aguda/crónica, 5 casos Rutherford 6 e 1 caso Rutherford 4. A etiologia foi cardioembólica em 40%, 25% com DAOP prévia, e trombótica em 60%, com 1 caso de trombose intra-stent. Todos foram tratados percutaneamente com Rotarex 6F. A estenose residual foi tratada com DCB em 8 doentes.

RESULTADOS: O sucesso técnico foi de 100% com recuperação de lúmen imediatamente após a trombectomia percutânea, 60% dos casos com 2 vasos distais permeáveis. Registaram-se 2 ruturas arteriais relacionadas com o procedimento tratadas com angioplastia com balão. O tempo mediano de internamento foi de 3 dias (3-22). Após revascularização nos 5 casos Rutherford 6, o tempo de cicatrização foi 4.5 semanas, 3 necessitaram amputação minor e 1 mantém cicatrização em curso por infeção. Globalmente verificou-se melhoria significativa nos estádios de Rutherford ($p < 0,006$). O seguimento variou entre 1-30 semanas (mediana 9.2), sem re-estenose ou reintervenção. Verificou-se 1 óbito por choque cardiogénico associado a complicações anestésicas durante amputação minor.

CONCLUSÃO: Na nossa experiência privilegiamos esta abordagem em doentes com múltiplas comorbilidades e elevado risco cirúrgico. O RotarexTM revelou-se seguro e eficaz, apesar do curto seguimento e experiência limitada, obteve-se elevada taxa de sucesso na recanalização da oclusão com baixa morbilidade pós-operatória.

P32 TYPE IA ENDOLEAK AFTER CHEVAR DUE TO STENT GRAFT INFOLDING: SUCCESSFUL ENDOVASCULAR REPAIR

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AIM: Chimney endovascular aneurysm repair (ChEVAR) is often used for complex abdominal aortic aneurysm (AAA) when fenestrated endografts are unavailable, particularly in urgent settings

Type Ia endoleak (EL) after ChEVAR remains one of the most challenging complications. We report a case of urgent AAA repair with ChEVAR complicated by type Ia EL due to proximal stent graft infolding, successfully managed with an endovascular approach.

METHODS: Retrospective review of clinical data.

CASE REPORT: An 82-year-old man with wild-type transthyretin amyloidosis, hypertension and hyperlipidemia presented to the hospital with severe abdominal pain. He had a known AAA under surveillance in outpatient clinic. When admitted to emergency department a computed tomography (CT) scan was performed and demonstrated a 5mm increase in aneurysm sac diameter (maximum of 61mm) compared to a CT scan performed one month ago. There were no other findings of suggestive alternative pathology, so the patient was admitted with the diagnosis of symptomatic juxta-renal AAA and underwent to an urgent ChEVAR. The procedure was initially uneventful however, persistent postoperative abdominal pain prompted a control CT scan, which revealed proximal graft infolding with type Ia EL associated. Given the patient's high-risk for open surgical conversion, endovascular correction was decided. In a operation room, through bilateral percutaneous femoral access and open brachial artery exposure under local anaesthesia, aortography confirmed a large type Ia EL. Both renal arteries were selectively catheterized and two 60 x 6mm balloons were advanced over stiff wires, while a third balloon was placed at the graft neck.
Simultaneous insufflation of both renal balloons permitted to noticed that the renal chimney stents were inadvertently crossed. Simultaneous inflation of the renal balloons, combined with controlled traction, allowed the stents to uncross and the graft. Subsequent inflation of the proximal neck balloon ensured complete apposition of the endograft to the aortic wall. Final angiogram confirmed successful resolution of the EL, however extension of the right renal stent was required due to distal dislocation during traction. The postoperative course was uneventful, and one-month follow-up CT scan showed no evidence of EL.

CONCLUSION: This case highlights that complex ChEVAR complications, such as type Ia EL caused by proximal graft infolding, can be successfully managed through a endovascular strategy. Balloon assisted stent manipulation is an effective and minimally invasive solution.

P33 EXTENSIVE INFERIOR VENA CAVA THROMBOSIS EXTENDING TO THE RIGHT ATRIUM: CASE REPORT

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INTRODUCTION: Inferior vena cava (IVC) thrombosis is an uncommon manifestation of venous thromboembolism, occurring in 2.6% to 4.0% of patients with lower-extremity deep vein thrombosis. Hyperhomocysteinemia has been proposed as a risk factor for venous thromboembolism, though its independent contribution remains controversial.

CASE REPORT: We report the case of a 24-year-old male with a history of vitiligo and Graves' disease who developed extensive IVC thrombosis extending into the right atrium during hospitalization for community-acquired pneumonia. Initial presentation included new onset left lower extremity edema on hospital day 7. Imaging revealed bilateral iliac and femoral deep vein thrombosis with complete occlusion of the left lower extremity deep venous system, partially occlusive IVC thrombosis extending to the right atrium, and acute pulmonary embolism. Transthoracic echocardiography confirmed a floating right atrial thrombus. Thrombophilia workup identified elevated plasma homocysteine (40 µmol/L; upper limit of normal 18.5 µmol/L) with normal vitamin B12 and folate levels. Testing for hereditary thrombophilias, malignancy, and autoimmune conditions was negative. The patient was treated conservatively with therapeutic anticoagulation (unfractionated heparin followed by low-molecular-weight heparin for 3 months, then acenocoumarol) and elastic compression stockings. After 5 years of follow-up, he remains asymptomatic without residual edema. Serial imaging demonstrated dissolution of thrombus in the suprahepatic IVC and right atrium, with persistent residual thrombosis and endoluminal synechiae in remaining IVC segments and progressive development of venous collateral circulation.

CONCLUSION: This case demonstrates that extensive IVC thrombosis with right atrial extension can be successfully managed with anticoagulation alone in hemodynamically stable patients. Moderate hyperhomocysteinemia was the sole identified risk factor, highlighting the importance of comprehensive thrombophilia evaluation in young patients with extensive venous thromboembolism. Despite the debated role of hyperhomocysteinemia as an independent risk factor, it may contribute to thrombotic risk in young patients without other identifiable causes.

P34 ENDOVASCULAR RESCUE OF PERSISTENT GASTRODUODENAL ARTERY BLEEDING AFTER WHIPPLE PROCEDURE – A LIFE-SAVING APPROACH

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AIM: The Whipple procedure (pancreaticoduodenectomy) remains the standard curative treatment for periampullary

malignancies. However, it is still associated with postoperative morbidity rates reported as high as 60%, with hemorrhage being one of the most severe and potentially fatal complications. We report a case of persistent gastroduodenal artery bleeding after Whipple procedure, refractory to surgical attempts, successfully managed with and endovascular approach.

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

CASE REPORT: A 77-year-old patient was admitted to the general surgery unit with acute cholangitis secondary to ampullary carcinoma. After discussion in a multidisciplinary team meeting, a curative Whipple procedure was decided. His past history included hypertension, diabetes mellitus, obesity, severe obstructive sleep apnea syndrome and a permanent pacemaker implanted for third-degree atrioventricular block. The post operative was complicated with peritonitis to Klebsiella pneumoniae and Enterococcus feacium, as well as hemorrhagic shock secondary to gastroduodenal artery bleeding. A surgical second look was performed by general surgery team with ligation of the gastroduodenal artery, but the patient remained hemodynamically unstable, prompting a third surgical exploration with additional attempt at gastroduodenal artery hemostasis. A subsequent CT angiography showed persistent active contrast extravasation. Given the ongoing bleeding, an endovascular approach was attempted by the vascular surgery team. From left femoral access, through a 7F sheath in the celiac trunk, the right hepatic artery was selectively catheterized, a 7x18mm covered self-expandable stent was placed in the common hepatic artery to exclude gastroduodenal artery; Control angiography, however, still demonstrated active contrast blush; After multiple balloon angioplasties, a distal extension was implanted using a 6x18mm covered self-expandable stent, achieving complete exclusion of the bleeding. The patient was discharged from the intensive care unit 20 days after the endovascular procedure. No further hemorrhagic episodes or other procedure-related complications were noted.

CONCLUSION: Endovascular exclusion of gastroduodenal artery bleeding using covered stents represents an effective and minimally invasive rescue strategy after failed surgical control. This approach was lifesaving in the present case and has been reported with favorable outcomes.

P35 ENDOVASCULAR MANAGEMENT OF A PROPER HEPATIC ARTERY ANEURYSM: OVERCOMING SEVERE TORTUOSITY

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INTRODUCTION: Hepatic artery aneurysms are rare but carry a significant risk of rupture. While most involve the common hepatic artery, aneurysms of the proper hepatic artery are less frequently reported and may present additional technical challenges due to limited distal landing zones and proximity to the hepatic bifurcation.

CASE REPORT: A 63-year-old man was incidentally diagnosed with an asymptomatic 28-mm fusiform proper hepatic artery aneurysm with mural thrombus. An initial endovascular attempt failed due to severe arterial tortuosity and inadequate catheter support. During a second procedure, a steerable guiding sheath was introduced to improve coaxial alignment and distal support. Angiography confirmed the aneurysm and marked tortuosity, and a heparin-bonded covered stent graft was successfully deployed, achieving complete aneurysm exclusion with preservation of antegrade hepatic arterial flow. The postoperative course was uneventful, and one-month computed tomography angiography demonstrated durable exclusion and full stent patency without ischemic complications.

DISCUSSION: Proper hepatic artery aneurysms are technically more demanding than common hepatic artery aneurysms and may increase the technical complexity of endovascular reconstruction. In the presence of severe visceral tortuosity, adjunctive strategies such as steerable guiding sheaths can enhance catheter stability and expand the feasibility of minimally invasive repair.

P36 STAGED ENDOVASCULAR SALVAGE AFTER RUPTURED ABDOMINAL AORTIC ANEURYSM: MANAGING SEQUENTIAL ENDOLEAKS, RENAL FAILURE, AND SUSPECTED ENDOGRAFT INFECTION

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BACKGROUND: Ruptured abdominal aortic aneurysm (rAAA) remains a surgical emergency with high morbidity

and mortality. Endovascular repair has improved early survival but, frequently, requires staged interventions to manage acute and/or chronic complications. This case demonstrates a challenging case of rAAA and a step-to-step approach to solve complications.

CASE REPORT: A 68-year-old man with hypertension and a mechanical aortic valve on chronic anticoagulation presented on emergency department with haemodynamic instability secondary to rupture of an infrarenal abdominal aortic aneurysm. He underwent emergent percutaneous EVAR with an aorto-bi-iliac endograft. Early postoperative imaging identified a type III endoleak, which was immediately corrected by iliac limb relining. Subsequent imaging demonstrated a persistent type Ia endoleak associated with a large retroperitoneal haematoma, prompting further intervention with chimney EVAR to the left renal artery. Because of the large pararenal aortic diameter, a Valiant endograft was shortened on the back table and used as an aortic cuff to achieve an adequate proximal seal. During the same admission, follow-up imaging revealed a type II endoleak caused by recirculation between the inferior mesenteric artery and lumbar arteries, which was treated by inferior mesenteric artery embolization.
The postoperative course was prolonged and complex, with progression to dialysis-dependent renal failure requiring creation of a basilic vein transposition arteriovenous fistula, respiratory insufficiency due to nosocomial pneumonia, and refractory hypertension. The patient also developed Pseudomonas aeruginosa bacteraemia, raising suspicion of endograft infection, and completed prolonged antibiotic therapy. Despite this challenging course, serial imaging ultimately confirmed complete aneurysm exclusion without further endoleak. The patient achieved clinical and haemodynamic stability and was discharged 150 days after admission.

CONCLUSION: This case highlights the need for a staged and adaptable endovascular strategy in rAAA management. Durable aneurysm exclusion may require multiple endovascular reinterventions tailored to evolving complications, including different types of endoleak. Severe associated morbidity, particularly renal failure and infection, has a major impact on outcomes and must be addressed in parallel with aneurysm-related treatment.

P37 TRUE PROFUNDA FEMORIS ARTERY ANEURYSM: A RARE ENTITY

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INTRODUCTION: True aneurysms of the profunda femoris artery (PFAA) are rare, accounting for approximately 0.5% of peripheral arterial aneurysms. They predominantly affect elderly men and are frequently associated with atherosclerotic disease and synchronous aneurysms. Although usually asymptomatic, they carry a significant risk of complications, namely rupture, thrombosis, and distal embolization. Treatment options include vascular reconstruction with or without aneurysm resection, ligation, embolization, or aneurysm exclusion with covered stent implantation.

CASE REPORT: We present the case of a 74-year-old man, former smoker, with a history of arterial hypertension, hypertrophic cardiomyopathy, and treated prostate cancer, referred following an incidental finding on CT angiography of a fusiform aneurysm of the second segment of the profunda femoris artery measuring 30 mm, associated with bilateral internal iliac artery aneurysms (20 mm). The patient was asymptomatic. He underwent aneurysmectomy with prosthetic interposition, without complications. At 6-month follow-up, he remained asymptomatic, with a patent graft and no complications.

DISCUSSION: The deep anatomical location of the profunda femoris artery allows aneurysms to remain asymptomatic for a prolonged period, and they are often detected incidentally, as in the present case. This anatomical location makes clinical diagnosis difficult, and when diagnosed, they usually present at a significant size, which explains the higher rupture rate (18.5%) compared to other peripheral arterial aneurysms. Other presentations include local compressive symptoms (pain, edema, paresthesia, gait disturbances), thrombosis, and distal embolization. CT angiography is the imaging modality of choice for diagnosis and therapeutic planning. According to Reslan OM et al., surgical intervention is always recommended due to the high complication rate and the unknown natural history of asymptomatic PFAA. Other authors suggest more restrictive criteria, proposing intervention for PFAA >2 cm or even >3.5 cm. Open surgery with vascular reconstruction remains the most commonly used approach, although endovascular techniques are an alternative in selected cases.

CONCLUSION: PFAA aneurysms are rare entities with a relevant risk of complications. Early diagnosis and screening for synchronous aneurysms are essential. Surgical management should be individualized.

P38 HYBRID THROMBECTOMY IN CARDIOEMBOLIC STROKE WITH EXTENSIVE OCCLUSION OF THE BRACHIOCEPHALIC TRUNK - CASE REPORT

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INTRODUCTION: Ischemic stroke due to large vessel occlusion is a time-sensitive emergency. Extensive occlusion of the supra-aortic trunks is rare (0.5-6.4% of cases), with atherosclerotic etiology being most common and cardioembolic origin even less frequent. This involvement may limit the effectiveness of an isolated endovascular approach, requiring combined therapeutic strategies.

CASE REPORT: We present the case of a 72-year-old patient with cardioembolic stroke on apixaban for atrial fibrillation presented after 11 hours of symptom onset. Examination on admission revealed inability to follow simple commands, mutism, left hemiplegia and hemi-hypoesthesia, rightward oculocephalic deviation, left central facial palsy, and spatial neglect (NIHSS 25). CT angiography demonstrated continuous occlusion from the brachiocephalic trunk to the right middle cerebral artery. Criteria for intravenous thrombolysis were not met due to time after symptom onset and baseline anticoagulation. The patient underwent endovascular treatment by neuroradiology using a combined technique (aspiration and stent retriever) at the level of the brachiocephalic trunk, common carotid artery, internal carotid artery, and middle cerebral artery. Final angiography demonstrated recanalization of the carotid axes and the middle cerebral artery, with residual thrombus in the brachiocephalic trunk. The patient was transferred to another center and underwent subsequent surgical thrombectomy of the right common carotid artery and brachiocephalic trunk by vascular surgery. Control angiography showed complete recanalization of the treated vessels, without carotid or intracranial embolization. Postoperatively, improvement in neurological deficits was observed, with the patient able to follow simple commands and presenting with dysarthria.

CONCLUSION: Embolic occlusions involving the brachiocephalic trunk represent a particularly rare and challenging presentation in the invasive management of cerebrovascular events. Organized thrombus may not be treatable by percutaneous devices in patients with contraindications to thrombolytic therapy. Early surgical thrombectomy may be the only viable option. Despite the rare hyperacute involvement of vascular surgery in cerebrovascular events, an early, tailored multidisciplinary approach remains highly relevant.

P39 MYCOTIC COMMON FEMORAL ARTERY ANEURYSM FOLLOWING CELLULITIS: IN SITU RECONSTRUCTION WITH A SILVER-IMPREGNATED DACRON GRAFT – CASE REPORT

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INTRODUCTION: Mycotic aneurysms are rare but life-threatening vascular infections, most commonly caused by bacterial pathogens despite their historical nomenclature. They arise from hematogenous seeding, septic embolization, contiguous spread from adjacent infections, or direct vascular injury. The femoral artery, particularly the common femoral artery, is the most frequent site of peripheral involvement. Staphylococcus aureus is the most commonly identified pathogen, followed by Salmonella species and other gram-negative organisms.
Clinically, they typically present as painful, pulsatile masses and require urgent surgical intervention due to the high risk of rupture and hemorrhage. Prompt resection and revascularization, combined with prolonged antimicrobial therapy, are essential to prevent rupture, hemorrhage, and limb loss.

CASE REPORT: We present a case of a 78-year-old male presented to the emergency department with a rapidly enlarging right inguinal mass after four weeks of antibiotic therapy for right lower limb cellulitis. Physical examination revealed a pulsatile inguinal mass without skin compromise. Computed tomography angiography demonstrated a 42 mm aneurysm of the right common femoral artery with features suggestive of an infectious etiology. The patient underwent urgent surgical resection of the infected arterial segment, followed by in situ reconstruction using a silver-impregnated Dacron graft, creating an interposition between the external iliac and deep femoral arteries through an anatomic route. The intraoperative and postoperative courses were uneventful. Empirical broad-spectrum antibiotic therapy was initiated and subsequently tailored to methicillin-sensitive Staphylococcus aureus isolated from the excised arterial tissue. Serial blood cultures remained negative.

CONCLUSION: Mycotic aneurysms of the common femoral artery are rare but life-threatening conditions that require early diagnosis and urgent surgical intervention.
This case highlights contiguous spread from soft tissue infection as a potential etiology and supports in situ reconstruction with a silver-impregnated Dacron graft as a safe and effective alternative when autologous conduits are not feasible.

P40 DELAYED PRESENTATION OF IATROGENIC RENAL ARTERIOVENOUS FISTULA CAUSING HIGH-OUTPUT HEART FAILURE: A CASE REPORT

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HEM - CHLO

INTRODUCTION: Acquired renal arteriovenous fistula (AVF) is a rare iatrogenic complication associated with surgical interventions such as nephrectomy. Clinical presentation is variable and often delayed, and it may remain asymptomatic for years. In hemodynamically significant cases, it can progress to high-output heart failure, posing a diagnostic challenge due to the nonspecific nature of symptoms and the long latency between the causal event and clinical manifestation. Diagnosis relies on imaging modalities, particularly CT angiography and catheter angiography, the latter being the gold standard. Endovascular embolization is currently the first-line treatment, with surgery reserved for selected cases.

OBJECTIVES: To describe a case of delayed presentation of a post-nephrectomy iatrogenic renal AVF complicated by high-output heart failure, emphasizing the diagnostic challenges and the effectiveness of endovascular management.

METHODS: We report the case of a patient with post-nephrectomy iatrogenic renal AVF complicated by high-output heart failure, focusing on diagnostic workup and endovascular treatment using percutaneous embolization with a vascular plug.

RESULTS: A 65-year-old woman with a history of right nephrectomy for renal cell carcinoma 15 years earlier was referred for heart failure with preserved ejection fraction (metabolic equivalent of task: 4).
CT angiography revealed a high-flow reno-renal AVF between the renal artery stump and the right renal vein stump, with drainage into the inferior vena cava and signs of arterialized flow. An initial attempt at embolization with coils was unsuccessful. In a second stage, embolization with a vascular plug (MVP-II, 20 × 16 mm) was successfully performed via a left humeral approach, without complications. At 2-month follow-up, the patient was asymptomatic, with complete resolution of dyspnea.

CONCLUSIONS: Iatrogenic renal AVF may present years after surgery as high-output heart failure.
Endovascular treatment with a vascular plug is a safe and effective option, enabling fistula exclusion and significant clinical improvement.

P41 MYCOTIC SUPERIOR MESENTERIC ARTERY ANEURYSM: AN ATYPICAL MANIFESTATION OF INFECTIVE ENDOCARDITIS

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HEM - CHLO

INTRODUCTION: Superior mesenteric artery (SMA) aneurysms are rare visceral lesions, with mycotic etiology being particularly uncommon. Typically associated with bacteremia or infective endocarditis, their insidious early presentation—characterized by abdominal pain, constitutional symptoms, and occasionally low-grade fever—often delays diagnosis until advanced stages. Consequently, patients frequently present with life-threatening complications such as rupture, hemorrhage, or mesenteric ischemia, which carry high morbidity and mortality. The association with native-valve endocarditis highlights the role of hematogenous dissemination in its pathophysiology and underscores the need for a high index of suspicion, especially in the presence of systemic embolic events. Early diagnosis and prompt targeted therapy—including prolonged antibiotic treatment and endovascular or surgical intervention—are crucial to improving outcomes and reducing mortality.

OBJECTIVES: To report a rare mycotic SMA branch aneurysm in native mitral valve endocarditis, highlighting its embolic presentation and the role of endovascular therapy.
Methods: Case report describing clinical features, imaging findings, and endovascular management.

CASE PRESENTATION: A 29-year-old man presented with several days of abdominal pain and was initially discharged. He returned with sudden aphasia, and imaging revealed a left middle cerebral artery ischemic stroke, deemed ineligible for reperfusion therapy. Echocardiography revealed native mitral valve infective endocarditis, and blood cultures grew Streptococcus mitis. Antibiotic therapy was initiated. Abdominal computed tomography demonstrated splenic infarctions and a 4.5 cm SMA branch aneurysm, suggestive of mycotic origin. The patient underwent mitral valve replacement, followed by endovascular treatment of the aneurysm.
Via left humeral access, selective catheterization of a jejunal branch was performed, and the aneurysm was excluded with six AZUR hydrocoils (20 × 30 mm), achieving complete occlusion with preservation of superior mesenteric artery patency. The procedure was uneventful, and the patient had a favorable clinical course under multidisciplinary follow-up.

CONCLUSIONS: Mycotic SMA aneurysms are rare and life-threatening, often associated with infective endocarditis and delayed diagnosis.
A high index of suspicion is crucial in embolic settings. In this case, the SMA aneurysm was interpreted as a manifestation of aortitis, representing an atypical presentation of infective endocarditis.

P42 FLOATING THROMBUS OF THE BRACHIOCEPHALIC TRUNK PRESENTING AS ISOLATED DIGITAL ATHEROEMBOLISM: A HYBRID APPROACH

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ULS Coimbra

BACKGROUND: Free-floating thrombus (FFT) of the brachiocephalic trunk is an uncommon but clinically significant condition, typically presenting with acute ischemic stroke or recurrent cerebral embolization. Isolated peripheral embolization without neurological involvement is exceedingly rare.

CASE REPORT: We report the case of a 49-year-old woman presenting with acute digital ischemia of the right hand due to embolization from a floating thrombus located at the origin of the brachiocephalic trunk. Computed tomography angiography demonstrated a non-occlusive, intraluminal floating thrombus at the ostium of the vessel, without underlying atherosclerotic plaque. There was no evidence of cerebral ischemia. Given the high embolic potential and absence of structural arterial disease, a hybrid approach was performed.
Surgical exposure and clamping of the right common carotid artery were undertaken for cerebral protection. Endovascular thrombectomy using an AngioJet Zelante device was performed via femoral access, followed by deployment of a balloon-expandable covered stent at the brachiocephalic trunk origin.
Completion angiography confirmed patency of the subclavian and carotid branches without residual thrombus. The patient experienced complete clinical resolution and remains asymptomatic after three months of follow-up under anticoagulation therapy.

CONCLUSION: This case illustrates a rare presentation of brachiocephalic trunk free-floating thrombus causing isolated upper limb embolization without neurological involvement. In the setting of high embolic risk and absence of significant underlying arterial disease, a tailored hybrid approach combining carotid protection, mechanical thrombectomy, and covered stent exclusion may represent a safe and effective treatment option.

P43 A RARE CASE OF AN IDIOPATHIC POSTERIOR TIBIAL ARTERY PSEUDOANEURYSM

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INTRODUCTION: Pseudoaneurysms of the posterior tibial artery are rare vascular lesions, most commonly arising secondary to trauma or iatrogenic injury. Reported causes include penetrating injuries, fractures, orthopedic procedures, and endovascular interventions. However, in rare instances, no clear etiology can be identified. We present an idiopathic case in which no underlying cause was determined despite thorough evaluation, which prompted its presentation due to its unusual and noteworthy nature.

CASE REPORT: A 75-year-old male patient presented with a pulsatile mass in his left ankle. His past medical history was significant for hypertension, dyslipidemia, and ischemic heart disease.
On physical examination, a 50 × 50 mm pulsatile mass was noted just posterior to the left medial malleolus. Peripheral pulses were easily palpable bilaterally.
A Doppler ultrasound confirmed a 23 mm pseudoaneurysm of the distal posterior tibial artery. The proximal segments of the posterior tibial artery, as well as the anterior tibial and popliteal arteries, were unremarkable. The patient underwent surgical resection of the pseudoaneurysm and arterial reconstruction with a primary end-to-end anastomosis.
The patient was discharged on postoperative day two, maintaining a palpable left posterior tibial pulse. Histopathological examination confirmed a pseudoaneurysm filled with an acute thrombus.

DISCUSSION AND CONCLUSION: Posterior tibial artery pseudoaneurysms are rare vascular lesions that may present with subtle or delayed clinical findings, making the diagnosis challenging.
A high index of suspicion is essential, particularly in patients presenting with a pulsatile ankle mass. In this particular case, the etiology was considered idiopathic, as no antecedent traumatic or iatrogenic events were identified. Early recognition and prompt surgical management are key to preventing complications such as rupture or distal embolization. Surgical resection combined with arterial reconstruction achieves excellent clinical outcomes and ensures sustained distal perfusion.

P44 CAROTID-AXILLARY BYPASS WITH VERTEBRAL TRANSPOSITION FOR SUPERIOR SULCUS TUMOUR RESECTION: A SURGICAL CASE REPORT

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INTRODUCTION: Superior sulcus tumors frequently involve thoracic inlet vessels, and subclavian artery invasion represents a major technical challenge to achieving complete oncologic resection while preserving cerebral and upper limb perfusion. In selected patients, preservation of vertebral artery antegrade flow may reduce the risk of posterior circulation compromise.

CASE REPORT: A 47-year-old woman with a left superior sulcus tumor (cT3N0M0 adenocarcinoma) presented with ipsilateral Horner syndrome, left upper limb weakness and asymmetric but palpable radial pulse. Following induction chemoradiotherapy, multidisciplinary evaluation supported curative-intent resection with planned vascular reconstruction. The patient underwent carotid–axillary bypass using a 6-mm ringed PTFE graft combined with transposition of a dominant left vertebral artery to the common carotid artery. The vertebral artery was exposed through the vertebral triangle and transposed to the common carotid artery using an end-to-side anastomosis after systemic heparinization. A carotid–axillary bypass was then constructed through a retrojugular and retroclavicular tunnel, allowing en bloc tumor and subclavian artery resection. The patient recovered without neurological deficits and with preserved upper limb perfusion. Postoperative computed tomography angiography confirmed patency of both reconstructions.

DISCUSSION: Subclavian artery involvement in superior sulcus tumors does not preclude curative surgery when complete en bloc resection with vascular reconstruction is feasible. Carotid–axillary bypass provides reliable upper limb revascularization when proximal subclavian artery resection is required. Although vertebral artery reconstruction is rarely necessary, it may be justified in selected patients, particularly when the vessel is dominant or when preservation of posterior cerebral circulation is desirable.

CONCLUSION: Carotid–axillary bypass with vertebral artery transposition can safely preserve cerebral and upper limb perfusion during resection of locally advanced superior sulcus tumors with subclavian artery involvement. Individualized vascular reconstruction strategies are essential in complex thoracic inlet oncologic surgery.

P45 MULTILIMBED ACUTE ISCHEMIA AS A CATASTROPHIC MANIFESTATION OF CARDIOEMBOLIC ATRIAL FIBRILLATION

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BACKGROUND: Acute limb ischemia (ALI) is a vascular emergency with cardioembolic events accounting for 20–30% of cases, most commonly due to atrial fibrillation (AF). Multilimbed ischemia is exceptionally rare and associated with high morbidity and mortality.

CASE PRESENTATION: A 61-year-old female with newly diagnosed AF and no anticoagulation presented with triple limb ischemia: right upper limb (one-week duration, Rutherford IIb), left lower limb (24-hour duration, Rutherford IIb), and right lower limb (24-hour duration, Rutherford IIa). Emergency bilateral femoral and right humeral thromboembolectomy achieved initial successful reperfusion.
However, 12 hours postoperatively, the patient developed recurrent ischemia in all three limbs despite technically successful revascularization.
Infective endocarditis was considered given the patient's substance use history, though microbiological studies were negative. The patient experienced progressive clinical deterioration and died during hospitalization. Echocardiography was not performed due to rapid deterioration, limiting definitive identification of the embolic source.

DISCUSSION: This case illustrates the catastrophic embolic potential of untreated AF.
The sequential presentation of ischemia across multiple limbs suggests ongoing embolization from a persistent central source. Recurrent ischemia following successful thromboembolectomy should prompt urgent investigation for persistent embolic sources including intracardiac thrombi or endocarditis. The fatal outcome despite revascularization highlights the severe metabolic burden of multilimb reperfusion and the critical importance of early anticoagulation in AF.

CONCLUSION: Triple limb acute ischemia represents a rare, life-threatening manifestation of cardioembolic disease requiring immediate revascularization, systemic anticoagulation, and comprehensive etiological investigation to optimize limb salvage and survival.

P46 THE ROAD LESS TRAVELLED: DIRECT PAMPINIFORM PLEXUS ACCESS FOR ANTEGRADE VARICOCELE EMBOLIZATION

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ULSSA

INTRODUCTION: Varicocele is defined as abnormal dilatation of the pampiniform plexus secondary to venous reflux in the testicular drainage system. Both surgical and percutaneous treatments have demonstrated efficacy. Retrograde embolization via femoral venous access is the standard endovascular approach; however, it may be unsuccessful in the presence of complex venous anatomy. We report a case of successful varicocele embolization using an antegrade approach through direct puncture of the pampiniform plexus.

CASE REPORT: A 16-year-old male with a recurrent left-sided varicocele following prior open surgical repair was referred for vascular surgery evaluation. Retrograde catheterization of the left testicular vein via right femoral venous access was attempted but proved unsuccessful due to the presence of a duplicated circumaortic left renal vein and a markedly tortuous proximal testicular vein.
An antegrade approach was therefore undertaken. Under ultrasound guidance, direct puncture of the transition between the pampiniform plexus and the distal testicular vein at the level of the inguinal ring was performed using a micropuncture needle. A 0.014-inch Command ES guidewire was advanced, followed by placement of a 4F sheath. A Progreat microcatheter was then navigated proximally along the testicular vein, overcoming significant tortuosity.
A sandwich embolization technique was employed. Coils (10 mm and 12 mm) were first deployed in the proximal testicular vein, followed by injection of 4 mL of 3% polidocanol foam (2:1 air-to-liquid ratio).
Additional coils (8 mm and 10 mm) were subsequently placed in the distal segment, achieving complete occlusion. The procedure was completed without complications, and the patient reported resolution of symptoms on follow-up.

CONCLUSION: This case highlights that antegrade access to the testicular vein via direct puncture of the pampiniform plexus is a safe and effective alternative when retrograde catheterization is not feasible due to anatomical variations or prior interventions.

P47 POPLITEAL VEIN ANEURYSM: A RARE CAUSE OF PULMONARY EMBOLISM

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AIM: To report a rare cause of recurrent pulmonary embolism (PE) and to emphasize the importance of recognizing popliteal venous aneurysm (PVA) as a potentially life-threatening condition requiring definitive surgical management.

METHODS: We describe the case of a 75-year-old man who presented with sudden-onset dyspnea and palpitations. Computed tomography (CT) pulmonary angiography confirmed bilateral pulmonary embolism. A comprehensive evaluation was performed, including clinical, laboratory testing, thrombophilia screening, lower-limb duplex ultrasonography, and CT angiography. Clinical course, imaging findings and therapeutic interventions were reviewed. Subsequently referred for vascular surgery evaluation.

RESULTS: Lower-limb duplex ultrasonography revealed an occlusive deep vein thrombosis of the right popliteal vein. Despite adequate anticoagulation and clinical stability on edoxaban, follow-up CT angiography revealed a saccular aneurysm of the left popliteal vein measuring approximately 4 cm containing intraluminal thrombus and evidence of recurrent pulmonary embolism. The patient underwent open tangential aneurysmectomy with endoaneurysmorrhaphy without complications. Postoperative duplex ultrasound demonstrated normal venous flow and no residual ectasia. Long-term oral anticoagulation was instituted, with no further thromboembolic events observed during follow-up.

CONCLUSION: Popliteal venous aneurysm is an uncommon but clinically significant source of recurrent pulmonary embolism, even under adequate anticoagulation. This case underscores the need for a high index suspicion in patients with unexplained or recurrent PE and supports open surgical repair as effective strategy to prevent further embolic events.

P48 HYBRID REVASCULARIZATION FOR TRAUMATIC UPPER LIMB ARTERIAL INJURY IN A POLYTRAUMA PATIENT

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AIM: To highlight the pivotal role of emergency vascular surgery and the need for a hybrid open–endovascular approach in the management of complex arterial injuries in polytrauma patients.

METHODS: We present the case of a 28-year-old male admitted following a high-energy road traffic collision, resulting in severe polytrauma with a complex open injury to the right axillary region and active arterial hemorrhage. On arrival, the patient was hemodynamically unstable due to hemorrhagic shock. Emergency vascular surgical intervention was undertaken. Operative findings, intraoperative decision-making, and the technical rationale for a hybrid revascularization strategy were assessed.

RESULTS: Surgical exploration revealed extensive soft-tissue destruction in the right axilla with loss of distal pulses. Computed tomography (CT) angiography demonstrated a subclavian artery injury with occlusion at the retroclavicular segment. Conventional open exposure of the subclavian artery was deemed extremely challenging due to the patient's body habitus and the extent of soft-tissue trauma. Consequently, a hybrid solution was adopted. Endovascular recanalization was achieved via femoral access, followed by deployment of covered stent grafts (GORE® VIABAHN®7 x 100 mm and VBX 8 x 59 mm) to exclude the arterial lesion. This was combined with open axillary artery repair using a patch anastomosed to the distal end of the
stent graft. Final angiography confirmed patency of the reconstruction and restoration of axillary pulse, with effective hemorrhage control. Despite significant intraoperative blood loss requiring massive transfusion and vasopressor support, limb perfusion was successfully re-established. Although revascularization was initially successful, concomitant injuries led to transhumeral amputation.

CONCLUSION: This case underscores the critical importance of a hybrid open–endovascular approach in the management of complex axillary–subclavian arterial injuries in polytrauma patients when standard open techniques are not feasible. Hybrid revascularization can provide rapid hemorrhage control and restoration of arterial flow under challenging anatomical and physiological conditions, representing a valuable strategy in contemporary vascular trauma surgery.

P49 TREATMENT OF LYMPHOCELE AFTER AXILLO-BIFEMORAL BYPASS WITH DOXYCYCLINE INJECTIONS: A CASE REPORT

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INTRODUCTION: Lymphoceles are abnormal collections of lymphatic fluid caused by disruption of lymphatic channels and subsequent leakage of lymph. They most commonly occur in the pelvic, inguinal, and axillary regions, which are frequently approached in vascular surgery. Small lymphoceles are usually asymptomatic and tend to resolve spontaneously.
However, larger lymphoceles may become symptomatic and carry a risk of infection. Secondary infection represents a serious complication, particularly in patients with prosthetic vascular grafts.
We report a case of a large lymphocele developing along the tunneling path of an axillo-bifemoral bypass, successfully treated with doxycycline injections.

CASE PRESENTATION: We present the case of a 60-year-old man with bilateral chronic limb-threatening ischemia. His medical history included hypertension, active smoking, and chronic obstructive pulmonary disease. Computed tomography angiography revealed extensive bilateral aortoiliac occlusive disease (TASC II D). An axillo-bifemoral bypass using a 8mm dacron graft was performed to achieve revascularization of the lower limbs. The patient was discharged on postoperative day 3 with resolution of rest pain and without complications. Two weeks postoperatively, the patient presented at follow-up with a large, painless, soft mass, in the right thoracic region. Computed tomography suggested a postoperative lymphocele along the graft tunneling pathway, with no signs of infection. Ultrasound-guided percutaneous aspiration was performed, yielding 400 mL of clear, pale yellow fluid. Microbiological analysis was negative.
One week later, the lymphocele had recurred. Repeat aspiration was performed, followed by injection of 100 mg/5 mL doxycycline as a sclerosing agent. This procedure was repeated once per week for the duration of one month, resulting in complete resolution of the lymphocele without any complications.

CONCLUSION: Lymphocele formation is a recognized complication of open vascular surgery, particularly when involving axillary and inguinal regions rich in lymphatic tissue.
Management is especially important in large or symptomatic lymphoceles and in cases involving prosthetic grafts due to the risk of infection and consequent limb loss. Percutaneous treatment with sclerosing agents such as doxycycline is a safe and effective minimally invasive option, offering excellent outcomes while avoiding the need for surgical intervention.

P50 PALMA-DALE BYPASS IN KLIPPEL-TRÉNAUNAY SYNDROME - A CASE REPORT

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BACKGROUND: Klippel-Trénaunay syndrome (KTS) is a rare congenital vascular disorder characterized by capillary, venous, and lymphatic malformations, frequently associated with hypoplasia or agenesis of the deep venous system. Chronic venous hypertension in these patients can lead to severe morbidity. Surgical options remain limited when endovascular approaches are not feasible.

METHODS: We report a 25-year-old male with KTS and left lower limb venous insufficiency secondary to agenesis of the left iliac and superficial femoral veins. Following multidisciplinary evaluation, the patient underwent a Palma-Dale femoro-femoral venous bypass using the contralateral great saphenous vein with adjunctive arteriovenous fistula creation.

RESULTS: The postoperative course was uneventful, with discharge on postoperative day four under anticoagulation. At 1- and 3-month follow-up, the patient demonstrated significant clinical improvement, including reduction in limb edema and symptomatic relief.
Conclusion: Palma-Dale bypass remains a valuable surgical option in venous outflow obstruction in patients with absent or nonfunctional deep venous systems, particularly when endovascular techniques are not applicable.

P51 POPLITEAL VEIN ANEURYSM: A UNDERRECOGNIZED CAUSE OF RECURRENT PULMONARY EMBOLISM — CASE REPORT AND LITERATURE REVIEW

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INTRODUCTION: We present a rare case of recurrent pulmonary embolism (PE) caused by a popliteal venous aneurysm (PVA) treated by open surgical repair. A literature review of the current evidence on the surgical management of this condition was performed.

METHODS: We describe the case of a 75-year-old man who presented with sudden-onset dyspnea and palpitations. CT pulmonary angiography confirmed bilateral PE. A comprehensive evaluation was performed, including thrombophilia screening, lower-limb duplex ultrasonography, and CT angiography. A comprehensive literature search was performed using PubMed (MEDLINE) and Web of Science databases from inception through March 2026.

RESULTS: Initial duplex ultrasonography revealed occlusive deep vein thrombosis of the right popliteal vein. Despite adequate anticoagulation with edoxaban and clinical stability, follow-up CT angiography identified a saccular aneurysm of the left popliteal vein measuring approximately 4 cm, containing intraluminal thrombus, with evidence of recurrent PE. Open tangential aneurysmectomy with endoaneurysmorrhaphy was performed, without complications. Postoperative duplex ultrasound demonstrated normal venous flow and no residual ectasia. Long-term oral anticoagulation was maintained, with no further thromboembolic events during follow-up. Nine studies with 173 patients, were included in the literature review. Tangential aneurysmectomy with lateral venorrhaphy is the most frequently reported technique (61.3% of surgical cases), with no reported postoperative PE, a complication rate of 13%, and a recurrence rate of 10.4%.

CONCLUSIONS: PVA is a rare but potentially life-threatening cause of recurrent PE, even under adequate anticoagulation. This case underscores the need for a high index of suspicion in patients with unexplained or recurrent PE. Open surgical repair is a safe and effective strategy to prevent further embolic events.

P52 HOW TO SAVE A HEART: TREATMENT OF CORONARY SUBCLAVIAN STEAL SYNDROME- CASE REPORT

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ULSSA

INTRODUCTION: Coronary Subclavian Steal Syndrome (CSSS) is an uncommon but important cause of angina in patients with prior coronary artery bypass grafting (CABG). It typically occurs in individuals with a left internal mammary artery (LIMA) to left anterior descending artery (LAD) graft and significant proximal left subclavian artery (LSA) stenosis or occlusion. In this setting, retrograde blood flow through the LIMA graft supplies the subclavian artery distal to the stenosis, potentially compromising myocardial perfusion and resulting in ischemic symptoms.

CASE REPORT: A 64-year-old male with a history of coronary artery disease status post CABG with a LIMA–LAD graft and TAVI performed in 2021 presented to the emergency

department with substernal chest pain concerning for unstable angina. His medical history was significant for hypertension, hyperlipidemia, and a 30 pack-year smoking history with ongoing tobacco use.
Given his cardiovascular history and risk factors, coronary angiography was performed, revealing severe stenosis of the proximal left subclavian artery with retrograde flow through a patent LIMA graft, consistent with CSSS.
Computed tomography angiography further demonstrated occlusion of the right vertebral artery, occlusion of the left common carotid artery, a large left vertebral artery, and significant LSA stenosis extending to the ostium of the vertebral artery. These findings indicated a high risk of cerebrovascular compromise with endovascular intervention due to potential vertebral artery lesion during angioplasty and stenting of the LSA. Given the high ischemic stroke risk with LSA angioplasty/stenting, the patient underwent a right-to-left axillo-axillary artery bypass. Postoperative imaging confirmed restoration of antegrade flow. The patient had an uneventful postoperative course and was discharged without complications. At follow-up, he remained free of anginal symptoms.

CONCLUSION: CSSS is a rare cause of angina. A high index of suspicion is required, particularly in patients with cardiovascular risk factors and prior LIMA grafting. While endovascular intervention with percutaneous angioplasty and stenting is generally the recommended treatment option for subclavian artery stenosis/occlusion, open surgery remains a safe and effective alternative in cases of complex anatomy or high risk cerebrovascular compromise

P53 FEMOROPOPLITEAL SUPERA STENTING IN THE REAL WORLD: HOW DOES IT IMPACT ONE-YEAR LIMB OUTCOMES?

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BACKGROUND: Peripheral arterial disease, particularly chronic limb-threatening ischemia, is associated with high morbidity, mortality, and risk of limb loss. Femoropopliteal stenting with SUPERA® (Abbott Vascular) has emerged as a promising therapeutic option; however, real-world evidence remains limited. This study aimed to evaluate one-year outcomes of femoropopliteal SUPERA® stenting in a real-world population.

METHODS: This single-centre retrospective cohort that included 52 patients treated with femoropopliteal SUPERA® stenting between January 2023 and December 2024. The primary endpoint was one-year Major Adverse Limb Events (MALE). Secondary endpoints included major amputation, clinically driven target lesion revascularization, amputation-free survival, and primary, primary-assisted, and secondary patency.

RESULTS: The cohort included 52 patients (67.3% male) with a mean age of 71.1 ± 11.0 years. Diabetes, hypertension, and smoking history were present in 76.9%, 80.8%, and 40.4% of patients, respectively. Chronic limb-threatening ischemia with tissue loss was the main indication for revascularization (86.6%), and 44.2% of patients were classified as GLASS stage III. At 1 year, MALE occurred in 38.5% of patients (20/52), apparently driven mainly driven by reintervention of the treated femoropopliteal segment, whereas major amputation remained infrequent at 9.6% (5/52). Amputation-free survival was 90.4%. Primary, primary-assisted, and secondary patency rates were 61.7%, 74.5%, and 78.7%, respectively. No significant differences were observed between GLASS stages I–II and III in MALE (41.4% vs 34.8%, p = 0.627), primary patency (60.0% vs 63.6%, p = 0.798), or amputation-free survival (96.6% vs 82.6%, p = 0.090). No independent predictors of MALE were identified.

CONCLUSION: In a complex femoropopliteal population with advanced limb threat, SUPERA® stenting provided favourable one-year limb preservation, even though adverse limb events remained frequent.

P54 VASCULAR EHLERS-DANLOS SYNDROME: COLONIC PERFORATION COMPLICATED BY ILIAC ARTERY PSEUDOANEURYSM

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INTRODUCTION: Vascular Ehlers-Danlos Syndrome (vEDS) is a rare autosomal dominant disorder caused by COL3A1 variants, with a prevalence of 1:100.000-200.000 and <4% of EDS subtypes. Median survival is 48-50 years. Spontaneous

colonic perforation, due to type III collagen defect, occurs in ~22% of patients and has a reperforation rate up to 47%. Open vascular repair carries 7-41% mortality, while endovascular treatment of iliac pathology is limited to case reports, with no guidelines.

OBJECTIVES: To report spontaneous colonic perforation in vEDS complicated by iliac artery pseudoaneurysm, successfully managed with endovascular repair in an exceptionally high-risk patient.
METHODS: Patient's clinical information and imagiological studies were reviewed retrospectively.

CASE REPORT: A 45-year-old woman with vEDS and a pancreatic neuroendocrine tumour had undergone total pancreatectomy, splenectomy, partial gastrectomy, and arterial reconstruction with PTFE graft (later removed due to thrombosis), and right nephrectomy for ureteral dehiscence, with a solitary kidney. Two years later, she presented with right iliac fossa pain, fever (38°C), leucocytosis (15.000/µL) and CRP 255mg/L. CT showed a peri-arterial abscess adjacent to the right common iliac artery with gas and an 8 mm saccular pseudoaneurysm. Prosthetic graft infection was excluded; Spontaneous colonic perforation was the presumed cause. Management included percutaneous drainage and targeted antibiotherapy (ertapenem for piperacillin-tazobactam-resistent *E.Coli*). On day 13, the pseudoaneurysm was excluded with a balloon-expandable covered stent (VBX 10x39 mm) via ultrasound-guided femoral access with manual compression. Doppler confirmed thrombosis on day 18. AKIN 3 required temporary haemodialysis. She was discharged on day 24 with renal recovery.

CONCLUSION: In vEDS, spontaneous colonic perforation is a severe and recurrent complication that may lead to perivascular collections. Endovascular repair of affected arteries is feasible and may represent the only viable option in surgically high-risk patients.

P55 HEMOSUCCUS PANCREATICUS SECONDARY TO PANCREATODUODENAL ARTERY PSEUDOANEURYSM: SUCCESSFUL ENDOVASCULAR MANAGEMENT

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INTRODUCTION: Hemosuccus pancreaticus is a rare but potentially fatal cause of upper gastrointestinal bleeding, most frequently resulting from rupture of a pseudoaneurysm of a visceral artery into the pancreatic duct. Although uncommon, prompt recognition and vascular management are crucial to patient survival.

CASE REPORT: A 47-year-old man with a history of alcohol-induced pancreatitis presented with melena, severe microcytic anemia, and recurrent epigastric pain. After upper endoscopy revealed blood emerging from the major papilla, contrast-enhanced computed tomography identified a large pseudoaneurysm of the pancreatoduodenal artery. Endovascular coil embolization was performed using selective catheterization of the affected branch. Embolization achieved complete exclusion of the pseudoaneurysm and immediate cessation of bleeding, with no recurrence or complications during follow-up. The patient had an uneventful recovery and normalization of hemoglobin levels.

CONCLUSION: Hemosuccus pancreaticus should be considered in patients with chronic pancreatitis and obscure gastrointestinal bleeding. Endovascular embolization represents a safe, minimally invasive, and definitive treatment option for pancreatoduodenal artery pseudoaneurysms, emphasizing the central role of vascular intervention in the management of this rare condition.

P56 PATENT BUT UNCONTROLLED: TAPERED PTFE GRAFT INTERPOSITION AFTER FIVE YEARS OF REFRACTORY HIGH-FLOW AVF

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INTRODUCTION: High-flow arteriovenous fistulae (AVF) represent a complex challenge, associated with aneurysmal degeneration, mural thrombosis, and central venous stenosis. Beyond access complications, sustained high flow carries systemic consequences - cardiac volume overload and steal syndrome - making flow control a priority.

AIM: To report the sequential management of a refractory high-flow AVF over five years, culminating in tapered PTFE graft interposition.

CLINICAL CASE: A 54-year-old woman with end-stage renal disease of undetermined aetiology on haemodialysis developed a high-flow left brachiocephalic AVF (constructed January 2021), with progressive aneurysmal degeneration of the cephalic vein, recurrent mural thrombosis, and cephalic arch stenosis — fed by a large-calibre brachial artery (7.8 mm). Recurrent cephalic arch stenoses required repeated high-pressure PTA (balloons up to 12×40 mm, 36 atm) to

maintain patency; each intervention removed a natural flow-limiting resistance, and Qa escalated relentlessly. In January 2024, cephalo-axillary transposition addressed the arch stenosis; concomitant anastomotic banding aimed at flow reduction, yet Qa rose to 2700 ml/min at two months. Mural thrombosis and anastomotic stenosis recurred, requiring further PTA (10×40 mm, 18 atm). Re-intervention - ligation of the cephalic vein and new latero-terminal brachiocephalic anastomosis - similarly failed, with Qa 2800 ml/min and recurrent thrombosis within three months.
In March 2026, a tapered 4×7 mm PTFE graft was interposed between the brachial artery and cephalic vein, combined with cephalic arch angioplasty with satisfactory angiographic result. Endovascular access was technically demanding, requiring a hydrophilic guidewire to navigate the severely tortuous aneurysmal vein. At the venous anastomosis, calibre mismatch between the prosthetic limb and the ectatic cephalic vein required intraoperative anastomotic tailoring. Post-operative Qa was 673 ml/min at three weeks, with preserved radial pulse and satisfactory thrill.

DISCUSSION/CONCLUSION: This case illustrates the inherent tension between access preservation and flow reduction in high-flow AVF - a challenging cycle in which each intervention carries its own limitations, even when specialised techniques such as cephalo-axillary transposition are employed. Tapered PTFE graft interposition.

P57 POPLITEAL VEIN ANEURYSM WITH CONCOMITANT ILIAC VEIN COMPRESSION: WHICH LESION SHOULD BE TREATED FIRST?

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INTRODUCTION: Popliteal vein aneurysm (PVA) is a rare cause of venous thromboembolism, associated with deep vein thrombosis (DVT) and pulmonary embolism (PE) due to flow stasis. Anticoagulation alone does not eliminate the embolic source, and surgical repair may be recommended in high-risk cases. May–Thurner anatomy may increase the risk of post-thrombotic syndrome severity by causing venous outflow obstruction. Few reports describe this association, and the optimal treatment sequence remains unclear.

CASE REPORT: A 76-year-old woman with varicose veins presented with ascending left lower limb DVT involving the popliteal, femoral, and iliac veins. Venous computed Tomography (v-CT) identified a thrombosed saccular popliteal vein aneurysm (27×19mm) with thrombus extension up to the May–Thurner point and compression at this point. Rivaroxaban was initiated.
At 6-month follow-up, she reported venous claudication, edema, and pain (Villalta score 10). Both Doppler ultrasound (DUS) and v-CT showed near-complete recanalization, persistent stasis in the aneurysm, and uncertain iliac vein patency. Aneurysm repair with tangential aneurysmectomy and lateral venorrhaphy via a posterior approach was performed without complications.
Postoperatively, left lower limb edema worsened despite no DVT recurrence, suggesting significant outflow obstruction. One month later, left iliac vein angioplasty and stenting were performed, leading to complete edema resolution. Follow-up DUS confirmed stent patency and a normal popliteal vein, without dilation or thrombus. Anticoagulation was continued, with no complications.

CONCLUSION: This case illustrates the rare occurrence of aneurysmal and obstructive venous disease. After initial anticoagulation achieved partial recanalization, the rationale of which lesion (aneurysmal or obstructive) should be treated first is not currently established. By treating the aneurysm first, the potential embolic source is eliminated before reestablishing iliac vein patency, potentially reducing the risk of pulmonary embolism. An inverted order of treatment or even simultaneous treatment of both lesions could also be considered. Combined PVA and iliac compression represent a multifactorial cause of DVT and require an individualized approach based on embolic risk, thrombus burden, and outflow obstruction severity to prevent recurrence and optimize outcomes.

P58 BETTER LATE THAN NEVER - SUCCESSFUL REVASCULARIZATION IN TWO CASES OF RENAL ARTERY THROMBOSIS

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BACKGROUND: Acute renal artery thrombosis usually causes irreversible infarction; however, native kidney viability can occasionally be preserved through collateral circulation or residual partial perfusion. Two cases are presented in which delayed endovascular intervention successfully restored renal function, effectively averting permanent dialysis dependency in a solitary kidney patient.

CASE SERIES:
Case 1: A 62-year-old male, eight days post-left living-donor nephrectomy, presented with acute kidney injury (creatinine 6.07 mg/dL). Imaging revealed complete occlusion of the

right main renal artery with partial salvage of the lower pole via an accessory artery. Despite the delayed presentation (symptoms starting 48 hours prior), he underwent catheter-directed thrombolysis with alteplase for 72 hours. Revascularization was successful; at 12-month follow-up, the patient remains dialysis-independent with a stable GFR of 20 mL/min/1.73 m².
Case 2: A 77-year-old female with Raynaud syndrome presented with left lumbar pain and an increase in serum creatinine (1.16 mg/dL). Contrast-Enhanced Computed Tomography demonstrated an occlusive thrombus in the left renal artery with signs of underlying dissection ("pencil point" appearance). She was treated with immediate catheter thromboaspiration, stent placement, and adjunctive catheter-directed thrombolysis. Perfusion was restored, and the patient was discharged with a recovered serum creatinine of 0.91 mg/dL.

CONCLUSION: In Case 1, the presence of an accessory polar artery likely maintained minimal viability (the "hibernating" nephron effect), while Case 2 highlights the success of combined mechanical and pharmacological therapy for dissection-related thrombosis. These cases show that late intervention should be considered, especially in solitary kidney scenarios, as achieving even a modest glomerular filtration rate can significantly alter the patient's quality of life by avoiding renal replacement therapy.

P59 ENDOVASCULAR-FIRST STAGED MANAGEMENT OF LOWER-LIMB ARTERIOVENOUS MALFORMATIONS (AVMS) IN HIGH-RISK SURGICAL LOCATIONS

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BACKGROUND: Lower-limb arteriovenous malformations (AVMs) are rare progressive high-flow lesions. Management is particularly challenging in anatomically complex regions such as the fibular head, where surgery carries significant morbidity due to the risk of common peroneal nerve injury. In this setting, an endovascular-first strategy may provide effective nidus control while avoiding open dissection.

CASE REPORT: A 22-year-old male was referred for two progressively enlarging, painful vascular lesions in the anterior and lateral aspects of the left leg, with intermittent bleeding. Clinical examination showed preserved distal pulses and absence of edema, varicose veins, or trophic skin changes. Duplex ultrasound identified a high-flow vascular malformation with arterial and venous components.
Angio-MRI demonstrated two contiguous AVMs connected by superficial cutaneous branches: one in the anterior compartment (32×7×28mm) and another in the posterolateral compartment with deep tissue involvement at the level of the fibular head (13×56×41mm).
Given the lesion topography and the high risk of surgical peroneal nerve morbidity, a staged minimally invasive nidus-oriented embolization strategy was chosen. The anterior AVM was treated with superselective embolization of afferent vessels using Onyx-34, complemented by fluoro-guided direct foam injection.
The postoperative course was complicated by sensory disturbance and weakness of the dorsiflexor compartment of the left leg. Electromyography confirmed partial denervation, consistent with ischemic involvement of the peroneal nerve territory. The patient underwent structured rehabilitation with full recovery.
At 1-year imaging follow-up, angio-MRI showed a marked reduction of the anterior AVM, with only a small residual superficial enhancing component. The posterolateral AVM remained unchanged, and due to its superficial residual nidus adjacent to cutaneous nerve branches, a second-stage direct puncture embolization is planned.

CONCLUSION: This case highlights the role of staged endovascular embolization as first-line treatment for lower-limb AVMs in high-risk surgical locations. In the fibular head region, this strategy may avoid the morbidity of open dissection and peroneal nerve injury. However, ischemic neuropathy remains a relevant procedural risk, reinforcing the need for meticulous angioarchitectural planning and long-term surveillance.

P60 FROM FAILURE TO SALVAGE: A COMPLEX INFECTED FEMORO-FEMORAL BYPASS RECONSTRUCTED WITH A BIOLOGICAL GRAFT

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BACKGROUND: Management of infected vascular prostheses in patients with critical limb-threatening ischemia (CLTI) remains a major surgical challenge, particularly after multiple failed revascularization attempts. Biological grafts may represent a valuable salvage option in complex redo scenarios.

CASE PRESENTATION: We report a 68-year-old male with type 2 diabetes mellitus, hypertension, smoking, and previous aortobifemoral bypass performed abroad. He presented with worsening right lower limb claudication progressing to CLTI with hallux ulceration. CT angiography demonstrated occlusion of the right limb of the aortobifemoral bypass.

He underwent a left-to-right femoro-femoral crossover bypass with a PTFE graft, an ipsilateral common femoral–profunda femoris PTFE interposition graft, and a femoro-popliteal bypass using an autologous vein conduit. Postoperatively, the patient developed graft thrombosis and anastomotic failure requiring reintervention and thrombectomy. Following discharge, he was readmitted with right inguinal swelling and hematoma. Imaging raised suspicion of prosthetic graft infection, confirmed by Klebsiella pneumoniae. Initial management included abscess drainage and antibiotics tailored to sensitivity results. Surgical removal of the infected common femoral–profunda femoris prosthesis was performed, followed by negative pressure wound therapy with instillation (normal saline and 10% dextrose; NPWTi, Veraflo™). Intraoperatively, extension of the abscess to the femoro-femoral graft was identified. Given persistent infection and prior failed reconstructions, the infected femoro-femoral crossover bypass was excised and reconstruction was performed using a bovine biological graft (Artegraft) with extensive debridement.

RESULTS: Postoperative recovery was favorable, with infection resolution, improved inflammatory markers, and preserved limb perfusion. Duplex ultrasound confirmed a patent biological graft with satisfactory flow.
Conclusion: Biological grafts represent an effective salvage option in infected vascular prostheses after multiple failed revascularizations. Close follow-up is essential to monitor graft durability and structural integrity.

Keywords: CLTI, vascular graft infection, femoro-femoral bypass, biological graft, limb salvage

P61 WHEN KIDNEYS BLEED: UNRAVELLING A CASE OF WUNDERLICH SYNDROME

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BACKGROUND: Wunderlich Syndrome (WS) is a high-mortality clinical entity defined by spontaneous, non-traumatic retroperitoneal hemorrhage. In patients with end-stage renal disease (ESRD), the underlying vascular architecture of atrophic native kidneys often undergoes cystic transformation (Acquired Cystic Kidney Disease), leading to increased vascular fragility and a heightened risk of spontaneous arterial rupture and exsanguination.

CASE: A 36-year-old female with a history of ESRD secondary to IgA nephropathy, currently on peritoneal dialysis (PD) following a kidney transplant, presented to the Emergency Department with acute left flank pain. Upon admission, the patient was tachycardic and hypotensive. Initial laboratory work revealed a significant drop in hemoglobin from a baseline of 10.5 g/dL to 8.2 g/dL, further declining to 6.5 g/dL during observation. Renal ultrasonography initially identified a frankly atrophic left kidney with a heterogeneous hypoechoic mass (7,7 x 4,6 cm) in the upper pole, suggesting either complicated cystitis or pyelonephritis. Subsequent Contrast-Enhanced Computed Tomography (CT) provided a definitive diagnosis, revealing a globose left kidney with an 80 mm oval formation consistent with a hemorrhagic cyst. Futhermore, the CT demonstrated hyperdense areas post-contrast, indicating active hemorrhage.
Embolization of the left renal artery was achieved using 300–500 µm microparticles, followed by the deployment of 7 mm and 10 mm coils. Post-procedural angiography demonstrated complete resolution of the arterial blush.

CONCLUSION: This case highlights the necessity of early vascular imaging in ESRD patients presenting with acute abdomen. Even in atrophic, non-functional native kidneys, the progression of cystic disease can lead to spontaneous vascular compromise. The identification of active haemorrhage via CT is paramount to distinguish Wunderlich Syndrome, allowing for immediate life-saving interventions.

P62 TECHNICAL CONSIDERATIONS IN THE ENDOVASCULAR EXCLUSION OF A CELIAC TRUNK PSEUDOANEURYSM

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BACKGROUND: Visceral artery aneurysms (VAAs) are rare, with an estimated prevalence of 0.01% to 0.2%. Celiac artery aneurysms (CAAs) account for approximately 4% of all VAAs. While treatment indications for true aneurysms are relatively well established, guidance for pseudoaneurysms remains less clearly defined. In anatomically suitable patients, an endovascular-first approach is generally favored due to its lower morbidity compared with open repair.

CASE REPORT: A 63-year-old male with a history of prior smoking had previously undergone percutaneous endovascular aortic repair (pEVAR) with a right iliac branch endoprosthesis (IBE) (GORE® EXCLUDER® C3) for concomitant abdominal aortic and right common iliac artery aneurysms. Routine follow-up with computed tomography angiography identified a 3-cm celiac trunk pseudoaneurysm. Given its morphology and size, endovascular exclusion was indicated. The procedure was performed via bilateral femoral access.

An 8-Fr steerable sheath (TourGuide™, Medtronic) was advanced through the right femoral artery. The splenic and common hepatic arteries were selectively catheterized using a Berenstein catheter and a 0.035-inch guidewire. To prevent retrograde perfusion, the proximal splenic artery was occluded using a 10 × 7 mm Amplatzer™ Vascular Plug. Subsequently, the pseudoaneurysm was excluded using a self-expanding covered stent (Viabahn®, 7 × 50 mm) deployed into the common hepatic artery, combined with a balloon-expandable covered stent (Viabahn VBX®, 8 × 39 mm) positioned at the celiac artery ostium. Completion angiography demonstrated successful exclusion of the pseudoaneurysm without endoleak. Femoral access sites were closed using percutaneous closure devices.
No evidence of splenic ischemia was observed. The patient had an uneventful recovery and was discharged on postoperative day 1.

CONCLUSION: This case underscores the technical nuances involved in the endovascular management of celiac artery pseudoaneurysms. Careful preoperative planning, appropriate device selection, and strategic embolization to prevent retrograde perfusion are critical to achieving durable exclusion. An endovascular-first strategy represents a safe and effective option in appropriately selected patients.

P63 SPONTANEOUS RUPTURE OF A HIGH-FLOW MEGA ARTERIOVENOUS FISTULA

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BACKGROUND: Arteriovenous fistula (AVF) aneurysmal degeneration is a recognized long-term complication in patients undergoing chronic hemodialysis, commonly associated with high-flow states (>2000 mL/min) and progressive vascular remodeling. Long-standing high-flow AVFs may enlarge and promote aneurysmal degeneration, including involvement of the inflow artery, particularly in kidney transplant recipients. We report a case of a non-functioning AVF (unused since 2016) presenting with spontaneous rupture and life-threatening hemorrhage requiring urgent surgical management.

CASE PRESENTATION: A 60-year-old male, independent in daily activities, with hypertension and end-stage renal disease, underwent hemodialysis via a left brachiocephalic AVF from 2009 to 2016, when he received a kidney transplant. He presented to the Emergency Department with active bleeding from the fistula site.
He was hemodynamically stable but had ongoing hemorrhage and prominent collateral venous circulation, with a hemoglobin drop from 13.4 to 9.5 g/dL. A tourniquet was applied promptly for hemorrhage control before transfer to the operating theatre.
Doppler ultrasound demonstrated a high-flow AVF (5,500 mL/min) with a 28 mm aneurysmal dilatation of the brachial artery. The patient underwent urgent surgery with ligation of the AVF and venous aneurysmectomy in the emergency setting. Hemostasis was achieved without complications. The patient remains hospitalized for planned further treatment of a brachial artery aneurysm with aneurysmectomy and revascularization.
High-flow AVFs are a significant risk factor for late complications. After kidney transplantation, progressive enlargement of outflow veins and increased flow may occur, potentially accelerated in the post-transplant period. Surveillance with Doppler ultrasound is essential for early detection, and timely intervention may prevent catastrophic rupture.

CONCLUSION: This case highlights the importance of vigilance in long-standing AVFs, especially in high-flow states. Early surgical management is crucial to prevent life-threatening hemorrhagic complications.

Keywords: Arteriovenous fistula; high-flow AVF; aneurysm; hemodialysis; end-stage renal disease; vascular access complications; aneurysmectomy; vascular surgery; hemorrhage.

P64 WHEN THE BULL STRIKES: THE LETHAL SYNERGY OF TRAUMA AND ABDOMINAL AORTIC ANEURYSM

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INTRODUCTION: Abdominal aortic aneurysm (AAA) is associated with severe complications, particularly rupture and thromboembolism[1]. Blunt abdominal aortic injury is rare but may result in significant morbidity and mortality[2,3]. We report a rare case of a previously asymptomatic AAA complicated by distal embolization following blunt trauma caused by a bull attack, a mechanism (bull attack) not previously described in the literature to our knowledge.

CLINICAL CASE: An 81-year-old man with a known infrarenal AAA (30 mm two years prior) presented with Rutherford IIb acute limb ischemia of the right lower limb 10 hours after blunt trauma caused by a bull attack. Physical examination revealed absence of the right femoral pulse, with preserved contralateral findings. In the context of polytrauma and given these findings, computed tomography angiography

(CTA) was performed, demonstrating a patent infrarenal AAA measuring 47 mm, with intraluminal thrombus and occlusion of the right common iliac artery. The thrombus exhibited an atypical morphology, with an irregular and eccentric configuration, and a proximal tongue-like projection. Following stabilization, urgent intervention was performed (> 12 hours after trauma). Right femoral and popliteal thromboembolectomy restored distal perfusion, with multiphasic flow on duplex ultrasound. Approximately 30 minutes later, contralateral ischemia developed, requiring left-side tromboembolectomy with comparable results. With the aim of controlling the embolic source, EVAR was performed via open surgical exposure of the common femoral arteries. Despite initial stabilization, the patient deteriorated due to reperfusion injury (with rhabdomyolysis and acute kidney injury), as well as acute respiratory distress syndrome, ultimately resulting in death.

CONCLUSION: This case illustrates a rare and unusual mechanism of injury[2]. Given the atypical morphology of the aneurysm intraluminal thrombus, likely related to blunt trauma sustained during a bull attack, together with acute right lower limb ischemia due to right common iliac artery occlusion, distal embolization from the AAA appears to be the most plausible mechanism. Nonetheless, alternative mechanisms, including iliac artery dissection or intimal injury, cannot be excluded. Trauma-induced thromboembolism in the context of AAA underscores the importance of early recognition and prompt intervention. However, prognosis may remain poor due to systemic complications[3].

P65 THE SILENT MASS BEHIND THE KNEE: A POPLITEAL ANEURYSM MIMICKING NEUROLOGICAL DEFICIT

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BACKGROUND: Popliteal artery aneurysm (PAA) is the most common peripheral arterial aneurysm and is typically asymptomatic. When symptomatic, it usually presents with thrombosis or distal embolization leading to acute limb ischemia. Compressive symptoms affecting adjacent neurovascular structures are rare and may delay diagnosis.

CASE PRESENTATION: We report the case of a 60-year-old institutionalized male with a history of schizophrenia, presenting with left foot pain, coldness, and motor deficit. Physical examination revealed edema, pallor, and sensory-motor impairment of the left foot, with preserved distal pulses. A pulsatile, expansile mass was noted in the left popliteal fossa, associated with a tense and tender calf on palpation.

Arterial Doppler ultrasound demonstrated a large (~45 mm) popliteal artery aneurysm with mural thrombus and maintained patency, causing extrinsic compression of the neurovascular bundle.

The patient underwent surgical treatment consisting of popliteal aneurysmectomy with interposition bypass using an ipsilateral reversed great saphenous vein (rGSV) graft, performed via a posterior approach in the left lower extremity, combined with decompressive fasciotomies.

Postoperatively, the patient showed clinical improvement with recovery of neurological deficits and preserved limb perfusion.

This case highlights an unusual presentation of PAA with predominant neurological symptoms due to compressive effects rather than ischemia. Awareness of this presentation is essential to avoid delayed diagnosis and to ensure timely surgical intervention.

Keywords: Popliteal artery aneurysm; neurovascular compression; peripheral aneurysm; vascular surgery; case report.

P66 VASCULAR INJURY IN DISPLACED PEDIATRIC SUPRACONDYLAR HUMERAL FRACTURES: A FOUR-CASE RETROSPECTIVE SERIES

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ULS S. José

INTRODUCTION: Supracondylar humeral fractures are the most common elbow fractures in children. In displaced injuries (Gartland type III–IV), vascular injury, particularly of the brachial artery, occurs in 5%–15% of cases. Recent acute limb ischemia guidelines support expectant management of the pink pulseless hand after fracture reduction when perfusion is preserved and there are no signs of ischemia. We report our institutional experience following this approach, which differed from our previous practice.

METHODS: We performed a retrospective analysis of four cases of children aged 5–7 years with supracondylar humeral fractures and arterial compromise, assessed by the vascular surgery team at our institution in 2025.

RESULTS: In all cases, distal pulses were absent despite a warm, well-perfused hand, normal capillary refill, and preserved oxygen saturation. Duplex ultrasound showed monophasic distal flow and brachial artery occlusion at the fracture level, consistent with intimal injury/contusion. All patients underwent closed reduction and percutaneous Kirschner wire fixation, therapeutic enoxaparin, and close

clinical surveillance. Mean hospital stay was 4.75 days, and all were discharged on enoxaparin. Progressive pulse recovery occurred in three cases, with arterial repermeabilization confirmed on follow-up duplex ultrasound. In the fourth patient, clinical deterioration after discharge, with malperfusion and rest pain, prompted surgical exploration, which revealed entrapment of the brachial artery and nerve within the fracture site, requiring thrombectomy, focal resection, and end-to-end anastomosis. The postoperative course was favorable, with restoration of distal pulse; the patient was discharged on postoperative day 3 with therapeutic enoxaparin and single antiplatelet therapy. All patients had median and/or anterior interosseous nerve deficits, with partial neurological recovery and persistent residual sensory deficits.

CONCLUSION: Arterial injuries associated with displaced supracondylar humeral fractures are heterogeneous in presentation and course. In the pink pulseless hand, an initial expectant approach may be safe when strict clinical and ultrasound surveillance is feasible, in line with recent guidelines. However, any clinical deterioration should prompt early surgical exploration. The frequent association with nerve injury highlights the need for prolonged multidisciplinary follow-up.

P67 THE VORTEC (VIABHAN OPEN REVASCULARIZATION) TECHNIQUE FOR HYBRID ILIOFEMORAL RECONSTRUCTION IN HEAVILY CALCIFIED TASC II D LESIONS

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INTRODUCTION: Extensive, heavily calcified TASC II D lesions are traditionally managed with open surgery. However, hybrid approaches combining open and endovascular techniques can be valuable alternatives, enabling effective and less invasive revascularization, particularly in frail patients. We report a case illustrating an innovative hybrid strategy for complex iliofemoral occlusive disease.

CASE REPORT: A 79-year-old independent male with multiple cardiovascular comorbidities, presented with rest pain and minor digital necrosis of the third toe of the left foot. Clinical examination revealed absent pulses in both lower limbs consistent with advanced limb ischaemia. Duplex ultrasound and computed tomography angiography demonstrated severe multilevel atherosclerotic disease, characterized by extensive calcification of both common femoral arteries and bilateral occlusion of the external iliac arteries. Additionally, both superficial femoral arteries were occluded. A hybrid inflow revascularization strategy for the left lower limb was undertaken using a 'VORTEC' (VIABAHN Open Revascularization TEChnique) technique via a single femoral approach. Initially, a left iliofemoral inlay prosthetic bypass was constructed using an 8 mm ePTFE graft, with a single distal anastomosis to the femoral bifurcation. The left external iliac artery was subsequently punctured through a non-calcified segment of the occlusion, allowing successful guidewire passage. The graft was then punctured, and the guidewire reintroduced through the prosthesis using an 8F sheath. A 9 mm self-expanding stent-graft was deployed in the external iliac artery, extending into the graft to establish inflow continuity, and an 11 mm balloon-expandable stent-graft in the common iliac artery. Final angiography demonstrated an excellent result, with restoration of robust inflow and no residual stenosis. The postoperative course was uneventful, and the patient was discharged on postoperative day two. At one-month follow-up, the reconstruction remained patent, with near-complete wound healing.

CONCLUSION: This case highlights an innovative hybrid approach combining open and endovascular techniques using a VORTEC strategy to achieve effective and low risk revascularization in a frail patient with complex, heavily calcified TASC II D iliofemoral disease. This hybrid approach expands the boundaries of limb salvage in challenging anatomical settings, because its appeals a telescopic sutureless technique to facilitate the making of a challenging proximal anastomosis.

P68 GIANT ANASTOMOTIC PSEUDOANEURYSM AFTER POPLITEAL BYPASS SURGERY

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Anastomotic pseudoaneurysms are rare but potentially serious complications that require timely diagnosis and treatment to prevent limb- or life-threatening events such as thrombosis, distal embolization, or rupture.
We report the case of a 67-year-old male with a

medical history of arterial hypertension, dyslipidaemia, cerebrovascular disease, hypertensive heart failure, and chronic kidney disease. Relevant surgical history included a bilateral supragenicular popliteal-infragenicular popliteal bypass with ipsilateral inverted great saphenous vein, for popliteal artery aneurysms, performed approximately four years earlier, as well as endovascular aneurysm repair (EVAR) with bilateral iliac branch devices (IBDs) for an aortoiliac aneurysm.
In the preceding year, the patient had been hospitalized for septic shock of urinary origin due to extended-spectrum beta-lactamase–producing Klebsiella pneumoniae. Routine arterial duplex ultrasound surveillance identified a large pseudoaneurysm (11 × 11 cm) at the proximal anastomosis of the right bypass graft, partially thrombosed with heterogeneous content.
The patient reported progressive swelling of the medial right thigh over the previous three months. Physical examination revealed a pulsatile, expansile mass, with preservation of all the limb pulses. Computed tomography angiography confirmed a large perianastomotic aneurysmal sac with parcial opacification.
The patient underwent interposition of a prosthetic graft from the mid superficial femoral artery (with ligation of the superficial femoral artery distal to the anastomosis) to the venous bypass, combined with drainage of the pseudoaneurysm and endoaneurysmorrhaphy. Microbiological cultures from the pseudoaneurysm capsule and content, as well as blood cultures, were negative. The postoperative course was uneventful, with favourable clinical evolution and maintenance of a palpable pedal pulse, and the patient was discharged on postoperative day five. This case highlights the late presentation of a large anastomotic pseudoaneurysm following infrainguinal bypass surgery, underlining the importance of imaging surveillance and timely surgical intervention to prevent severe complications.

P69 TRANSARTERIAL ETHANOL EMBOLIZATION OF A COMPLEX PLANTAR ARTERIOVENOUS MALFORMATION IN A CHILD – TECHNICAL CHALLENGES AND EARLY RESULTS

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INTRODUCTION: Arteriovenous malformations (AVMs) of the plantar foot are uncommon high-flow lesions that frequently cause pain, gait disturbance and equinus posture in pediatric patients. Treatment is challenging due to the complex anatomy and risk of functional impairment.

CASE REPORT: A 9-year-old boy with a congenital right plantar AVM was referred due to progressive gait impairment, recent worsening of the plantar lesion and pulsatile sensation.
Physical examination revealed phototype VI and a deep 5 cm nodule on the plantar surface without thrill. MRI demonstrated a voluminous, elongated vascular malformation with predominant deep component and subcutaneous extension along the intermediate-lateral plantar aspect, extending approximately 8 cm toward the medial ankle and posterior tibial neurovascular bundle. Duplex ultrasound confirmed an AVM without phleboliths. The patient underwent transarterial sclerotherapy with absolute ethanol under general anesthesia. Selective angiography via the popliteal and posterior tibial arteries revealed a complex AVM mainly supplied by the posterior tibial artery (lateral plantar branch) with communication to the dorsalis pedis artery. The angioarchitecture was difficult to classify, compatible with Yakes type II or IV, presenting multiple direct arteriovenous fistulas and a challenging nidus.
Superselective catheterization of the nidus was achieved with a microcatheter. After intra-nidal administration of 0.5 mg nitroglycerin to relieve spasm, absolute ethanol was injected in multiple sessions with temporary occlusion of draining veins. Final angiography showed significant devascularization of the malformation with residual nidus and preserved patency of the distal arteries and digital branches.

RESULTS: The procedure was uneventful with no neurological deficits. At early follow-up the patient reported mild improvement in pain and a less voluminous lesion, although mild pulsatility persisted. Control duplex ultrasound demonstrated reduced flow in the anterior tibial artery, partial thrombosis of the AVM (more pronounced in the midfoot), more pulsatile flow pattern and decreased fistulous component. Residual malformation in the calcaneal region was identified, requiring further staged treatment planning.

CONCLUSION: Transarterial ethanol embolization is an effective therapeutic option for complex plantar AVMs in children.
Superselective nidus targeting and control of venous outflow are essential technical aspects to improve results and safety. Staged procedures are often necessary for optimal lesion control.

P70 A RARE PRESENTATION OF PENETRATING TRAUMA IN PEDIATRIC POPULATION

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INTRODUCTION: Traumatic arteriovenous fistulas (AVFs) are abnormal connections between arteries and veins that occur in a small proportion of arterial injuries. Prompt diagnosis is important as many cases become evident only months or years after injury when complications have developed. Despite rare, AVFs should always be considered in penetrating extremity trauma.

CASE REPORT: A 15-year-old previously healthy male developed a traumatic AVF with steal syndrome of the upper limb secondary to penetrating injury of the axillary artery. He sustained a stab wound to the anterior aspect of the left shoulder and subsequently developed progressive axillary swelling, leading to urgent, unspecified surgical intervention. Nine months after the injury, he was evacuated from Guinea-Bissau to be evaluated on a tertiary center. On vascular assessment, a palpable thrill was identified in the left upper limb, associated with atrophy of the left forearm and hand, as well as reduced hand temperature. Physical examination by plastic surgery revealed plegia in the distribution of the median and ulnar nerves, along with partial paralysis of the radial nerve. Computed tomography angiogram revealed a significant dilation of axillar and brachial veins with an apparent communication between artery and vein in the transition of axillar to brachial artery and no continuity of artery below this level. Magnetic resonance imaging detected an abnormal posterior displacement of the median, ulnar, and the radial nerves in the axillary region. The case was discussed with a multidisciplinary team, and the patient underwent surgery to exclude the AVF. During surgery, the presence of the fistula was confirmed, with significant adhesions between the venous and arterial axes, and the artery below the level of the fistula was completely atrophic. Consequently, an axillobrachial bypass was performed using an inverted graft of the left great saphenous vein. On the same procedure a plastic surgeon repaired the median nerve. At 6-month follow-up, the patient has recovered uneventfully, although with some deficits secondary to nerve injury.

CONCLUSION: Traumatic AVFs are clinically significant due to their diagnostic and therapeutic complexity. They should be considered a part of the differential diagnosis in patients with unilateral limb pain and swelling after trauma. Early recognition and quick intervention are essential to prevent severe complications such as limb ischemia and high output cardiac failure.

P71 RUPTURED EXTERNAL ILIAC ANEURYSM REVEALING EHLERS-DANLOS SYNDROME: THE ROLE OF THREE-DIMENSIONAL MODELING IN VISCERAL ANEURYSM ASSESSMENT

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INTRODUCTION: Vascular Ehlers-Danlos Syndrome (vEDS) is a rare autosomal dominant connective tissue disorder characterized by arterial fragility, predisposing to aneurysm formation, and early major vascular events1. Patient-specific three-dimensional (3D) models have emerged as valuable tools for anatomical assessment and procedural planning. We report a case of vEDS diagnosed after spontaneous rupture of an unknown external iliac artery aneurysm (EIAA). Decades later, 3D modeling aided the characterization and management of associated visceral aneurysms.

CLINICAL CASE: A 35-year-old man with no relevant medical history presented with right inguinal pain and hemodynamic instability. In this context, computed tomography angiography (CTA) was performed, revealing a ruptured right EIAA and multiple visceral aneurysms, the largest in the common hepatic artery (CHA) (29×25 mm). Emergent intervention was performed, followed by surveillance. Given these findings and a positive family history of aneurysmal disease, genetic testing identified apathogenic COL3A1 mutation, confirming vEDS. Progressive aneurysm enlargement was observed on serial CTA, while the patient remained asymptomatic. On CTA performed 20 years after EIAA rupture, the largest aneurysms involved the CHA (57×30 mm), superior mesenteric artery (SMA) (41×28 mm), and splenic artery (24×13 mm). However, the origin of the SMA aneurysm was unclear on CTA, suggesting a collateral branch. Given the complexity of the case, a patient-specific 3D model was developed for anatomical characterization. It was generated from thin-slice CTA (≤1mm), segmented in 3D Slicer®, and printed using PLA. Segmentation and printing required 10 and 12 hours, respectively, with 5 attempts needed. The model showed that the SMA aneurysm arose from a collateral branch related to SMA occlusion, likely critical for bowel perfusion, supporting deferred intervention.

CONCLUSION: This case highlights the diagnostic and management value of patient-specific 3D modeling in complex vascular disease. Given the complex anatomy not clearly delineated on CTA, reconstruction was performed for anatomical clarification and educational purposes. The model supported conservative management, as intervention carried a high risk of intestinal ischemia due to potential compromise of critical collateral perfusion pathways. This case also underscores the importance of

considering vEDS in young patients with spontaneous arterial rupture.

P72 TYPE III ENDOLEAK AS A CAUSE OF RECURRENT POPLITEAL STENT THROMBOSIS: A CASE REPORT

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INTRODUCTION: Endovascular repair of popliteal artery aneurysms with covered stent-grafts is an established alternative to open bypass, particularly when suitable autologous vein is unavailable. However, stent-graft thrombosis remains a major limitation. Type III endoleak — caused by fabric disruption or component separation — may lead to aneurysm sac re-pressurization, generating adverse flow conditions that promote thrombus formation and stent occlusion. This mechanism is likely underrecognized as a cause of recurrent stent-graft failure in the popliteal artery. We hereby present a case of recurrent popliteal stent-graft thrombosis secondary to type III endoleak, successfully managed with open surgical repair.

CASE REPORT: A 77-year-old woman underwent endovascular repair of a left popliteal artery aneurysm with implantation of two self-expanding covered stents two years earlier. The absence of an adequate autologous saphenous vein precluded initial open surgical bypass. During follow-up, the stent-grafts thrombosed on two occasions, both presenting as acute limb ischemia Rutherford class IIb, and were successfully managed with catheter-directed thrombolysis. Following the second episode, adjunctive balloon angioplasty of the distal runoff vessels was performed. Despite therapeutic anticoagulation with apixaban, early re-thrombosis occurred. Duplex ultrasound, computed tomography angiography, and digital subtraction angiography revealed a type III endoleak with progressive aneurysm sac enlargement (up to 36 × 32 mm), providing a unifying explanation for recurrent stent failure. Given the absence of a suitable venous conduit, open surgical conversion was performed, including stent explantation, aneurysm ligation, and above- to below-knee popliteal bypass with a prosthetic PTFE graft. At 6- and 12-month follow-up, the bypass remained patent with no recurrence of ischemic events.

CONCLUSION: Type III endoleak should be suspected in cases of recurrent popliteal stent-graft thrombosis refractory to thrombolysis and anticoagulation. In this setting, sac re-pressurization may promote thrombosis rather than rupture. Open surgical conversion with stent explantation and bypass reconstruction, even using prosthetic conduit, may offer a durable and definitive treatment option.

P73 COVID-19 AND LOWER-LIMB CHRONIC VENOUS DISEASE: ABSENCE OF DIRECT EVIDENCE DESPITE STRONG BIOLOGICAL PLAUSIBILITY

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BACKGROUND: COVID-19 is associated with venous thromboembolism (VTE) and persistent endothelial dysfunction, but whether SARS-CoV-2 infection contributes to the onset or progression of lower-limb chronic venous disease (CVD) remains unclear.

OBJECTIVE: To systematically evaluate direct and indirect evidence linking COVID-19 to lower-limb CVD onset or progression.

METHODS: A systematic review was attempted according to PRISMA 2020 guidelines. PubMed, Scopus, and Web of Science were searched for studies published between January 2020 and December 2025. Eligible studies reported chronic venous outcomes, post-thrombotic sequelae, venous ulcer outcomes, or mechanistic vascular findings following COVID-19. Due to heterogeneity, a narrative synthesis was performed.

RESULTS: Of 1,248 records identified, 18 predominantly observational studies were included. No study demonstrated objective CVD progression using validated endpoints (CEAP classification, duplex-confirmed reflux, or Venous Clinical Severity Score). Indirect evidence included persistent endothelial dysfunction up to 18 months post-infection; increased VTE risk (hazard ratio up to 33.2 in the first week, declining to 1.80 at weeks 27–49) reported in large population-based studies; VTE incidence of up to 17% among hospitalized patients; and pandemic-related healthcare disruption associated with a 16–42% reduction in venous ulcer healing rates.

CONCLUSIONS: Despite strong biological plausibility, no direct clinical evidence currently supports an association between COVID-19 and CVD progression. The most plausible pathway is indirect, through COVID-19-associated VTE and subsequent post-thrombotic syndrome. Prospective studies using validated venous endpoints are needed.

P74 OPEN SURGICAL REPAIR VERSUS ENDOVASCULAR TREATMENT OF POPLITEAL ARTERY ANEURYSMS: A 5-YEAR SINGLE-CENTER RETROSPECTIVE ANALYSIS

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OBJECTIVE: This study aims to evaluate the clinical outcomes and primary patency rates between conventional open surgical repair (OSR) and endovascular repair (ER) for popliteal artery aneurysms (PAA) over a 5-year period.

METHODS: A retrospective study was conducted including all patients treated for PAA between January 1st, 2020, and December 31st, 2025. This resulted in 72 interventions performed on 56 patients (16 patients treated bilaterally). Procedures were divided into two groups: OSR (n=61, using both autologous vein or prosthetic grafts) and ER (n=11).
Primary patency was defined as the interval from the index procedure to the first sustained stenosis or occlusion requiring reintervention (failing graft) or the occurrence of graft thrombosis, with deaths and losses to follow-up treated as censored data at the time of the event. Amputation-free survival (AFS) was calculated by including both major amputations and all-cause mortality as events. Statistical analysis was performed using Kaplan-Meier analysis, and survival curves were compared using the Log-Rank (Mantel-Cox) test.

RESULTS: A total of 72 interventions were analysed. In the OSR group, 14 events occurred (including 9 thrombotic events, 4 failing grafts and 1 death occurred - composite event rate of 22.9%), while 4 thrombotic events (36.4%) were observed in the ER group. Kaplan-Meier estimates for primary patency at 12 and 24 months were 74.7% and 71.8% for the OSR group, and 66.7% and 50.0% for the ER group, respectively. Despite the numerical trend favouring OSR during follow-up, no statistically significant difference was found between the groups (Log-Rank p=0.449). Regarding safety, the amputation-free survival at 24 months was 86.6% for OSR and 81.8% for ER, with no significant difference between the two groups (Log-Rank p=0.582).

CONCLUSIONS: In this series, both surgical and endovascular treatments provided acceptable results for PAA. Although open surgery showed numerically higher patency rates at 24 months, the difference did not reach statistical significance. The small sample size of the endovascular group and discrepancies in follow-up time may limit the statistical power to detect long-term differences.

P75 WHEN RARITY MEETS FRAILTY: AN ENDOVASCULAR SOLUTION FOR A RUPTURED POPLITEAL ARTERY ANEURYSM

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INTRODUCTION: Popliteal artery aneurysm (PAA) is the most common peripheral arterial aneurysm, but rupture is a rare and life-threatening complication. This report aims to describe a rare case of ruptured PAA in an elderly female patient with severe comorbidities and to highlight the role of endovascular repair as a key treatment option in high-risk patients.

CLINICAL CASE: An 87-year-old woman with multiple cardiovascular risk factors, chronic kidney disease, chronic obstructive pulmonary disease, and end-stage heart failure, under palliative care follow-up, presented to the emergency department with a large spontaneous hematoma of the left knee, associated with functional impairment and a 2 g/dL drop in haemoglobin levels.CTA revealed a ruptured popliteal artery aneurysm located at the transition between the superficial femoral artery and the supra-articular segment of the popliteal artery, with a large associated hematoma measuring up to 106 mm in maximum diameter. No aneurysmal disease was identified in other vascular territories. Given the patient's extreme frailty and advanced cardiac disease, open repair was considered inappropriate. An urgent endovascular approach was undertaken. A self-expanding covered stent (9 × 80 mm) was deployed via antegrade femoral access, with proximal fixation in the superficial femoral artery within Hunter's canal and distal fixation in the supra-articular popliteal artery. Knee flexion testing demonstrated no stent kinking or migration. Completion angiography confirmed complete aneurysm exclusion without visible endoleak, preserved distal perfusion with two runoff vessels, anterior tibial and peroneal arteries, and no distal embolization.The postoperative course was uneventful. Due to high haemorrhagic risk, single antiplatelet therapy with acetylsalicylic acid was initiated after multidisciplinary discussion. At 3-month follow-up, the patient remained asymptomatic, and CTA confirmed sustained aneurysm exclusion without device-related complications.

DISCUSSION/CONCLUSION: Ruptured PAA is an exceedingly rare presentation, particularly in women. In this case of extreme frailty and advanced cardiac disease, endovascular repair enabled effective aneurysm exclusion with minimal physiological stress. This case underscores the importance of individualized decision-making and highlights endovascular therapy as a crucial, life-preserving option for patients otherwise deemed unsuitable for conventional surgery.

P76 VISCERAL ARTERY ANEURYSM ASSESSMENT WITH 3D-PRINTED MODELS: IMPROVING THERAPEUTIC DECISION-MAKING

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BACKGROUND: Visceral artery aneurysms (VAAs) are rare but clinically significant vascular entities, carrying a rupture-associated mortality of approximately 25%. Accurate anatomical characterisation is essential for therapeutic decision-making, yet conventional imaging may prove insuQicient in complex cases. We present a case of a visceral artery aneurysm with conflicting imaging findings, in which a patient-specific 3D printed vascular model proved helpful in establishing the diagnosis and guiding clinical management.

METHODS: Patient's clinical information and imaging studies were reviewed retrospectively.

RESULTS: A 61-year-old male with no relevant past medical history presented to a peripheral hospital with a self-limited episode of epigastric pain. Computed tomography angiography(CTA) performed at that time raised the suspicion of a 19 mm pancreaticoduodenal artery aneurysm associated with coeliac trunk occlusion, suggestive of Sutton-Kadir syndrome. The patient was subsequently referred to the Department of Angiology and Vascular Surgeryof our institution for further evaluation, at which time he was asymptomatic. Repeat CTA suggested a 28 mm splenic artery aneurysm. Given the diagnostic uncertainty and anatomical complexity, the case was discussed in a multidisciplinary meeting without consensus. To aid clinical decision-making and procedural planning, 3D reconstruction and printing of a vascular model were subsequently undertaken. CTA images were segmented in collaboration with experienced radiologist, reconstructed using 3D Slicer and Bambu Studio software, and printed on a Bambu Lab X1C printer using PLA and TPU 95A filaments. The 3D model was evaluated by a multidisciplinary team of vascular surgeons and radiologists, proving helpful in confirming the diagnosis of a 28 mm splenic artery aneurysm and thereby supporting the decision to adopt a surveillance strategy with individualised follow-up.

CONCLUSIONS: This case supports the recognition and integration of 3D printing as a useful tool in vascular surgery practice, particularly in situations where conventional imaging modalities fail to provide adequate anatomical characterisation of visceral artery aneurysms.