MO-001 Three-year clinical outcomes of LEAD patients with low vision in Setouchi multicenter retrospective study (SETers study)

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【What's known?】
Purpose: Low vision is often observed in LEAD patients. However, the clinical outcomes in these patients had not been previously described.

【What's new?】
Methods: A total of 1422 patients with symptomatic LEAD with Rutherford category 2 to 6 who underwent EVT at 13 centers located in the Chugoku and Shikoku areas in Japan between January 2018 and December 2020 were enrolled in this study. The follow-up period was defined as 3 years after EVT. Based on the National Eye Institute's criteria, 201 patients were divided into low vision group. Propensity matching produced 196 patients in low and normal vision groups, and the time-dependent outcomes were analyzed using the Kaplan-Meier method.
Results: Even limb salvage rate was significantly lower in the low vision group than that in normal vision group, there was no significant difference in survival, amputation free survival, MALE, and wound healing between the groups. In addition, new-onset tissue loss in the low vision group was significantly higher than that in normal vision group.
Conclusions: Low vision was significantly associated with major amputation and new-onset tissue loss. However, low vision was not associated with survival, amputation free survival, MALE, and wound healing in this study.

MO-002 A single-center investigation of clinical outcomes in patients undergoing trans-ankle intervention (TAI)

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【What's known?】
The trans-radial approach (TRA) for PCI has been a standard access site. In EVT procedures, TRA has demonstrated non-inferiority to the trans-femoral approach. However, it is limited to the treatment of iliac arteries or the proximal portion of the superficial femoral artery (SFA). Trans-ankle intervention (TAI) enables minimally invasive treatment of distal lesions via the dorsal artery. However, data on its efficacy and safety are lacking.

【What's new?】
We retrospectively reviewed 36 procedures performed with TAI between January 2024 and January 2025 at Asahi General Hospital. The primary endpoint was procedural success, and the secondary endpoint was clinical worsening of lower limb ischemia within 30 days.
Procedural success was achieved in all cases, and no patient experienced clinical worsening within 30 days. All procedures were performed via the anterior tibial artery (ATA). Thirty-four cases (94.4%) involved SFA lesions, of which 15 cases (42.0%) were occlusions. The mean runoff score before and after the procedure was 2.4 and 2.75, respectively. Postprocedural ATA occlusion was observed in 9 cases (26%), and dorsal artery occlusion in 2 cases.
Although the TAI approach was effective and no clinical worsening was observed, further studies are required to clarify the risks associated with this technique.

MO-003 A Novel Distal Embolization Prevention Method Using JETSTREAM™ for Severely Calcified Femoropopliteal Lesions: The Reverse-CAT

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【What's known?】

Background: Distal embolization (DE) occurs in 10–35% of JETSTREAM™ (JS) atherectomy procedures for severely calcified femoropopliteal lesions and remains a major clinical problem. Although proximal balloon protection and the Filter-wire–based Flow-Controlled Atherectomy Treatment (F-CAT) have been proposed, complications are not negligible. To achieve more efficient embolic protection, we developed a novel approach—Reverse Flow-Controlled Atherectomy Treatment (R-CAT) —using retrograde insertion of a balloon-sheath to control distal flow. We report the initial outcomes.

【What's new?】

Method: Consecutive patients with severely calcified femoropopliteal lesions treated by JS atherectomy using R-CAT at a single center were retrospectively analyzed. A balloon-sheath was retrogradely inserted via the popliteal artery for distal occlusion, with contralateral balloon protection of the proximal SFA or deep femoral artery. After JS atherectomy and aspiration, drug-coated balloon angioplasty was performed.

Results: Technical success was achieved in all cases, with no intra- or post-procedural DE or major complications. Large amounts of debris were retrieved both from the JS aspiration bag and the retrograde sheath, confirming efficient embolic capture.

Conclusion: R-CAT is a safe and effective distal embolization prevention technique during JS atherectomy for heavily calcified femoropopliteal disease.

MO-004 Impact of Blades Up Technique and Minimum Lumen Area on Diameter of Distal Embolized Materials after Endovascular Therapy Using JETSTREAM

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Miyazaki Medical Association Hospital

【What's known?】

The histological analysis and the precise diameter of embolized materials after JETSTREAM atherectomy for calcified lesions of femoropopliteal artery have not been established.

【What's new?】

Aim: To evaluate the relationship between the diameter of embolized materials and clinical or procedural factors after atherectomy.

Methods: 50 samples (43 patients) were collected in single center between February 2023 and September 2025. All samples were captured by filter or aspiration devices and the diameter of each material was measured. Large group was defined as larger diameter than median value of collected materials. The relationship between large group and clinical or procedural factors were analyzed by multivariable logistic regression analysis and ROC curve analysis. **Results**: The median size of materials was 1206 [IQR:925 - 1847] μm. ROC curve analysis revealed that minimum lumen area (MLA) measured by IVUS cut-off value for predicting large group was 5.9 mm^2 (sensitivity 76%; specificity 70%; area under the curve 0.76; p=0.005). Large group was significantly associated with blades up technique (Odds ratio [OR]:11.38, 95% confidence interval [CI]:2.11 – 110.11) and MLA≥5.9 mm^2(OR:8.99, 95%CI: 1.93 – 67.34). **Conclusion**: Blades up technique and MLA by IVUS significantly affected the large diameter of embolized material post atherectomy.

MO-005 Predictors of successful extra-vascular ultrasound-guided wiring for femoropopliteal chronic total occlusions within 30 minutes

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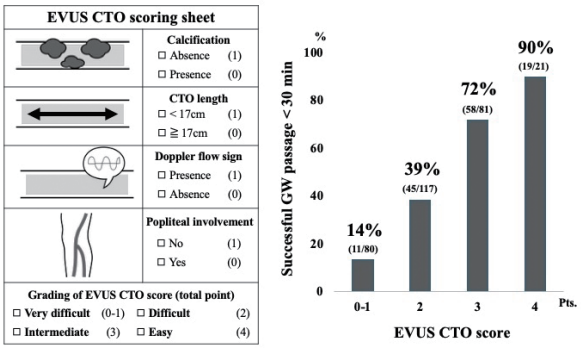
【What's known?】

Extra-vascular ultrasound (EVUS) has been reported to be a feasible modality for facilitating guidewire passage in femoropopliteal (FP) chronic total occlusions (CTOs). However, predictors of procedural success remain uncertain. We aimed to identify the lesion and imaging characteristics associated with successful EVUS-guided wiring within 30 min and to develop a simplified scoring system.

【What's new?】

Successful wiring within 30 min was achieved for 140 lesions (47%). Independent predictors were shorter lesion length (odds ratio [OR] 0.89, 95% confidence interval [CI] 0.86–0.92), absence of calcification (OR 0.30, 95% CI 0.14–0.64), presence of a Doppler flow sign (OR 2.45, 95% CI 1.17–5.10), and absence of popliteal involvement (OR 0.47, 95% CI 0.24–0.94). The EVUS CTO score (range, 0–4) demonstrated stepwise increases in success rates as follows: 14% (0–1 point), 39% (2 points), 72% (3 points), and 90% (4 points). The EVUS CTO score serves as a useful tool for stratifying lesion complexity, predicting early procedural success, and aiding in case selection, operator training, and procedural planning for FP-CTO interventions.



MO-006 Efficacy of Drug-Coated Balloons According to Paclitaxel Dose in Calcified Femoropopliteal Lesions

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Department of Cardiology, Shonan Kamakura General Hospital

【What's known?】

Background: Severe calcification is a major factor of patency loss following endovascular therapy (EVT) for femoropopliteal (FP) lesion. The difference of efficacy between high-dose paclitaxel drug-coated balloons (HD-DCB) and low-dose drug-coated balloons (LD-DCB) for severe calcified lesions remains controversial.

【What's new?】

Methods: This is a single-center, retrospective study including 98 limbs treated for de novo FP lesions with either IN.PACT (Medtronic) or Ranger (Boston Scientific) from March 2021 to August 2024. All lesions were assessed with intravascular ultrasound (IVUS). The primary endpoint was defined as primary patency at 3-year; secondary endpoints were defined as clinically driven target lesion revascularization (CD-TLR) and so on.

Results: The mean age was 75.9 years, and 50.0% were on hemodialysis. The mean lesion length was 167.4 mm, with 18.4% chronic total occlusion (CTO). Primary patency at 3-year didn't differ significantly between HD- and LD-DCB groups (80.0% vs. 67.3%, Log-rank p=0.38). The multivariate analysis identified CTO, calcified nodules by IVUS, and use of LD-DCB as independent predictors for patency loss.

Conclusions: Although HD-DCB didn't improve primary patency in overall cohort, it was suggested as a factor reducing patency loss. These findings highlight the potential clinical relevance of DCB selection in severely calcified FP lesions.

MO-007 Impact of Intra-Calcium Wiring on Acute Lumen Gain and Long-Term Patency Following Jetstream Atherectomy and Drug-Coated Balloon in Severely Calcified Femoropopliteal Lesions

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【What's known?】

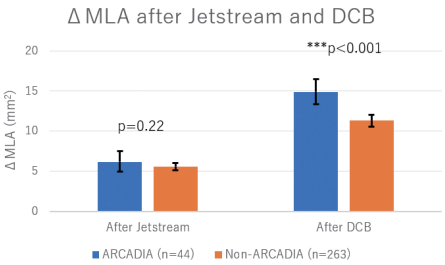
Background: Severely calcified femoropopliteal lesions remain challenging despite advances in endovascular therapy. The ARCADIA technique enables intra-calcium wiring, potentially optimizing plaque modification. However, its acute impact on luminal gain after Jetstream atherectomy has not been evaluated.

【What's new?】

Methods: This multicenter retrospective study included patients with severely calcified femoropopliteal lesions treated with Jetstream between November 2022 and December 2024. Patients were divided into ARCADIA (n=44 lesions) and non-ARCADIA groups (n=263 lesions). Primary endpoints were Δ MLA after Jetstream and after DCB, assessed by IVUS. Secondary endpoint was 1-year primary patency.

Results: Δ MLA after Jetstream was similar between groups (median 6.2 vs 5.6 mm², p=0.22). However, Δ MLA after DCB was significantly larger in ARCADIA group (median 14.9 vs 11.3 mm², p<0.001), representing a clinically meaningful difference of 3.6 mm². One-year primary patency showed a favorable trend (93.3% vs 82.5%, log-rank p=0.11). Procedural complications including distal embolization, slow-flow, and vessel injury were comparable between groups.

Conclusions: ARCADIA enhances DCB efficacy rather than debulking itself, leading to larger final MLA in severely calcified lesions, suggesting ARCADIA optimizes vessel preparation quality for DCB therapy.



MO-008 Long term efficacy following venous stenting for symptomatic iliofemoral venous obstruction: 5 year clinical and stent outcomes in a Southeast-Asian population

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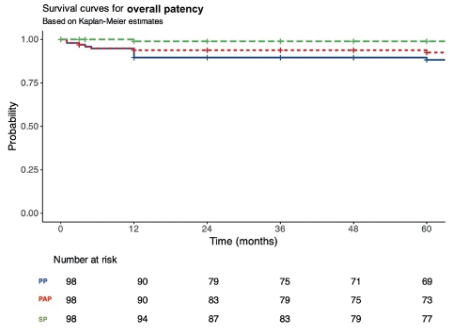
【What's known?】

Endovenous stenting is the standard of care for symptomatic iliofemoral venous obstruction with good short-term patency. As most data are derived from Western populations, we present our long-term outcomes in a Southeast Asian cohort.

【What's new?】

In this retrospective review of 98 limbs (76 patients), 82.6% had non-thrombotic iliac vein lesions, 9.2% post-thrombotic syndrome, and 8.2% acute deep vein thrombosis. 100% technical success was achieved. Five-year cumulative primary, assisted-primary, and secondary patency rates were 88.2%, 92.5%, and 98.9%, respectively. Primary patency by etiology was 92.0% (NIVL), 77.8% (PTS), and 62.5% (DVT). Loss of patency occurred mainly within the first year, largely from non-compliance and inadequate anticoagulation. Stent-related complications were rare (fracture 1.3%, migration 1.3%). The rate of stent occlusion (per limb) was 8.2%.At five years, ulcer-free rate was 82.7%, pain relief 91.8%, and sustained swelling relief 53.1%. No patient required major amputation, and all-cause mortality was unrelated to venous disease. These findings confirm durable stent patency and long-term symptomatic relief in a Southeast Asian population. Most reinterventions occurred early, highlighting the importance of procedural technique, inflow optimization, and adherence to antithrombotic therapy. Long-term surveillance beyond the first year may be unnecessary in selected patients with durable patency.



MO-009 Endovascular Salvage of Thrombosed Arteriovenous Fistulas, Grafts, and Vein–Vein Bypass Conduits

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【What's known?】

Thrombosis of arteriovenous fistulas (AVFs) and grafts (AVGs) remains a major cause of dialysis access failure. Endovascular salvage allows functional preservation with minimal morbidity. We retrospectively reviewed 52 percutaneous salvage procedures for thrombosed AVFs, AVGs, and vein–vein bypass grafts performed between January and July 2025. Open thrombectomies were excluded. Techniques included pharmacologic thrombolysis, balloon maceration, mechanical thrombectomy (AngioJet™), and adjunctive venoplasty.

Brachiocephalic AVFs (65 %) were most common, followed by radiocephalic (20 %) and grafts (10 %). Technical success exceeded 85 %, restoring immediate flow in most cases. Device-based thrombectomy achieved slightly superior thrombus clearance and lower residual clot burden, while device-free pharmacomechanical techniques remained highly effective and cost-efficient. Central venous stenosis occurred in one-third of cases and was successfully treated with venoplasty. No major embolic or bleeding events occurred. The 3-month primary and assisted primary patency rates were 70 % and 80 %, respectively, reflecting early follow-up and selective case inclusion.

【What's new?】

This study shows that resource-efficient, device-free endovascular strategies can provide patency and safety outcomes comparable to advanced thrombectomy systems, supporting their use as first-line therapy in regions with limited access to costly devices.

MO-011 Usefulness of IVUS-guided recanalization of the central vein in hemodialysis patients with upper arm swelling

○Tomoyasu Sato

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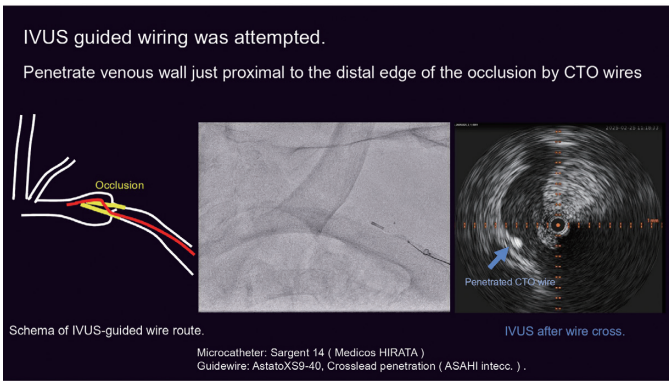
【Case overview】

We experienced a case of marked upper arm swelling caused by subclavian vein occlusion successfully recanalized by an antegrade IVUS-guided procedure.

【Procedure summary】

Under US guidance Basilic vein was punctured by a micropuncture kit. A 6F destination sheath was inserted just proximal to the occlusion. Transcatheter recanalization of the CTO of the subclavian vein under fluoroscopic guidance by 0.035 wire and 0.014wires was attempted but failed. IVUS-guided recanalization was conducted. 0.014 CTO wire and microcatheter were advanced parallel to the IVUS catheter. A CTO wire was successfully penetrated through the lesion under IVUS guidance. Balloon angioplasty was done, but residual stenosis remained. A stent was applied, and sufficient lesion dilatation was obtained.



【Clinical time course and implication (or perspective)】

Arm swelling was improved on the following day.

IVUS-guided recanalization of the central vein is a safe and effective method. It contributes to improving the success rate of antegrade recanalization and avoiding bidirectional recanalization in hemodialysis patients.

MO-012 A Case of Endovascular Therapy Using Intravascular Ultrasound for Recurrent Subclavian Vein In-Stent Restenosis in a Hemodialysis Patient

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Department of Cardiovascular and Renal Medicine, Hyogo Medical University

【Case overview】
A male in his seventies with end-stage renal disease had been undergoing hemodialysis using an arteriovenous fistula (AVF) in his right forearm. In August 20XX, right arm edema developed, and angiography revealed right subclavian vein occlusion and stenosis of the AVF. Endovascular therapy (EVT) was performed using intravascular ultrasound (IVUS), further self-expanding nitinol stent was deployed in the right subclavian vein which was compressed externally, and balloon angioplasty was also performed for the AVF stenosis. Despite these interventions, recurrent in-stent restenosis (ISR) of the right subclavian vein occurred, requiring ten EVT reinterventions over the following three years.

【Procedure summary】
In November 20XX+3, the patient was rehospitalized for recurrent right arm edema, and angiography demonstrated ISR within the subclavian vein stent. IVUS showed fibrotic intimal hyperplasia with atherosclerotic features, therefore a drug-coated balloon was used following balloon angioplasty.

【Clinical time course and implication (or perspective)】
During six months of follow-up, there was no recurrence of arm edema or restenosis requiring reintervention. The mechanisms of subclavian vein occlusion and subclavian stent restenosis remain poorly understood. This case suggests that IVUS can elucidate the mechanisms underlying venous stenosis and assist in selecting an optimal endovascular treatment strategies.

MO-013 Endovascular Stenting for Malignant Superior Vena Cava Syndrome as First-Line Therapy: Safety and Efficacy

○Tai-Wei Chen[1,3], Tzu-Ting Kuo[2,3], I-Ming Chen[1,3]

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[3] Department of Surgery, College of Medicine, National Yang-Ming Chiao-Tung University

【What's known?】
Background: Superior vena cava (SVC) syndrome from chest malignancy commonly results from extrinsic SVC compression. Standard therapies include chemo/radiotherapy and endovascular stenting. This single-center series evaluates the safety and efficacy of salvage and primary stenting for malignant SVC obstruction.
Methods: Retrospective review of the patients with malignancy undergoing SVC stenting (October 2009–August 2025). Dedicated venous stents (Boston scientific Wallstents, Medtronic Abre stent, BD Venovo stent) were used in all cases.

【What's new?】
Results: Mean preoperative narrowest SVC diameter on CT was 2.16 mm (0–5.5 mm). Technical success was 100% with no periprocedural pulmonary embolism, rupture, or bleeding. Symptoms (arm/face swelling, dyspnea) improved within 1–5 days in all patients. Follow-up CT showed a mean narrowest diameter of 11.17 mm (8–13.5 mm). Among those with prior radiotherapy, only one had initial relief, with recurrence at one year. Over an average follow-up of 12.5 months, one patient developed recurrent SVC syndrome due to in-stent thrombosis at two months.
Conclusions: Endovascular stenting is a safe and effective salvage option after failed radiotherapy/chemotherapy and merits consideration as primary therapy for SVC syndrome to rapidly improve quality of life.

MO-014 Enhancing the Management of High-Level Venous Hypertension through SVP Classification

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【What's known?】
Purpose: To demonstrate the use of the SVP classification as an accurate and practical framework for understanding and managing high-level venous hypertension, including pelvic congestion syndrome, nutcracker syndrome, and other complex venous disorders.
Materials and Methods: A retrospective analysis and representative case series were conducted to evaluate the application of SVP classification in identifying the source and pattern of venous hypertension.

【What's new?】
Results: By applying the SVP classification, clinicians can achieve a clearer understanding of the underlying pathophysiology and etiology of venous hypertension. This approach facilitates more precise treatment planning, leading to improved therapeutic effectiveness and consistency in clinical outcomes.
Conclusion: The SVP classification serves not only as a valuable management tool but also as a universal language for communication and comparison in the study and treatment of venous hypertension worldwide.

MO-016 Association between poor oral health and clinical outcomes after endovascular abdominal aortic aneurysm repair

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Aichi Medical University

【What's known?】
[Background] The Oral Health Assessment Tool (OHAT) is widely used to screen oral health status and has been associated with aspiration pneumonia. However, its clinical relevance in vascular surgery remains unclear. This study investigated the relationship between preoperative OHAT scores and long-term outcomes after endovascular aneurysm repair (EVAR) for abdominal aortic aneurysm (AAA).

【What's new?】
[Methods] We retrospectively analyzed 199 patients who underwent elective EVAR between 2017 and 2024. Patients with ruptured, saccular, or isolated iliac aneurysms and reinterventions were excluded. Based on preoperative OHAT scores, assessed by dental hygienists, patients were divided into a low OHAT group (<3; n=146) and a high OHAT group (≥3; n=53).
[Results] Baseline characteristics were comparable except for a higher prevalence of chronic obstructive pulmonary disease in the high OHAT group. Overall survival at 3 and 5 years was significantly lower in patients with OHAT≥3 (73% and 53%) compared to those with better oral health (89.6% and 70.5%, p=0.022). Freedom from cardiovascular death was also reduced in the high OHAT group (p=0.002). Multivariate Cox analysis identified OHAT≥3 as an independent predictor of all-cause (HR 2.1) and cardiovascular mortality (HR 4.0).
[Conclusion] Preoperative oral health was significantly associated with prognosis after EVAR.

MO-017 Long-Term Outcomes and Late Aortic Events After Thoracic Endovascular Aortic Repair

○Hajime Maeda[1)], Yutaka Iba[1)], Tsuyoshi Shibata[1)], Tomohiro Nakajima[1)], Junji Nakazawa[1)], Ayaka Arihara[1)], Kenichi Kato[1)], Shigeki Komatsu[1)], Masato Yonemori[1)], Shingo Tsushima[2)]

[1)] Cardiovascular Surgery, Sapporo Medical University,
[2)] Cardiovascular Surgery, Sapporo Teishinkai Hospital

【What's known?】
Thoracic endovascular aortic repair (TEVAR) has become the standard treatment for various thoracic aortic diseases. However, most reports have focused on short- or mid-term outcomes, and the long-term prognosis—including late aortic events and survival beyond five years—has not been sufficiently clarified in real-world clinical practice. Moreover, differences in patient characteristics and type of aortic pathology may influence durability and complication rates, but these factors have not been systematically compared in a single-center consecutive series.

【What's new?】
This study analyzed 226 consecutive patients who underwent TEVAR between 2011 and 2024. The 30-day mortality rate was 3.1%, and the median postoperative hospital stay was 11 days. At five years, the overall mortality rate was 25.2%, and the aorta-related mortality rate was 3.6%. Aortic events occurring more than one year after TEVAR were observed in 12.1% of patients, and 2.3% required late open conversion. These results provide comprehensive long-term data for contemporary TEVAR devices in a real-world setting, emphasizing the importance of lifelong surveillance beyond the early postoperative phase.

MO-018 TEVAR in Ruptured Thoracic Aortic Aneurysm With Hemothorax: Strategic Sequence of Aortic Repair and Delayed Hemothorax Evacuation

○Kevin Francio[1)], Nadya Luthfah[1)], Rendra M. Putra[2)], Raden M. Budiarto[1)], Johannes Nugroho E. Putranto[1)]

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【Case overview】
A 64-year-old male presented with one-month history of chest pain accompanied by hemoptysis and exertional dyspnea. Chest X-ray revealed a left upper lung mass, and contrast-enhanced computed tomography angiography (CTA) demonstrated a large thoracic aortic aneurysm. During stabilization and preprocedural planning for intervention, the aneurysm ruptured, leading to a massive left-sided hemothorax and hypovolemic shock. After prompt resuscitation, hemodynamic stability was achieved.

【Procedure summary】
To preserve the temporary tamponade effect and avoid rebleeding, hemothorax evacuation was deferred until after endovascular repair. Given that the proximal landing zone was close to the left subclavian artery (LSA) ostium, a chimney TEVAR was performed to maintain LSA perfusion. The stent graft was deployed with careful selection of proximal and distal landing zones to ensure complete aneurysm coverage and exclusion. Post-procedure imaging confirmed successful sealing and the hemodynamics stabilized.

【Clinical time course and implication (or perspective)】
Following confirmation of a sealed aneurysm immediately after TEVAR, hemothorax evacuation was performed to allow lung re-expansion and prevent infection. This case highlights the importance of strategic timing in hemothorax management during ruptured thoracic aortic aneurysm: blood clots formed from the hemothorax can initially provide a protective tamponade effect, whereas after successful exclusion, evacuation becomes both safe and essential for recovery.

MO-019 Acute and Mid-term Result of Puncture to Interwoven Bare-nitinol Stent following Endovascular Therapy for Severe Calcified Common Femoral Artery Lesions

○Kazuki Kumagai, Kazuki Tobita, Hikaru Tanemura, Syun Sawada, Eiji Koyama, Motoaki Kai, Hirokazu Miyashita, Shigeru Saito

Department of Cardiology, Shonan Kamakura General Hospital

【What's known?】

Background

A thromboendarterectomy (TEA) is standard therapy for common femoral artery (CFA) lesions, but complications after TEA are larger than endovascular therapy (EVT). BURDOCK-CFA study revealed good results following interwoven bare-nitinol stent (IWS) implantation for CFA, however, the safety of puncture for implanted IWS is still unknown.

【What's new?】

Aim

The aim of the study is to demonstrate the result of IWS puncture following EVT for CFA.

Method

This study was a retrospective single-center study enrolling consecutive EVT cases treated with CFA puncture between November 2019 and July 2025. We analyzed the patients underwent an IWS implantation. Efficacy outcome was defined as puncture success. Primary safety outcome was defined as any complication on acute phase, and secondary safety outcome defined as any complication on mid-term phase.

Result

Punctures for IWS at CFA were performed in 97 lesions. Used sheath sizes were 4.5 Fr to 14 Fr. All cases received angio-guided punctures and had successful punctures. Complications on acute phase were pseudoaneurysm in 2 cases (2.1 %) and IWS migration in 1 case (1.0%). Complication on mid-term phase was not confirmed.

Conclusion

Puncture for IWS following CFA EVT was secure and safe. Further investigation on long-term s warranted.

MO-020 Customized aortic arch fenestrated stent graft insertion for Total arch replacement

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Division of Cardiovascular Surgery, Taipei Veterans General Hospital

【Case overview】

The application of customized aortic arch fenestrated stent graft and endovascular technique provide the possibility to treat aortic arch aneurysms without sternotomy and using extracorporeal circulation.

【Procedure summary】

In September 2025, two cases were deployed successfully by this method in Taiwan. First case was an eighty-year-old male with hypertension, type 2 diabetes mellitus and lung squamous cell carcinoma, diagnosed with thoracic aortic arch aneurysm. Second case was a sixty-three-year-old male had hypertension and type B descending aortic dissection with prior descending aortic replacement twenty years ago, experienced huge pseudoaneurysm over distal aortic arch. In both cases, customized aortic arch fenestration stent graft was deployed on the precise location through the preloading catheter. Postoperative angiographies showed no stent migration or endoleak.

【Clinical time course and implication (or perspective)】

Application of endovascular techniques in the field of endovascular surgery may expand surgical indication for aortic arch disease.

MO-021 Early outcomes of CERAB in complex AIOD – Retrospective analysis of a single institution's experience

○Yu-Hern Tan

Department of Cardiovascular Surgery, Mackay Memorial Hospital

【What's known?】

Purpose

To investigate the early outcomes of CERAB in complex AIOD (TASC II C/D)

Materials and methods

A retrospective analysis of complex AIOD treating using CERAB technique between 2018-2025 regarding surgical outcomes.

【What's new?】

Results

Surgical outcomes (primary patency, secondary patency, 30-day mortality) and complications is analyzed.

Conclusion

CERAB technique offers an alternative for TASC II C/D lesions with acceptable short term outcomes and low complication rate.

MO-022 Successful EVAR for a Severely Angulated Infrarenal AAA in a Very Elderly (96-Year-Old) Patient with DIC: Achieving Complete Endoleak Elimination

○Takumi Miwa, Shirasu Takuro, Sawai Takayuki, Kozue Watabe, Daisuke Mochizuki, Kai Suzuki, Natsumi Iijima, Kenshiro Kawabe, Yu Tadokoro, Masaya Sano, Toshio Takayama, Katsuyuki Hoshina

Department of Vascular Surgery, University of Tokyo Hospital

【Case overview】

A 96-year-old man presented with subcutaneous and gingival bleeding and was diagnosed with an infrarenal abdominal aortic aneurysm (AAA) complicated by disseminated intravascular coagulation (DIC).Although the proximal neck of the aneurysm was markedly angulated, endovascular aneurysm repair (EVAR) was chosen due to his advanced age.

【Procedure summary】

Recombinant thrombomodulin was administered prior to surgery, resulting in improvement of the DIC score.Considering the presence of DIC, we avoid percutaneous procedures and exposed bilateral femoral and left brachial arteries via surgical cutdown. With help of a through-and-through wire between femoral and brachial arteries, EVAR was performed using Excluder Conformable AAA Endoprosthesis. Completion angiogram showed a minor type Ia endoleak which was successfully eliminated with an additional proximal cuff, recognizing spontaneous thrombosis could not be expected due to DIC.

【Clinical time course and implication (or perspective)】

Postoperatively, no bleeding events occurred, and the DIC score remained within the normal range without additional treatment. The patient was transferred to a nearby hospital on POD 8. In patients with AAA-associated DIC, EVAR can achieve rapid hemostatic improvement by excluding the aneurysmal sac; however, its success depends on complete sac isolation, and meticulous attention should be paid for persistent or recurrent DIC due to endoleaks.

MO-023 Bridging the Gap: Successful Carotid–Subclavian Bypass Enabling TEVAR in DeBakey IIIB Aortic Dissection – A Case Report

○Valerie Grecia[1)], Johanes Nugroho Eko Putranto[2)], Dhihintia Jiwangga Suta Winarno[3)], Danang Himawan Limanto[4)], Catarina Lilian Christine[1)], Citoporta Pranata[5)], Cornelia Angela Tanaem[1)]

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【Case overview】

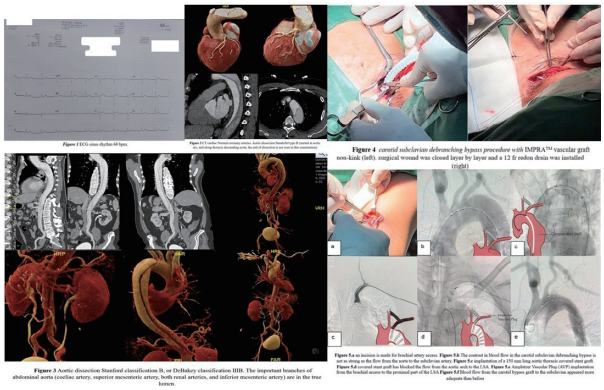
A 49 years old hypertension man with **left chest pain**, ECG showed nonspecific T-wave inversion *(figure 1)*, had normal CKMB and Troponin I (7.1 IU/L and 2.6 pg/mL). Cardiac CT revelaed DeBakey class III aortic dissection *(figure 2)*. **Thoraco-abdominal contrast CT showed DeBakey IIIb** aortic dissection **from the LSA** to proximal left common iliac artery *(figure 3)*. staged surgical procedure was planned for the patient.

【Procedure summary】

Thoracic endovascular aortic repair (TEVAR) procedure more complicated with the involvement of LSA, in this procedure we sacrifice the LSA to create an adequate landing zone for the covered stent graft *(Figure 5)*. Preceded by carotid-subclavian bypass to vascularize the LSA and reduce the risk of cerebral and limb ischemia before LSA coverage *(Figure 4)*. Implantation of the Amplatzer vascular plug during TEVAR contributes to adequate coverage of the LSA *(Figure 5)*.

【Clinical time course and implication (or perspective)】

After carotid-subclavian bypass and TEVAR procedures, an aortic covered stent graft was implanted extending from distal segment of the LSA to the descending aorta. Angiography confirmed adequate blood flow from the carotid to the subclavian artery with no endoleaks *(Figure 6)*. The patient's chest pain resolved, with no signs of ischemia.



MO-024 Multistaged endovascular repair including physician modified endograft for a thoracoabdominal aortic aneurysm

○Koichi Tamai[1)], Hiroki Arai[1)], Taichi Sano[1)], Yasushi Tashima[1)], Koichi Adachi[1)], Hiroshi Mitsuoka[2)]

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【Case overview】

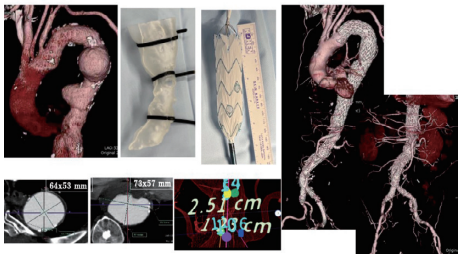
60s male with thoracoabdominal aortic aneurysm (proximal descending aorta 64 x 53 mm, thoracoabdominal aorta 73 x 57 mm) and clinical frailty score of 7 was admitted to our hospital after an event of cerebral infarction.

【Procedure summary】

Given the extent of aneurysm disease, a staged approach was adopted. Stage1: thoracic endovascular aortic repair (TEVAR) from the distal aortic arch to the supraceliac aorta (TAG 37–200 and 34–150). Stage2: a physician-modified endograft (PMEG) with fenestrations for all four visceral branches (Zenith Alpha Thoracic 28–155 plus TAG 37–31–150) and bridging stents – celiac artery: VBX 7×29, superior mesenteric artery: VBX 7×39, right renal artery: SMART 7×40, and left renal artery: VBX 7×29. Stage3: endovascular aortic repair (EVAR) with an Excluder C3 and coil embolization of the lumbar artery.

【Clinical time course and implication (or perspective)】

The postoperative course was uneventful without paraplegia; contrast-enhanced CT demonstrated no endoleak and all fenestrated visceral branches remained patent. The patient was transferred to a rehabilitation hospital two months after surgery for continued therapy related to the prior stroke.



MO-025 Beyond the IFU: Preserving Internal Iliac Flow with the MAGIC Technique in Confined Anatomy

○Hiraku Kamimura, Takuro Shirasu, Kai Suzuki, Kozue Watabe, Natsumi Iijima, Daisuke Mochizuki, Yu Tadokoro, Kenshiro Kawabe, Ayako Takasaka, Masaya Sano, Toshio Takayama, Katsuyuki Hoshina

Division of Vascular Surgery, Department of Surgery, The University of Tokyo

【Case overview】
Iliac branch endoprosthesis (IBE) enables preserving internal iliac artery (IIA) blood flow during endovascular repair of aortoiliac aneurysms but is limited by anatomical constraints including the renal-to-iliac bifurcation length. We present a case successfully treated with a Modified Adaption of iliac branch endoGrafts In Confined anatomy (MAGIC) technique.

A 74-year-old male with bilateral dissecting common iliac artery aneurysm (right 38mm, left 29mm) was referred to our hospital. The renal-to-iliac bifurcation lengths were 139mm and 140mm, exceeding the instruction for use of IBE. Since this physically active patient desired to preserve IIA with endovascular treatment, we employed the MAGIC technique.

【Procedure summary】
Following left IIA embolization, aortic stent graft were deployed from infrarenal aorta to the right common and left external iliac arteries. A 12-Fr Dryseal sheath was advanced across the flow divider from left to right over a pull-through wire, and iliac branch component was deployed inside the right iliac leg. After deployment of internal iliac components, an additional leg was implanted inside the left leg to counterbalance the outward force of IBE inside the narrow aorta.

【Clinical time course and implication (or perspective)】
At 2-year follow-up, right IIA patency was maintained without buttock claudication, preserving the patient's quality of life.

MO-026 Quantitative Assessment of Cerebral Perfusion Improvement Following Carotid Artery Stenting: A Multi-Case Analysis

○Chun Kit Li

Department of Radiology, Pamela Youde Nethersole Eastern Hospital

【What's known?】
Carotid artery stenosis is a leading cause of ischemic stroke, particularly in symptomatic or high-grade asymptomatic patients. Carotid artery stenting (CAS) is an effective alternative to endarterectomy for restoring cerebral blood flow, yet its precise impact on hemodynamics remains underexplored. Variability in patient outcomes underscores the need for better candidate selection and post-procedure monitoring. CT perfusion (CTP) imaging quantitatively assesses cerebral blood flow (CBF), cerebral blood volume (CBV), mean transit time (MTT), and time to peak (TTP), offering insights into perfusion deficits and recovery. However, its role in evaluating CAS outcomes lacks standardization, with gaps in understanding perfusion changes and risks like hyperperfusion syndrome. This study examines the extent of perfusion improvement post-CAS and its correlation with clinical outcomes.

【What's new?】
We retrospectively analyzed 40 patients with 70-99% carotid stenosis undergoing CAS (2023-2025). CTP was performed within 5 days pre-CAS and 48 hours post-CAS using a 160-slice Canon Aquilion PRISM (80 kVp, 200 mAs, 50 mL contrast). Perfusion parameters were quantified via Vitrea software, with regions of interest delineated by two radiologists. Pre/post metrics were compared using paired t-tests ($p<0.05$), and interobserver agreement was assessed via intraclass correlation coefficients. Clinical outcomes, including transient ischemic attack resolution, were recorded to evaluate CAS efficacy.

MO-027 Troubleshooting jailed olive tip in endovascular aortic repair of impending rupture abdominal aorta aneurysm: A Rare Case

○Salma R. Basuki[1)], Achmad H. A. Kartamihardja[2)]

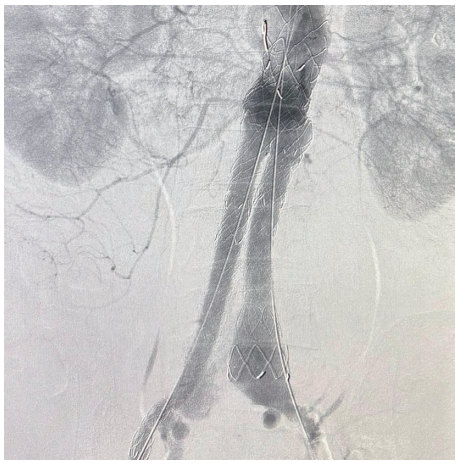
[1)] Melinda Cardivascular Center, [2)] Department of Cardiology and Vascular Medicine, Faculty of Medicine, Universitas Padjadjaran/Dr. Hasan Sadikin General Hospital, Bandung, Indonesia.

【Case overview】

A 74-year-old male presented with abdominal discomfort and pulsation. Examination revealed a palpable abdominal mass. Ultrasound showed an abdominal aortic aneurysm, and CT angiography confirmed a fusiform aneurysm measuring 9.34 cm with signs of impending rupture.

【Procedure summary】

The EVAR procedure was performed via bilateral femoral artery access with 8 Fr sheaths. A pigtail catheter from the left side revealed an infrarenal fusiform AAA with a left common iliac aneurysm. The main body stent graft and contralateral limb were successfully deployed. Advancement of the ipsilateral limb was complicated by an olive tip entrapment in the right external iliac artery, resolved using right brachial access, angioplasty, and balloon-anchor retrieval. A Type IB endoleak was corrected with an additional limb graft. A second olive tip entrapment on the left side was managed similarly. Final angiography showed only minimal Type IV endoleak.



【Clinical time course and implication (or perspective)】

A 74-year-old male with an impending ruptured AAA (9.34 cm) underwent successful EVAR. The procedure was complicated by femoral access failure and bilateral jailed olive tip entrapment, managed via brachial access, angioplasty, and balloon-anchor retrieval. Final angiography showed minimal type IV endoleak. Postoperatively, symptoms resolved with stable recovery and no complications.

MO-028 Endovascular Management of Vascular Complications After Liver Transplantation: A Comprehensive Review of Techniques and Outcomes

○Hsu-Ting Yen[1)], Chee-Chien Yong[2)], Yu-Fen Cheng[3)], Chao-Long Chen[2)]

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Vascular complications remain among the most critical causes of graft dysfunction and morbidity after liver transplantation, with a reported incidence ranging from 5% to 15%. Prompt recognition and appropriate endovascular intervention have become essential in maintaining graft patency and optimizing long-term outcomes. This review summarizes the current interventional strategies for managing post-transplant vascular complications, including portal vein thrombosis (PVT), hepatic artery stenosis (HAS), and hepatic vein or inferior vena cava (IVC) stenosis.

Portal vein thrombosis can occur early or late after transplantation and is often related to technical anastomotic factors, size mismatch, or hypercoagulable states. Catheter-directed thrombolysis, mechanical thrombectomy, and portal vein stenting have shown high technical success rates, restoring portal flow and preserving graft function. For hepatic artery stenosis, which typically presents within the first three months, percutaneous transluminal angioplasty (PTA) with or without stent placement remains the treatment of choice. Early intervention before irreversible ischemic cholangiopathy is crucial to ensure graft viability.

Hepatic vein and IVC stenosis, although less frequent, may result in significant graft congestion, ascites, or liver dysfunction. Balloon angioplasty and self-expanding stent placement provide durable luminal patency, with clinical improvement observed in the majority of cases. In complex or recurrent cases, intravascular ultrasound (IVUS) and covered stents can optimize outcomes and prevent restenosis.

Endovascular therapy offers a minimally invasive, repeatable, and highly effective approach compared with surgical revision, which carries substantial risk in post-transplant patients. Ongoing advancements in imaging guidance, thrombectomy devices, and covered stent technologies continue to refine procedural safety and efficacy. In conclusion, early diagnosis and multidisciplinary coordination between transplant surgeons, hepatologists, and interventional radiologists are essential to achieving optimal outcomes in the management of vascular complications after liver transplantation.

MO-029 Clinical Impact of Factors Associated with Delayed Wound Healing in Patients with Advanced Chronic Limb-Threatening Ischemia Undergoing Endovascular Therapy

○Tatsuro Takei[1)], Takahiro Tokuda[2)], Kenji Ogata[3)], Takashi Yanagiuchi[4)], Shunsuke Kojima[5)], Tatsuya Nakama[5)]

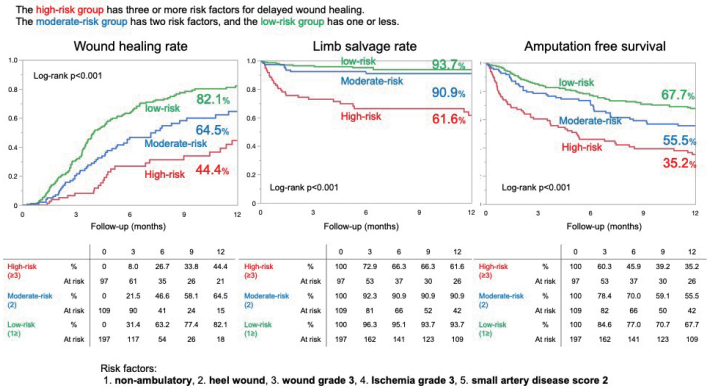
[1)] Department of Cardiology, Tenyoukai Central Hospital, [2)] Nagoya Heart Center, [3)] Miyazaki Medical Association Hospital, [4)] Rakuwakai Otowa Hospital, [5)] Tokyo Bay Urayasu Ichikawa Medical Center

【What's known?】

WIfI clinical stage 4 (WCS4) is the most serious condition in chronic limb-threatening ischemia (CLTI). The factors causing delay wound healing (DWH) in this stage are unknown.

【What's new?】

The objective of this study was to evaluate the factors associated with DWH within 1 year in CLTI of WCS4. The study included 403 patients diagnosed with WCS4 underwent endovascular therapy (EVT) for CLTI between January 2021 and December 2023 from a multicenter registry. Factors associated with DWH were evaluated using multivariate analysis. The clinical outcomes were analyzed by risk stratification. Multivariate analysis showed Non-ambulatory, Heel wound, Wound grade 3, Ischemia grade 3 and small artery disease score 2 were associated with DWH. The results of clinical outcomes for the stratified groups are shown in the figure. The clinical outcomes of high-risk patients with WS4 were extremely poor.



MO-030 Comparison between Traditional Endovascular Therapy and Mechanical Thrombectomy with Indigo System for Acute Limb Ischemia

○Eiji Koyama

Department of Cardiology, Shonan Kamakura General Hospital

【What's known?】

Background: Endovascular therapy (EVT) for acute limb ischemia (ALI) is one potion of revascularization therapy, and Indigo® system is only available mechanical thrombectomy device in Japan.

Objective: This study purpose is to demonstrate the efficacy and safety of EVT for ALI with mechanical thrombectomy of Indigo system.

【What's new?】

Methods: This study was multi-center, retrospective and observational study. Consecutive 308 patents undergoing EVT for ALI from March 2017 to May 2025 were retrospectively analyzed at 3 cardiovascular centers. The primary endpoint was defined as amputation-free survival at 1 year.

Result: The mean age was 78.6 ± 10.8 years; male patients was 58.4%; de novo lesion was 81.9%; Indigo system group was in 69 cases. The mean EVT number was 1.47 ± 0.64; complication rate was 16.0%. The mean follow-up period was 409 days. Amputation rate at 1 year was 9.7%. Amputation-free survival at 1 year in Indigo group was no statistically significant difference, the Indigo group demonstrated a trend toward more favorable outcomes (4.3% vs 11.2%; log-rank p value: 0.19).

Conclusions: The use of the Indigo system might be suggested to reduce the risk of major amputation compared with non-use.

MO-031 A prospective Registry investigating Predictors of Bail-out Stenting in FP-CTO treated with IVUS-guided EVT

○Hiroaki Akai, Kazunori Horie, Akiko Tanaka, Naho Itou, Hiromasa Okada, Norio Tada

Department of Cardiovascular Medicine, Sendai Kousei Hospital

【What's known?】
Although bail-out stenting is sometimes required to achieve sufficient vessel patency during EVT for FP-CTO, lesion factors related to its necessity remain unclear.

【What's new?】
This study investigated whether anatomical or procedural variables were associated with bail-out stent use under IVUS guidance.
Methods: This prospective, single-center observational study at Sendai Kousei Hospital enrolled 125 patients with 158 FP-CTO lesions between May 2024 and July 2025. All procedures were IVUS-guided. Intraluminal wiring was the primary strategy; bail-out stenting was defined as unplanned stent implantation after DCB.
Results: Median CTO length was 120 mm; CLTI and severe calcification rates were 30% and 31%. Intraluminal wiring succeeded in 136 lesions (86.1%), DCB was used in 85% of cases, and bail-out stent occurred in 32 lesions (20.3%). Cox multivariate analysis identified CTO length as the independent predictor of bail-out stenting (HR 1.08, per 10mm, P=0.001). ROC analysis demonstrated an AUC of 0.765, and the optimal cutoff length was 100 mm.
Conclusion: CTO length was independently associated with bail-out stent in femoropopliteal EVT. Recognition of longer CTO lesions may optimize procedural planning and device selection.

MO-032 Outcomes and predictors of restenosis after Jetstream atherectomy in small femoropopliteal arteries: A subanalysis of the JOKER Registry

○Masanaga Tsujimoto[1)], Hirokazu Miyashita[2)], Shinya Ichihara[3)], Kohei Yamaguchi[4)], Takuya Haraguchi[1)], Kazuki Tobita[2)], Naoki Hayakawa[3)], Shinsuke Mori[4)]

[1)] Department of Cardiology, Sapporo Cardio Vascular Clinic,
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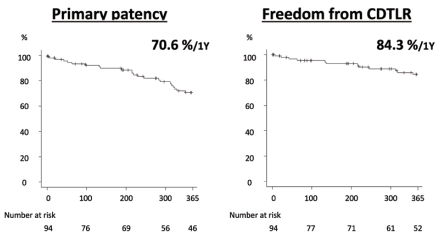
【What's known?】
Endovascular treatment for calcified femoropopliteal arteries remains challenging, and clinical outcomes in small vessels have also been reported to be unfavorable. This study evaluated the efficacy and predictors of restenosis following Jetstream in small, calcified femoropopliteal arteries.

【What's new?】
This multicenter retrospective study evaluated 84 patients with 94 calcified femoropopliteal lesions (distal reference vessel diameter (dRVD) <5.0 mm) treated with Jetstream between November 2022 and December 2024. The mean lesion length and dRVD were 19.6 ± 10.9 cm and 4.1 ± 0.6 mm, respectively. Chronic total occlusion (CTO) was present in 34.0%, and popliteal involvement in 18.1%. Single- and expandable-cutter catheters were used in 54.3% and 73.4% of cases (blades-up 100%), while embolic protection devices were applied in 30.9%. At one year, the primary patency and clinically driven target lesion revascularization (CD-TLR) rates were 70.6% and 84.3%, respectively. Non-ambulatory status and CTO independently predicted loss of patency. Flow impairment occurred in 20.2% of cases and was associated with dense calcification ("black rock" sign), dialysis, and diabetes mellitus. Jetstream achieved acceptable outcomes in small, calcified femoropopliteal arteries; however, careful patient selection and procedural planning are essential to reduce the risk of flow impairment.



MO-033 Intra- versus Extra-Calcification Wiring in JETSTREAM Atherectomy for Heavily Calcified Femoropopliteal Lesions

○Keiichiro Shimazu, Shinsuke Mori, Tomohisa Koyama, Yotaro Fujii, Natsumi Yanaka, Atsuya Murai, Tomoya Fukagawa, Kohei Yamaguchi, Masahiro Miyata, Masakazu Tsutsumi, Norihiro Kobayashi, Yoshiaki Ito

Department of Cardiology, Saiseikai Yokohama-City Eastern Hospital

【What's known?】

Background:

JETSTREAM (JS) atherectomy is a useful device for treating heavily calcified femoropopliteal (FP) lesions, but the impact of wire position during JS on procedural outcomes remains unclear. This study evaluated the influence of wire–calcium relationships on intravascular ultrasound (IVUS)-based outcomes.

【What's new?】

Methods:

A single-center retrospective analysis was conducted on 32 FP lesions treated with JS combined with a drug-coated balloon (DCB) between January 2023 and August 2024. Lesions were classified into an intra-calcium wiring (ICW, n=13) group and an outside-of-calcium wiring (OCW, n=19) group. The primary endpoint was the minimum lumen area (MLA) after DCB angioplasty. Secondary endpoints included slow flow, medial injury, and 1-year primary patency (defined as a peak systolic velocity (PSV) ratio <2.4 and no target lesion revascularization (TLR)).

Results:

Baseline lesion characteristics were similar between groups. Post-DCB MLA was significantly larger in the ICW group (22.3 ± 1.8 vs. 14.9 ± 1.4 mm^2, $p<0.01$). The incidence of slow flow and medial injury were comparable (25% vs. 30%, p=0.76; 17% vs. 25%, p=0.58). The 1-year primary patency rate was higher in the ICW group (91% vs. 75%, p=0.35).

Conclusion:

ICW during JS provided greater luminal gain without increasing periprocedural complications in heavily calcified FP lesions.

MO-034 Comparing Zilver PTX Outcomes for Femoropopliteal Disease: Insights from Australian and Japanese Real-World Studies

○Alan D Rossman, Michael Na, Erin Saricilar, Vikram Puttaswamy, Charles Fisher

Department of Vascular and Transplant Surgery, Royal North Shore Hospital

【What's known?】

Drug-eluting stents (DES) reduce restenosis in femoropopliteal disease, though outcomes may vary between populations. We compared mid-term results from our Australian multicentre Zilver PTX cohort with those of the Japanese REALDES registry to contextualise device performance across differing lesion profiles.

【What's new?】

Methods:

Our retrospective study included 148 patients (183 lesions; mean age 80 years, mean stent length 20.2 cm). Primary outcomes were primary patency and freedom from clinically driven target lesion revascularisation (FF CD-TLR). Results were compared at 3 years with the prospective REALDES Zilver PTX arm (96 limbs; mean lesion length 18.6 cm).

Results:

At 3 years, our cohort achieved primary patency 40% and FF CD-TLR 62%, compared with 70% and 79%, respectively, in the Japanese study. Predictors of restenosis in our series included stent length >160 mm, in-stent restenosis, and lesions crossing the femoropopliteal junction. Five-year all-cause mortality was 25%, with no device-related deaths.

Conclusion:

Zilver PTX remains a safe and durable DES in Australian practice, though long-term patency declines with increasing lesion complexity. Differences from Japanese outcomes likely reflect our older population, longer treated segments, and greater disease burden, emphasising the need for lesion-specific strategies to optimise durability.

MO-035 Clinical Outcomes and Technical Tips of the WIENPHIL Technique for Safe and Effective JETSTREAM Atherectomy in Calcified Occlusive Lesions

○Hideaki Aihara, Yui Takaiwa, Shunsuke Maruta
Tsukuba Medical Center Hospital

【What's known?】

Background

The WIENPHIL technique, which utilizes the outer tube of the WINGMAN035 catheter, enables distal Filtrap placement without pre-dilation. This novel method is expected to improve both the efficacy and safety of JETSTREAM atherectomy in heavily calcified occlusive lesions. However, its clinical outcomes have not been sufficiently reported.

【What's new?】

Methods

From December 2024 to August 2025, the WIENPHIL technique was applied in 10 consecutive patients with severely calcified occlusive lesions requiring JETSTREAM atherectomy. Procedural success, distal embolic events (including slow flow or no-reflow), and periprocedural complications were assessed. Technical considerations and tips derived from procedural experience were also summarized.

Results

Filtrap was successfully deployed distal to the target lesion in all 10 cases, enabling safe completion of JETSTREAM atherectomy. No cases of distal slow flow, no-reflow, or filter-related complications were observed. Practical tips obtained from these experiences included: (1) securing the optimal guidewire passage route, (2) crossing calcified occlusions with the WINGMAN035, and (3) pinpoint use of JETSTREAM at critical sites.

Conclusion

The WIENPHIL technique achieved 100% success without distal embolic complications. This reproducible method may improve both the safety and efficacy of JETSTREAM atherectomy for complex calcified occlusive lesions.

MO-036 Clinical outcomes and predictors of repair success following vessel preparation failure in femoropopliteal lesions

○Takehiro Yamada, Takahiro Usui, Kei Ando, Masaru Nagase, Taro Shibahara, Daiju Ono, Keita Suzuki, Takashi Nakashima, Makoto Yamaura, Takahisa Ido, Shigekiyo Takahashi, Takuma Aoyama
Department of Cardiology, Central Japan International Medical Center

【What's known?】

Background: Evidence on strategies to repair Vessel preparation failure (VPF) following vessel preparation (VP) is limited.

【What's new?】

Methods: This retrospective study analyzed 128 of 209 patients who underwent endovascular therapy for femoropopliteal lesions between January 2018 and August 2025, developed VPF after VP, and had repair attempts. The primary outcome was repair success. Residual stenosis, dissections, finalizing device use, and predictors of success were also assessed.

Results: Before repair, 78 patients (60.9%) had dissections ≥ grade D, and 115 (89.8%) had residual stenosis ≥ 50%. Repair was successful in 85 patients (66.4%). After repair, dissections ≥ grade D decreased to 40 (31.2%), and residual stenosis ≥50% to 29 (22.7%). Patients with dissections ≥ grade D had significantly lower repair success than those with < grade D (50.0% vs 92.0%, $p<0.001$). Lesion length <20 cm and balloon pressure ≥ 14 atm were independent predictors of successful repair. Additionally, in patients with dissections ≥ grade D, non-popliteal lesions, and inflation time ≥180 sec were also independent predictors.

Conclusion: The repair success rate of VPF with severe dissections is limited.

MO-037 Association between Lipid-rich Plaques and Calcification in Femoropopliteal Artery

○Yusuke Sato, Tomohiro Shimizu, Tatsuhiro Kataoka, Hiroyuki Ikeda, Naoto Tama, Kentaro Ishida, Kanae Hasegawa, Hiroshi Tada

Division of Cardiovascular Medicine, Faculty of Medical Sciences, University of Fukui

【What's known?】

Aim: From a pathological perspective, above-knee arteries have a higher incidence of lipid-rich plaque (LRP) and more severe intimal calcification than below-knee arteries. However, the relationship between LRP and calcification in the femoropopliteal artery (FPA) using near-infrared spectroscopy-intravascular ultrasound (NIRS-IVUS) remains underexplored. Therefore, we investigated the association between LRPs in the FPA of patients with femoropopliteal disease.

【What's new?】

Methods: This single-center prospective observational study observed 143 lesions (29 LRP and 114 non-LRP) in 50 limbs of 50 patients with femoropopliteal disease. The lesions were categorized into LRP and non-LRP groups and assessed for NIRS-IVUS findings. LRP was defined as a maximum lipid-core burden index in any 4-mm region (max-$LCBI_{4mm}$) >400.

Results: Regarding IVUS findings, the LRP group had a significantly longer lesion length (43.7 [30.0, 55.9] mm vs. 32.1 [22.5, 43.4] mm, p=0.03) and more severe calcification distribution (p=0.03) than did the non-LRP group. Regarding NIRS findings, the LRP group demonstrated a significantly higher max-$LCBI_{4mm}$ value (446.0 [429.0, 493.0] vs. 224.5 [143.0, 284.5], p<0.001), greater mean lipid-core plaque (LCP) length (p<0.001), and more severe LCP distribution (p<0.001) than did the non-LRP group.

Conclusions: The LRP in FPA was associated with significantly more severe calcification than the non-LRP.

MO-038 Clinical outcomes of cilostazol treatment for femoropopliteal lesions in second generation DCB era

○Masahiro Miyata, Keiichirou Shimazu, Tomohisa Koyama, Youtarou Fujii, Natsumi Yanaka, Atsuya Murai, Tomoya Fukagawa, Kouhei Yamaguchi, Masakazu Tsutsumi, Shinsuke Mori, Norihiro Kobayashi, Yoshiaki Ito

Department of Cardiovascular Medicine, Saiseikai Yokohama City Eastern Hospital

【What's known?】

In a preceding study, it was reported that cilostazol treatment significantly reduced risk of restenosis, after first-generation DCB therapy of FP lesions.

【What's new?】

This study was aimed to determine the effect of cilostazol treatment on restenosis risk in second generation DCB era.

Method

We performed retrospective, single center and observational study. Between January 2020 and December 2023, 82 pairs after propensity score matching treated by DCB in FP lesions were enrolled. Primary endpoint was primary patency at 3 years.

Result

Primary patency wes 63% with cilostazol and 39% without cilostazol at 3 years (Log rank, p=0.032).

Conclusion

Cilostazol treatment significantly reduced risk of restenosis in second generation DCB era.

MO-039 Mid-term clinical outcomes from single center experience of interwoven stent implantation in atherosclerotic common femoral artery disease

○Hironao Sudo, Yo Iwata
Funabashi Municipal Medical Center

【What's known?】
Objective: The efficacy of interwoven stent (IWS) implantation, particularly after the introduction of larger diameters (≥7.0 mm), for atherosclerotic common femoral artery (CFA) disease remains uncertain.

【What's new?】
Methods: We retrospectively analyzed 39 consecutive patients (excluding acute limb ischemia) who underwent IWS implantation at our institution (2019–2025). The primary endpoint was target lesion revascularization (TLR).
Results: Chronic limb-threatening ischemia (CLTI) was present in 14 cases (35.9%). Mean patient age was 78.8 ± 7.2 years (53.8% female). Mean IWS diameter was 7.01 mm; 14 (35.9%) received 6.0/6.5 mm, and 25 (64.1%) received < 7.0 mm stents. Mean follow-up was 617 ± 584 days. One TLR (2.6%) occurred outside the stent 2211 days post procedure in a patient with a 6.5mm stent. Two patients (5.2%) died from non-cardiovascular causes. No major amputations or stent fractures were observed. IWS site re-punctures were performed 31 times in 19(48.7%) patients; One pseudoaneurysm (3.2% per re-puncture) developed after regular dialysis on post-procedural day one, requiring surgical repair.
Conclusions: IWS implantation for CFA disease demonstrates excellent mid-term clinical outcomes with a low incidence of complications.

MO-040 Clinical Outcomes of Drug-Coated Balloon Angioplasty With Versus Without Jetstream™ Atherectomy for Severe Calcified Femoropopliteal Lesions

○Motoaki Kai, Kazuki Tobita, Hikaru Tanemura, Kazuki Kumagai, Shun Sawada, Eiji Koyama, Hirokazu Miyashita, Shigeru Saito
Shonan Kamakura General Hospital

【What's known?】
Background: The combination of Jetstream™ atherectomy (JET) and DCB dilatation has reported improved outcomes for severe calcified femoropopliteal (FP) lesions. However, the efficacy of JET in the Japanese real-world population, which includes a significant number of patients on hemodialysis, remains unclear.
Aim: This study aim is to evaluate the efficacy and safety of JET for severe calcified FP lesions in a Japanese real-world setting.

【What's new?】
Methods: This was a single-center, retrospective, and observational study of de novo or restenotic FP lesions with severe calcification (PACCS classification 3 or 4) treated with JET plus DCB versus DCB alone from April 2022 to September 2024. The primary endpoint was primary patency. Secondary endpoints included post-procedural MLA measured by IVUS, freedom from TLR, and freedom from MALE (defined as amputation or surgical reconstruction).
Results: A total of 148 patients were analyzed. Primary patency did not significantly differ between the JET plus DCB and DCB alone groups (89.0% vs 84.5%, P=0.48). The post-procedural MLA was significantly larger in the JET group (16.2 ± 5.6 mm vs 13.5 ± 4.9 mm , P=0.003). However, freedom from TLR and MALE was comparable between both groups.
Conclusion: JET achieved a larger post-procedural MLA but did not reduce patency loss.

MO-042 The BRight DCB First-in-Human study: PK analysis and 12-month results of a novel Limus derivative DCB

○Bibombe Mwipatayi
Royal Perth Hospital

【What's known?】
Drug-coated devices (DCD) are recommended as a first-line treatment of symptomatic femoropopliteal artery disease. Paclitaxel (PTX) is the predominant drug used. Yet safety concerns with PTX fostered the development of device coated with alternative drug.

【What's new?】
The BRight First study is a 48 patient prospective, multi-center, first-in-human single arm study designed to investigate the BRight DCB, a balloon coated a novel sirolimus derivative, to treat femoropopliteal disease. The primary endpoint was late lumen loss (LLL) at 6 months.

The BRight PK study elavuated BIOtorcin TM and Sirolimus levels in the systemic circulation of 6 patients after BRight DCB deployment. Secondary endpoints included 12 month primary patency, cd-TLR, and MAE.

In the BRight First study, LLL at 6 months was significantly lower than the uncoated balloon control. At 12 months, freedom from MAE was 95.8%, cd TLR 95.8% and primary patency 72.4%. There were also no deaths nor amputations.

Pharmacokinetic outcomes will be available by the time of the presentation.

The BRight First study showed that the BRight DCB met its primary endpoint and can safely and effectively treat femoropopliteal atherosclerotic lesions with sustained clinical improvement up to 12 months.

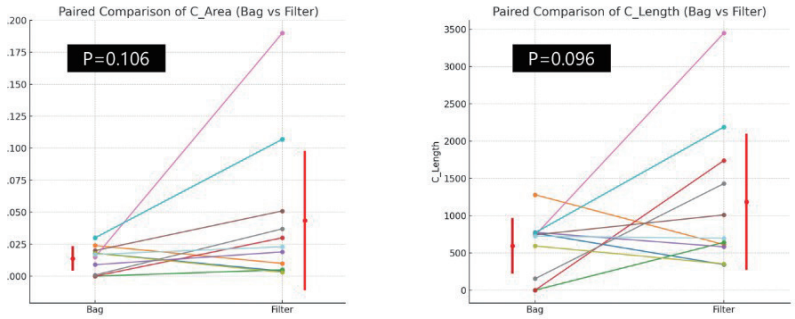
MO-043 The Difference in size of ablated material between inside the suction bag and at the filter of the JETSTREAM

○Yui Takaiwa, Hideaki Aihara, Syunsuke Maruta, Masayoshi Ozawa, Atsushi Kikuchi, Kazunori Kikuchi

Tsukuba Medical Center Hospital

【What's known?】
Can materials aspirated by JETSTREAM be fully recovered using suction from the tip alone?

【What's new?】
The JETSTREAM system aspirates ablated material from the tip to prevent distal embolization. However, could it be that larger calcifications and thrombi flowed distally and remain trapped within the filter placed in the distal region? To prevent distal embolization, is it not necessary to place a distal protection filter in addition to aspiration?We pathologically evaluated and examined the size of the material aspirated from the JETSTREAM's distal suction port and the material retained within the filter placed distally in the blood vessel.



MO-044 One-year Clinical outcomes of hybrid treatment combining Fogarty thrombectomy and endovascular techniques for acute lower limb ischemia

○Keisuke Shoji, Taku Kato, Tokuaki Bando, Shoki Ameno, Yuya Asano, Yoshihiro Azuchi, Yusuke Hori, Akiteru Kojima, Eigo Kishita, Yusuke Nakagawa, Masayuki Hyogo

Department of Cardiovascular Medicine, Japanese Red Cross Society Kyoto Daiichi Hospital

【What's known?】
Background: The clinical outcomes and those predictors of hybrid treatment (HT) combining open thrombectomy and endovascular techniques for patients with acute lower limb ischemia (ALLI) have been unclear.

【What's new?】
Methods: Ninety-one patients presenting with ALLI (Rutherford 1-2b) who underwent HT between January 2013 and May 2025 were retrospectively enrolled. Major adverse limb events (MALEs) were defined as the target lesion revascularization, major amputation, or surgical revascularization. The endpoints were MALEs and amputation-free-survival (AFS) rate at 1 year, assessing the Kaplan-Meier estimate and hazard ratio (HR), which was estimated Cox regression analysis.
Results: The estimated 1-year MALEs and 1-year AFS rate were 33.5% and 75.7%. Multivariate analysis demonstrated that artificial bypass graft thrombosis was an independent risk factor of 1-year MALEs was (HR: 6.12, 95%CI: 2.34-15.9). Independent risk factors of 1-year AFS were history of cerebrovascular disease (HR: 6.94, 95%CI: 2.17-24.2), chronic kidney disease (CKD) grade 4-5 (HR: 3.99, 95%CI: 1.22-13.5), and elevated preoperative CRP (HR: 1.12, 95%CI: 1.05-1.19). In contrast, Rutherford class and lesion distribution were not significantly associated with outcomes.
Conclusions: Artificial bypass graft thrombosis was an independent predictor of 1-year MALEs, while cerebrovascular disease, advanced CKD, and elevated preoperative CRP were independent risk factors for 1-year AFS after HT.

MO-045 Clinical Outcomes of Balloon-Only Venous Arterialization for Chronic Limb-Threatening Ischemia After Failed or Unfeasible Revascularization

○Tomonari Takagi, Akira Miyamoto, Shigehiro Ishigaki, Toru Nakanishi, Yasutaka Yamauchi

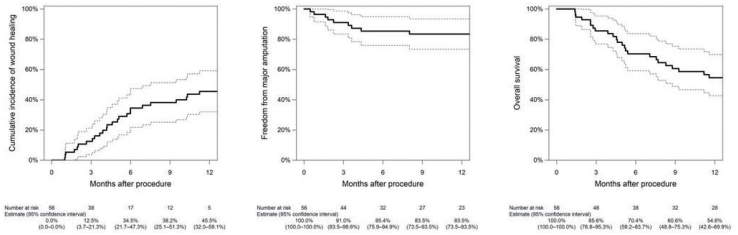
Cardiovascular Center, Takatsu General Hospital

【What's known?】

Patients with chronic limb-threatening ischemia who lack suitable targets for conventional revascularization face extremely poor prognoses, with high amputation and mortality rates. Percutaneous deep venous arterialization (pDVA) using dedicated devices such as the LimFlow system has shown promising results for limb salvage. However, device availability and reimbursement remain limited in some countries, including Japan, where below-the-knee stent implantation is off-label. Therefore, alternative strategies such as balloon-only venous arterialization (BOVA), which avoids stent use, have been developed, yet their multicenter clinical outcomes remain unclear.

【What's new?】

This multicenter, retrospective cohort study evaluated 56 limbs treated with BOVA in patients with refractory ischemic ulcers after failed or unfeasible conventional revascularization. At 12 months, the complete wound healing rate, freedom from major amputation, and overall survival were 45.5%, 83.5%, and 54.6%, respectively. The reintervention rate until complete healing was 5.58 procedures per person-year. Despite frequent reinterventions, this stent-free approach achieved outcomes comparable to dedicated pDVA systems and may reduce device-related complications such as thrombosis and infection.



MO-046 Clinical Outcomes of Thromboendarterectomy using a Bovine Pericardial Patch (XenoSure®) for Common Femoral Artery including Hybrid Treatments

○Takahiro Ohmine

Department of Surgery, Hiroshima Redcross Hospital and Atmic-bomb survivors Hospital

【What's known?】

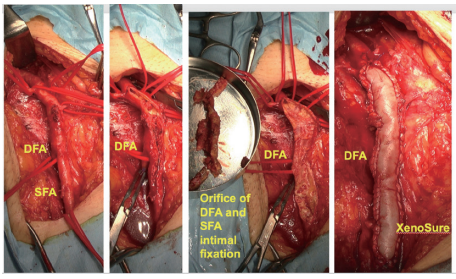
For revascularization of the common femoral artery region in peripheral arterial disease, endarterectomy is the gold standard. For patch formation during endarterectomy, experience with the bovine pericardial patch XenoSure, which became available in Japan in September 2020, has been reported, but the long-term results remain unclear.

【What's new?】

Eighteen patients and 21 limbs who underwent common femoral artery endarterectomy and patch plasty with XenoSure for LEAD patients in our department from September 2020 to January 2025 were included.

The median age of the patients was 75.5 years, 10 were men, and 15 (71%) limbs underwent hybrid revascularization with simultaneous EVT and bypass. There was no operative death and mean postoperative hospital stay was 12 days. Postoperative complications included wound subcutaneous bleeding in one case, wound lymph leak and infection in one case, and concurrent leg and foot bypass graft occlusion in one case.

There was no revision of the patch formation site in any of the patients. All patients had improvement in claudication symptoms and healing of ulcers. In addition, three limbs were punctured at the patch formation site by EVT during the remote period without any problems. The mean follow-up was 389 days and the 1-year primary patency rate was 100%.



MO-047 Endovascular therapy with Jetstream atherectomy debulking device for calcified femoropopliteal artery (JOKER registry): Early results from a retrospective multicenter registry

○Hirokazu Miyashita[1)], Masanaga Tsujimoto[2)], Shinya Ichihara[3)], Kohei Yamaguchi[4)], Kazuki Tobita[1)], Takuya Haraguchi[2)], Naoki Hayakawa[3)], Shinsuke Mori[4)]

[1)] Department of Cardiology, Shonan Kamakura General Hospital,
[2)] Department of Cardiology, Sapporo Cardio Vascular Clinic,
[3)] Department of Cardiology, Asahi General Hospital,
[4)] Department of Cardiology, Saiseikai Yokohama City Eastern Hospital

【What's known?】
Endovascular therapy (EVT) for lower limb arterial disease with severe calcification remains challenging. The JETSTREAM atherectomy system has been introduced to manage these lesions, but its safety and efficacy are not fully established.

【What's new?】
This multicenter retrospective study evaluated 245 patients and 314 limbs which underwent EVT using JETSTREAM between November 2022 and August 2024 across four centers. The primary efficacy endpoints were 1-year primary patency and clinically driven target limb revascularization (CD-TLR). Safety outcomes included non-recovered flow deterioration and major amputation. The mean patient age was 74.8 years, with 39.4% on hemodialysis. The mean lesion length was 176.5 mm, and 66.7% had PACSS grade 4 calcification. At one year, primary patency and freedom from CD-TLR were 83.8% and 90.3%, respectively. Non-recovered flow deterioration occurred in six cases, and major amputation was required in four limbs within one year. Multivariate analysis identified restenosis lesions, occlusive lesions, small vessel diameter, small maximum JETSTREAM size, and intra-procedural flow deterioration as independent predictors of loss of patency. In conclusion, JETSTREAM atherectomy demonstrated favorable efficacy and safety in treating severely calcified lesions. However, careful case selection and procedural planning are essential, particularly for small vessels and restenotic lesions.

MO-048 Verification of the safety of large-diameter sheath insertion in anterolateral popliteal artery puncture

○Daisuke Yamazaki

Hanaoka Seishu Memorial Hospital

【What's known?】
The approach for anterolateral popliteal artery (PA) puncture recommends the use of sheaths or devices with a diameter of 3.0 Fr or smaller because of the risk of bleeding complications due to the long distance from the skin to the PA.

【What's new?】
We evaluated the safety of sheath insertion via anterolateral popliteal artery puncture.
Material and methods: We retrospectively reviewed the devices and outcomes of 14 patients who underwent EVT with a wide sheath inserted during anterolateral PA puncture at our institution and introduced a hemostatic method.
Results: A total of 179 EVTs were performed at our institution, 14 of which involved anterolateral PA puncture. 4.0–6.0 Fr sheaths were used, and the PA was ballooned for 10 min during sheath removal. The dorsal PA was compressed with hemostatic compression cotton, and the anterior puncture site was compressed with Stepty (NICHIBAN, Tokyo, Japan) and fixed together with an adhesive elastic bandage. There were no complications, such as hematoma formation or compartment syndrome, in all 14 patients.
Conclusions: The safety of insertion of a wide-diameter sheath in anterolateral PA puncture has been recognized and is expected to expand the range of treatment strategies for EVT using the anterolateral PA approach.

MO-049 Thirty-Day Postoperative Major Adverse Limb Events in Patients with Acute Limb Ischemia at Bhumibol Adulyadej Hospital

○Sarrath Sutthipong

Department of Surgery, Bhumibol Adulyadej Hospital

【What's known?】

Background: Acute limb ischemia (ALI) is a vascular emergency associated with a substantial risk of limb loss. Although surgical revascularization remains the mainstay of treatment, postoperative major adverse limb events (MALEs) continue to pose significant clinical challenges.

【What's new?】

Objective: To determine the prevalence and predictors of 30-day MALEs following revascularization in patients with ALI at Bhumibol Adulyadej Hospital.

Methods: A retrospective cohort study was conducted involving 109 patients who underwent revascularization for ALI between 2018 and 2023. Clinical and perioperative variables were analyzed using univariate and multivariate logistic regression to identify independent risk factors.

Results: The mean age of the cohort was 69.96 ± 15.54 years and one-fourth of the patients were in the octogenarian group, with 66.1% classified as Rutherford category 2B. The 30-day MALE rate was 21.1% (95% CI: 14.49–29.68%). Independent risk factors included symptom duration exceeding 24 hours prior to surgery (OR 1.087; 95% CI: 1.014–1.166; p = 0.018) and chronic kidney disease stage 3–5 (OR 4.154; 95% CI: 1.150–15.010; p = 0.030).

Conclusion: Delayed revascularization and advanced chronic kidney disease were independently associated with increased risk of 30-day MALEs. Timely intervention is essential to optimize limb salvage outcomes.

MO-050 A case of a calcified CIA lesion with early thrombotic occlusion caused by deformation of a covered stent

○Soki Inoue, Kazuaki Kataoka, Hideyuki Muraoka, Neiko Ozasa, Noritsugu Uemori, Takatomo Fujimoto, Yohei Oi, Hideya Yagi, Hiroaki Sasaki, Ryuji Nohara

Department of Cardiovascular Medicine, Takanohara Central Hospital

【Case overview】

An 81-year-old female presented with acute lower limb arterial occlusion and underwent endovascular therapy (EVT). Covered stents were implanted in both common iliac arteries (CIAs) because of severe calcification. Her symptoms and ankle-brachial index (ABI) improved, and she was discharged. Ten days later she returned with recurrent pain in the left leg. Computed tomography revealed deformation of the covered stent in the left CIA with thrombotic occlusion of the left CIA and the popliteal artery (Pop A).

【Procedure summary】

Manual thrombus aspiration was performed in the left CIA. To reinforce the deformed covered stent, a self-expanding nitinol stent was implanted with subsequent post-dilatation. Additional thrombus aspiration and balloon angioplasty were carried out in the Pop A, and anticoagulation therapy was initiated for the residual thrombus.

【Clinical time course and implication (or perspective)】

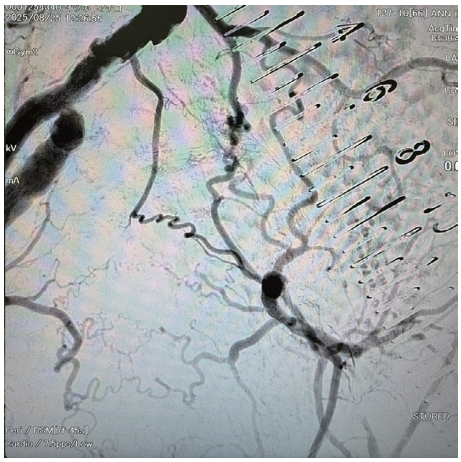
The patient received systemic heparin for one week, followed by transition to a direct oral anticoagulant (DOAC). Three weeks after the procedure, stent patency and complete thrombus resolution were confirmed, and she was discharged from the hospital. No recurrence has been observed during follow-up. This case suggests that reinforcement by a self-expanding nitinol stent may be a feasible bailout option to preserve patency in the case of covered stent deformation.

MO-051 Bidirectional Parallel Wire Technique for LCIA Chronic Total Occlusion (CTO) with CFA Extension using the WINNER Technique

○Jonald O. Lucero, Makoto Sugihara
Department of Cardiology, Fukuoka University Hospital

【Case overview】
A 76 year old female with a history of hypertension, dyslipidemia, and coronary artery disease presented with complaints of left lower limb claudication and intermittent rest pain. Physical examination and diagnostic imaging suggested CTO of the LCIA.

【Procedure summary】
Left radial and femoral arterial accesses were obtained using 6F R2P Destination Slender and Parent Plus guiding sheaths. An antegrade Vassallo NS3 guidewire on a Teleport XT microcatheter and a retrograde Astute 9-12 wire on a Corsair Armet microcatheter were advanced to establish a bidirectional parallel wiring strategy for a heavily calcified LCIA CTO. IVUS demonstrated a mixed fibrous and >180 ° calcified plaque with confirmed wire positions in both directions. Wire escalation from NS3 to Astute 9-12 and 9-40 failed to cross the lesion due to dense calcification. A Crosslead Penetration guidewire within a nude Wingman microcatheter was then advanced retrogradely using a clockwise maneuver, successfully achieving distal-to-ostial crossing. The wire was externalized using a Poorman's snare technique, followed by sequential balloon dilatation and deployment of R2P Misago 8.0×100 mm and 8.0×80 mm stents. Final angiography and IVUS confirmed optimal expansion with excellent flow.



【Clinical time course and implication (or perspective)】
The procedure was successful with no complications, showing excellent post-procedural flow and complete occlusion resolution, with marked symptomatic improvement.

MO-052 A Case of Severe Aorto-Iliac Artery Stenosis in Which All Balloons Ruptured

○Takakuni Kurokawa, Katsuharu Hatada, Tomoyasu Suzuki, Yuko Matsuyama, Takao Yanagawa
Department of Cardiovascular Medicine, Saiseikai Niigata Hospital

【Case overview】
A woman in her 70s presented with intermittent claudication and rest pain (Rutherford category II-4), consistent with chronic limb-threatening ischaemia (CLTI).

【Procedure summary】
Wiring of the right common iliac artery (CIA) via the transradial approach was successful; however, other devices, including the microcatheter, could not be advanced. The ipsilateral femoral artery was subsequently punctured, and a through-and-through wire access was established, but conventional endovascular techniques still failed to deliver the device. A specialized wire support strategy (BADFORM technique) was then applied, enabling successful device passage. During this maneuver, introducer sheaths were positioned as close as possible from both directions to minimize the risk of vessel injury at the aorto-iliac curvature. Although all balloons, including small-diameter types, ruptured during plain old balloon angioplasty (POBA), vessel preparation was deemed adequate, and a covered stent (VBX balloon-expandable endoprosthesis) was successfully implanted at the same site. Following endovascular revascularization, both rest pain and intermittent claudication markedly improved.

【Clinical time course and implication (or perspective)】
Following the endovascular revascularization, both rest pain and intermittent claudication improved.

MO-054 Dealing with In-stent and Calcified Chronic Total Occlusion (CTO) in Chronic Limb-threatening Ischemia

○Teuku Rahadiyan[1,2], Taofan Taofan[2]

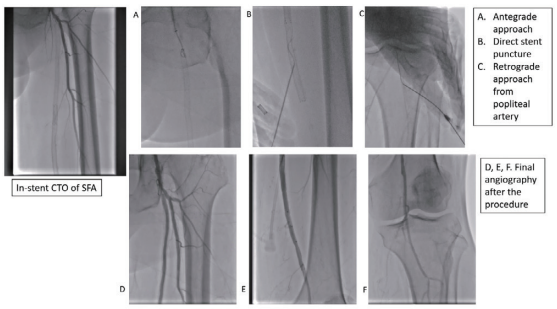
[1] Department of Cardiovascular Medicine, Raden Mattaher General Hospital, [2] Vascular Division, Department of Cardiology and Vascular Medicine, National Cardiovascular Centre Harapan Kita

【Case overview】

56s male complained severe resting pain on left limb with cold,numbness,and burning sensation. Patient had balloon angioplasty in left EIA and stenting in SFA two years ago. CT-angiography demonstrated stent occlusion in left SFA with collateral flow to distal stent and plaque calcification.

【Procedure summary】

An 8.0x100mm stent was placed via right femoral access in right EIA to facilitate subsequent procedures due to subtotal stenosis of right EIA. Angiography from contralateral access demonstrated multiple stenosis in left CIA-EIA and In-stent chronic total occlusion (IS-CTO) with collaterals supplying distal portion of left SFA. Antegrade manipulation using escalation of 0.014-inch wire failed to penetrate the calcium CTO. Two attempts of direct stent puncture were performed and 0.035-inch wire crossed the IS-CTO retrogradely. Ballooning the IS-CTO were performed anterogradely but wire failed crossing the IS-CTO body beyond distal placed stent. After re-puncture of distal popliteal artery 0.018-inch wire eventually could cross with reverse CART technique. Predilation performed and 6x120mm stent was implanted in distal SFA. A 5.0x200mm DCB was inflated along SFA and 7.0x100mm stent implanted in EIA. Final angiography and IVUS examination showed excellent result with well stent expansion.



【Clinical time course and implication (or perspective)】

The patient symptom significantly relieved after procedure. 3-month CT-angiography follow up result good stent patency.

MO-055 SUPERA stent migration following contralateral femoral access: exclusion with VBX covered stent and mechanical considerations

○Katsuyuki Hanabusa, Tatsuya Nakama, Shunsuke Kojima

Department of Cardiology, Tokyo Bay Medical Center

【Case overview】

A 76-year-old hemodialysis patient with chronic limb-threatening ischemia underwent endovascular therapy. A SUPERA interwoven nitinol stent was deployed from the right external iliac artery to the deep femoral artery. One week later, during left femoral intervention, the right common femoral artery was punctured and an 8-Fr guiding sheath was inserted through the stented segment for contralateral access. This maneuver resulted in proximal migration of the SUPERA into the right common iliac artery.

【Procedure summary】

The displaced SUPERA stent was excluded with a Viabahn VBX covered stent to restore flow and isolate the migrated segment. At one-year follow-up, a slit-like restenosis due to incomplete sealing was observed. To address this, an additional SUPERA stent was implanted through the struts of the SUPERA as a bailout.

【Clinical time course and implication (or perspective)】

Although migration of the SUPERA stent is rare in peripheral intervention, it may occur after sheath insertion through an implanted segment. Various bailout methods have been reported, including endovascular and surgical approaches. Exclusion using a balloon-expandable covered stent like VBX is effective for the immediate restoration of flow; however, structural differences in radial stiffness between interwoven and balloon-expandable stents may contribute to deformation or restenosis. Recognizing these mechanical interactions is crucial for optimizing bailout strategies and preventing recurrence.

MO-056 Successful Limb Salvage by Combined Indigo Aspiration Thrombectomy and Catheter-Directed Thrombolysis with tPA for Acute Lower Limb Ischemia Associated with Popliteal Artery Aneurysm

○Mitsuyo Ito, Hitoshi Anzai, Keigo Kajiwara, Takehiro Katou, Hiroya Watanabe, Masaya Yuzawa, Rikako Saito, Yusuke Samejima, Chihiro Fukuyama, Kento Yabe, Hiroki Takenaka, Naohiko Nemoto

Department of Cardiovascular Medicine, SUBARU Health Insurance Society Ota Memorial Hospital

【Case overview】
A male patient in his 70s presented with acute lower limb ischemia (ALI) caused by a popliteal artery aneurysm (PAA).

【Procedure summary】
We performed emergency aspiration thrombectomy was performed using the Indigo CAT8 and CAT6. This achieved TIPI 2 flow; however, IVUS and angiography revealed a significant amount of residual thrombus. Therefore, catheter-directed thrombolysis (CDT) was initiated. A 5 Fr Fountain infusion catheter was placed at the lesion site, and continuous infusion of alteplase (tPA) was started. After 24 hours, repeat angiography showed a reduction in thrombus volume and improved distal flow, and the procedure was concluded.

【Clinical time course and implication (or perspective)】
To prevent recurrence of ALI, elective surgical repair of the PAA with prosthetic graft replacement was performed by cardiovascular surgery. We retrospectively reviewed seven cases of ALI associated with PAA treated at our institution over the past ten years. In recent years, we successfully achieved limb salvage by combining the Indigo system with CDT using tPA, followed by elective surgical repair of the PAA. Based on these experiences, we report this case with a literature review, as it may help inform future treatment strategies in our institution.

MO-057 Supera Implantation for Common Femoral Artery Disease in Patients with High Frailty and Comorbidities

○Naho Ito, Kazunori Horie, Hiromasa Okada, Hiroaki Akai, Akiko Tanaka, Norio Tada

Cardiovascular Center, Sendai Kousei Hospital

【What's known?】
Background: Endarterectomy remains the gold-standard treatment for common femoral artery (CFA) disease. However, in elderly or frail patients with multiple comorbidities, surgical intervention is sometimes not feasible. In such cases, endovascular therapy (EVT) may be considered as an alternative approach. The Supera stent, with its high radial strength and flexibility, has recently been applied in these challenging settings.

【What's new?】
Methods: We retrospectively analyzed 50 patients who underwent Supera stent implantation for CFA lesions between June 2019 and February 2025. Most patients had significant comorbidities such as dementia, poor cardiac function, or severe pulmonary disease, making endarterectomy difficult.
Results: Twenty-four patients had stenosis and 26 had occlusion; 44 patients (88%) had calcified nodules. Technical success was achieved in all cases. Stent diameters ranged from 6.0 to 7.5 mm. Among 43 patients with duplex ultrasound follow-up, no in-stent restenosis was observed at 12 months. Although occlusion of the deep femoral artery occurred in four cases, no acute limb ischemia developed.
Conclusions: Supera implantation can serve as a reasonable alternative only in patients where surgical endarterectomy is not feasible, providing a safe and technically successful option in such high-risk cases.

MO-058 Initial Experience of Percutaneous Hemostasis for Large-Bore Device Removal

○Keiko Watanabe, Kenji Suzuki, Shiho Taniguchi, Yuuki Fujii, Kazutaka Miyamoto, Ayaka Endo, Naoki Hirata, Tasuku Hasegawa, Toshiyuki Takahashi

Department of Cardiovascular Medicine, Tokyo Saiseikai Central Hospital

【What's known?】
Removal of large-bore devices such as VA-ECMO and IMPELLA® is generally performed surgically. However, timing is often restricted by patient condition and surgical team availability, creating a clinical need for a safe and rapid percutaneous hemostatic approach.

【What's new?】
We retrospectively analyzed 26 cases of percutaneous closure for ≥16Fr device removal performed at our institution since June 2024. Perclose™ ProStyle™ was primarily used. Immediate hemostasis was achieved in all cases without the need for surgical intervention. Additional closure devices were required in some cases—three or more Perclose devices in 2 cases, and Angio-Seal™ in 10 cases. Balloon-assisted hemostasis was used in 19 cases. The mean duration of device placement was 3.1 days, and the mean recorded hemostasis time (n=9) was 20 minutes. Post-procedural complications occurred in two cases: one pseudoaneurysm and one case of bleeding that required prolonged manual compression. These findings suggest that percutaneous hemostasis may be a safe and effective option for large-bore device removal; however, further clinical experience is necessary to confirm its reliability.

MO-059 Clinical Outcomes of the LifeStream Covered Stent for Iliac Artery Disease: A Single-Center Retrospective Study

○Masanao Inoue, Naoki Hayakawa, Toshinobu Tsurumaki, Yasuyuki Tsuchida, Shinnya Ichihara, Syunnichi Kushida

Department of Cardiology, Asahi General Hospital, Chiba, Japan

【What's known?】
Covered balloon-expandable stents provide reliable scaffolding and sealing for complex aorto-iliac occlusive disease. The LifeStream covered stent, composed of ePTFE with a cobalt-chromium frame, has shown excellent acute technical success and short-term patency in pivotal trials such as BOLSTER. However, evidence remains limited in real-world settings, especially among elderly patients with TASC II C/D or heavily calcified lesions. Understanding the clinical outcomes and mid-term patency of LifeStream in such high-risk populations is clinically relevant.

【What's new?】
In this single-center retrospective analysis of 43 iliac interventions using the LifeStream covered stent (2020–2024), 72% were TASC II C/D lesions and 93% showed calcification. Technical success was 100%, and ABI improved from 0.70 to 0.96 ($p < 0.01$). During a mean follow-up of 532 days, only 2 TLR events occurred, yielding ≈95% 1-year primary patency. No device-related major complications were observed. These findings demonstrate excellent safety and durable mid-term patency even in complex, calcified iliac disease, extending the evidence from BOLSTER to a real-world elderly cohort.

MO-061 Sharing the Excellence of Hybrid Revascularization for LEAD/CLTI

○Shuji Kurata

Department of Surgery,Shonan Fujisawa Tokushukai Hospital

【What's known?】

In the treatment of LEAD and CLTI, revascularization cannot always be achieved successfully with EVT alone. Even when technically possible, EVT often results in limited long-term patency and may lead to early re-occlusion, worsening the patient's condition. While optimal outcomes with EVT are ideal, experienced vascular specialists recognize its limitations.The greatest advantage of vascular surgeons lies in their ability to perform both EVT and open surgery. Although surgical approaches are more invasive and may be associated with wound-related complications, the hybrid approach offers a balanced alternative. By combining the strengths of EVT and surgery, hybrid procedures can be performed more efficiently and safely.

【What's new?】

In particular, the strategy of addressing the inflow with EVT and the outflow with distal bypass provides a more reliable runoff than EVT alone, and thus has the potential to enhance patency and overall outcomes. I truly believe that hybrid revascularization is an excellent treatment strategy. It is essential for revascularization specialists to recognize that revascularization should not rely solely on EVT but should incorporate surgery and hybrid options in a well-balanced manner. Drawing on my extensive clinical experience, I hope to share the remarkable advantages of hybrid treatment and convey its true value to the audience.

MO-062 First-in-Human Evaluation of a Novel Hybrid Drug-Eluting Stent for Below-the-Knee Lesions: Study Design of the DIAMOND-BTK Randomized Trial

○Yukihisa Ogawa[1)], Terumitsu Hasebe[1)], Osamu Iida[2)], Yoshimitsu Soga[3)], Tatsuya Nakama[4)], Kenta Bito[5)], Shunto Maegawa[6)], Emi Kearon Matsuoka[7)], Masahiko Fujihara[8)], Takao Ohki[9)], Masato Nakamura[10)], Sahil A. Parikh[11)], Elazer R. Edelman[12)]

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[11)]Division of Cardiology, Colombia University Irving Medical Center, [12)]Institute for Medical Engineering and Science, Massachusetts Institute of Technology

【What's known?】

Background: Despite advances in drug-eluting technologies for femoropopliteal disease, treatment of below-the-knee (BTK) lesions remains challenging, with high restenosis rates following balloon angioplasty. To adress this need, we developed the BioStealth stent, a novel hybrid drug-eluting stent engineered for enhanced flexibility and controlled sirolimus release.
Methods: The DIAMOND-BTK trial is an investigator-initiated, multicenter randomized controlled study conducted at four sites in Japan. The study includes an initial two-patient non-randomized safety run-in, in which both subjects will undergo BioStealth stent implantation. A 30-day safety evaluation will be performed by an independent committee. If no safety concerns are identified, the subsequent randomized phase will begin, enrolling 50 additional patients with CLTI who will be randomized to receive either the hybrid DES or balloon angioplasty. The primary endpoint is a composite of freedom from major target limb amputation above the ankle, vessel occlusion, clinically driven target lesion revascularization, and binary restenosis at 12 months. Follow-up is scheduled at 30 days, 3, 6, and 12 months.
Conclusions: The BioStealth stent represents a promising therapeutic option for BTK disease. First-in-human results from this trial, including run-in outcomes, will be presented.

【What's new?】

This is the first clinical trial to evaluate a hybrid sirolimus-eluting stent designed for BTK disease.

MO-063 Pathology of above the Knee Arteries after Balloon Angioplasty

○Manabu Shiozaki, Sho Trii, Norihito Nakamura, Yu Sato, Yuki Matsumoto
Department of Cardiology, Tokai University

【What's known?】
For endovascular treatment of above-the-knee (ATK) arteries, multiple devices are available, including plain balloon angioplasty (POBA), drug-coated balloons (DCB), and metal stents. Their treatment outcomes have also been clarified through various clinical studies. In the field of coronary intervention, pathological insights into vascular healing and restenosis mechanisms following angioplasty and stenting have partially driven advances in device design. However, little is known about the biological responses following these interventions, and this remains true for ATK arteries. Existing pathological data are scarce, and no large-scale human pathological studies addressing vascular responses exist.
Therefore, we performed a comprehensive histopathological evaluation of arteries in the ATK arteries of CLTI patients after POBA or DCB. Univariate analysis identified the following variables as significantly associated with restenosis in AK lesion. Severe medial calcification (OR: 2.95; 95% CI: 1.70–5.11; P = 0.0001), medial disruption (OR: 5.06; 95% CI: 2.27–11.1; P = 0.0001), and intimal dissection (OR: 2.81; 95% CI: 1.58–5.21; P = 0.0004) were significantly associated with restenosis.

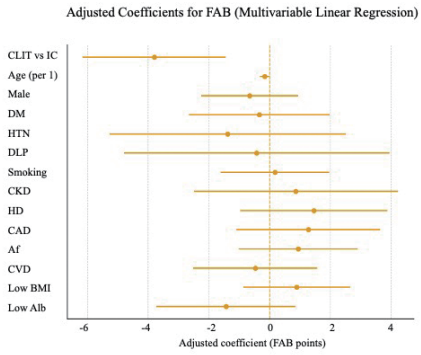
【What's new?】
By elucidating morphological and cytological features associated with restenosis, we aim to deepen our understanding of vascular healing and provide insights that could guide the selection between DCB and metal stents, as well as inform future therapeutic strategies.

MO-064 CLTI Is Linked to Executive Dysfunction: A 4-Point Drop in the Frontal Assessment Battery

○Yuichiro Hosoi, Yutaro Kasai, Seji Yamazaki
Department of Cardiology, Sapporo Higashi Tokushukai Hospital

【What's known?】
The relationship between PAD and brain dysfunction is recognized but underexplored; evidence on frontal executive deficits is especially sparse. Few studies directly compare CLTI with intermittent claudication using the FAB.

【What's new?】
Methods: Single-center cross-sectional comparison of IC vs CLTI. Outcome: FAB. Multivariable linear regression adjusted for age, DM, HTN, DLP, smoking, CKD, HD, CAD, AF, OCI, male sex, low BMI, and low albumin; missingness handled as available-case. For causal support, we used stabilized IPTW with PS trimming (0.05–0.95; balance by SMD) and 1:1 nearest-neighbor matching (caliper 0.2×SD of logit PS). Secondary analyses regressed MMSE and HDS-R on z-standardized FAB.
Results: CLTI was associated with a −3.79-point decrement in FAB (95% CI, −5.63 to −1.96). Inverse probability of treatment weighting yielded an ATE of −3.91 (95% CI, −5.84 to −1.99; n=75; maximum |SMD| = 0.10). Matching yielded an ATT of −3.28 (25 pairs), converging to −3 to −4 points across methods. FAB correlated with MMSE (r=0.50, 95% CI, 0.34–0.67) and HDS-R (r=0.50, 95% CI, 0.31–0.70).
Conclusion: Even after adjustment for background comorbidities and risk factors, CLTI is associated with a clinically meaningful 3–4-point lower FAB than intermittent claudication.



MO-065 Serum ferritin level could predict wound healing in chronic limb-threatening ischemia patients after endovascular therapy

○Jun Nakamura, Takahisa Yamada, Mitshtoshi Asai, Takashi Morita, Masato Kawasaki, Atsushi Kikuchi, Takumi Kondo, Tsutomu Kawai, Masahiro Seo, Takeshi Fujita, Yuki Kokubu, Masatake Fukunami

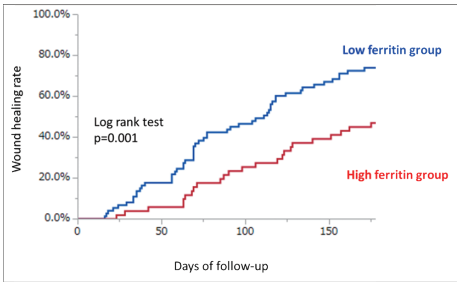
Osaka General Medical Center

【What's known?】

Ferritin is an essential protein in iron metabolism that reflects body iron homeostasis and is considered a biomarker for inflammation.

【What's new?】

There are no information available on wound healing in chronic limb-threatening ischemia (CLTI) patients.To investigate whether serum ferritin levels could predict wound healing in CLTI patients after endovascular Therapy (EVT), we retrospectively analyzed 91 patients with CLTI who underwent EVT between July 2022 and March 2024. Study patients were divided into 2 groups according to serum ferritin levels, the high ferritin (>250ng/ml, n=34) and the low ferritin groups (<250, n=57).There were no significant differences in gender, hypertension, hemoglobin, chronic kidney disease or serum iron between the high and low ferritin groups. The primary outcome measure was 6-month wound healing after EVT. Forty-six patients attained complete wound healing without major amputation at 6 months. At Cox multivariable hazard analysis, low ferritin was significantly associated with wound healing independently of BNP after the adjustment with age and C-reactive protein. Kaplan- Meier analysis revealed that the low ferritin group patients had significantly higher wound healing rate than the high ferritin group (adjusted hazard ratio:2.93[1.48-6.31], p=0.01). In conclusion, serum ferritin levels could predict wound healing in CLTI patients after EVT.



MO-066 Thrombotic Lesions in Femoropopliteal Disease Untreatable by Modern Balloon Angioplasty Strategies in Elective Endovascular Procedures: the THUMB study

○Tomofumi Tsukizawa, Masahiko Fujihara

Department of Cardiology, Nozaki Tokushukai Hospital

【What's known?】

Background: Managing thrombotic lesions in clinical practice is often challenging. This study aimed to evaluate the prevalence of thrombotic lesions in the femoropopliteal artery and compare their clinical outcomes with non-thrombotic lesions.

【What's new?】

Methods: Among 598 patients who underwent EVT for FPA total occlusive lesions between 2018 and 2023, 500 patients were included after excluding cases of ALI requiring emergency intervention and those without IVUS evaluation. We defined "THUMB" lesions as those: "Easy Wire Cross," "All True and thrombus as the primary lesion morphology by iVUS" and "failure to achieve sufficient dilation with standard balloon angioplasty".
Results: THUMB lesions were identified in 97 out of 500 cases (19.4%). Compared to the control group, the THUMB group showed significantly higher rates of full metal stent implantation ($p<0.001$), distal embolization ($p<0.001$), and procedural failure ($p=0.009$). At 3 months, the THUMB group also exhibited higher rates of restenosis ($p=0.007$), reocclusion ($p=0.012$), and reintervention ($p=0.032$). Independent predictors of THUMB lesions identified by multivariable logistic regression analysis included symptom duration <3 months, a CTO/lesion length ratio >0.5, and the absence of bilateral calcification.
Conclusion: These findings provide critical insights into the poorly understood thrombotic lesions and their management.

MO-067 Prognostic Impact of Nutritional Status After EVT in CLTI Patients With Isolated Below-the-Knee Lesions

○Satoshi Takase, Yuki Nakata, Eiji Shibahashi, Naoki Serikawa, Takanori Kawamoto, Masafumi Yoshikawa, Hisao Otsuki, Tomohito Kogure, Yuichiro Minami, Junichi Yamaguchi

Department of Cardiology,Tokyo Womens Medical University Hospital

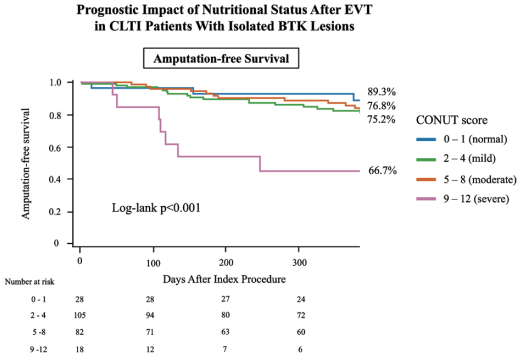
【What's known?】

Malnutrition is known as a prognostic factor in patients with chronic limb-threatening ischemia (CLTI). However, its impact in CLTI patients with isolated below-the-knee (BTK) lesions who underwent endovascular therapy (EVT) remains unclear.

【What's new?】

We retrospectively analyzed CLTI patients with isolated BTK lesions who underwent EVT. Patients were stratified into four groups according to the CONUT score (0-1, 2-4, 5-8, 9-12, reflecting normal, mild, moderate, and severe malnutrition, respectively). The primary endpoint was amputation-free survival (AFS). And we also evaluated bleeding events.

A total of 233 patients were included. Severe malnutrition status was significantly associated with worse AFS compared with other nutritional groups (log-rank p<0.001). Furthermore, bleeding events were significantly more frequent in patients with severe malnutrition group (log-rank p<0.001). Nutritional status assessed by the CONUT score is a strong prognostic indicator in CLTI patients with isolated BTK lesions undergoing EVT. Severe malnutrition was associated with both impaired limb-related outcomes and higher bleeding risk, underscoring the importance of nutritional assessment in this high-risk cohort.



MO-068 Superiority of Geriatric Nutritional Risk Index for Predicting Major Adverse Cardiovascular and Limb Events in Patients Undergoing Endovascular Treatment for Lower Extremity Artery Disease

○Yuji Ohno[1], Yuichi Saito[2], Kayo Yamamoto[2], Noriyuki Oka[3], Masayuki Takahara[4], Sakuramaru Suzuki[5], Yo Iwata[3], Yoshio Kobayashi[2]

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[3] Department of Cardiology, Funabashi Municipal Medical Center,
[4] Department of Cardiology, Kimitsu Central Hospital,
[5] Department of Cardiology, National Hospital Organization Chiba Medical Center

【What's known?】

Background: Malnutrition is associated with adverse cardiovascular and limb outcomes in patients with lower extremity artery disease (LEAD). However, the comparative prognostic value of nutritional indicators has not been sufficiently investigated.

【What's new?】

Methods:This multicenter, retrospective study included 337 patients who underwent endovascular treatment for aortoiliac or femoropopliteal lesions between January 2019 and December 2023. The Geriatric Nutritional Risk Index (GNRI), Controlling Nutritional Status (CONUT) score, serum albumin, and body mass index (BMI) were assessed as nutritional indices. Receiver operating characteristic (ROC) curve analyses were used to assess and compare their prognostic ability for major adverse cardiovascular and limb events (MACLEs), defined as death, myocardial infarction, ischemic stroke, acute limb ischemia, major amputation, or development/recurrence of chronic limb-threatening ischemia (CLTI). Multivariate Cox regression analysis was performed using the best-performing index.

Results: During a median follow-up of 726 days, MACLEs occurred in 34.1% of patients. GNRI showed the highest predictive ability among the four indices (AUC 0.70; cutoff 96.8) and remained an independent predictor of MACLEs(Adjusted HR 2.46; 95% CI 1.50–4.00; p<0.01).

Conclusion: GNRI demonstrated superior prognostic value compared with other nutritional indicators for adverse cardiovascular and limb outcomes in patients with LEAD.

MO-069 Prognostic factors of long-term survivors after surgical revascularization in dialysis-dependent patients with chronic limb-threatening ischemia

○Keisuke Kamada, Shinsuke Kikuchi, Kyokei Fuchizawa, Izumi Fukii, Hirohumi Jinno, Takayuki Uramoto, Seima Ohira, Naoya Kuriyama, Nobuyoshi Azuma

Department of Vascular Surgery, Asahikawa Medical University

【What's known?】

This single-center retrospective study analyzed prognostic factors for 2-year survival in 304 hemodialysis-dependent (HD) patients with critical limb-threatening ischemia (CLTI) who underwent infrainguinal bypass surgery between 2000 and 2019.

【What's new?】

Patients were categorized into short (<2 years), long (>2 years), and super-long (>5 years) survivors. Clinical outcomes including survival, limb salvage, and graft patency were compared. Five-year survival was poor (28%). Two-year limb salvage rates were high in both short (89%) and long (95%) survivors, with no significant difference (P=0.10). However, 2-year primary and secondary graft patency rates were significantly better in long survivors (53% vs. 61%, P=0.02; 79% vs. 88%, P=0.04). Multivariate analysis revealed that younger age (OR 1.06) and absence of chronic heart failure (CHF) (OR 0.36) were associated with 2-year survival. For 5-year survival, younger age (OR 1.07) and female gender (OR 3.49) were positive predictors, while loss of ambulation (OR 0.33), CHF, and high WIfI stage were negative factors. These findings suggest that systemic conditions—particularly cardiac function, mobility, and age—are key determinants of survival. Limb severity becomes more relevant in long-term outcomes. When considering open bypass indication in HD patients with CLTI, both systemic and limb-specific factors should be evaluated to guide individualized revascularization strategies.

MO-070 Efficacy and Safety of Trans-Collateral Angioplasty as a Retrograde Approach for Infrapopliteal CTO Lesions in CLTI

○Yoshinori Tsubakimoto[1,2], Jun Shiraishi[2], Daisuke Usuki[3], Shin Takiuchi[1], Satoru Otsuji[1]

[1] Department of Cardiology, Higashi Takarazuka Satoh Hospital,
[2] Department of Cardiology, Japanese Red Cross Kyoto Daini Hospital,
[3] Department of Cardiovascular Engineering, Japanese Red Cross Kyoto Daini Hospital

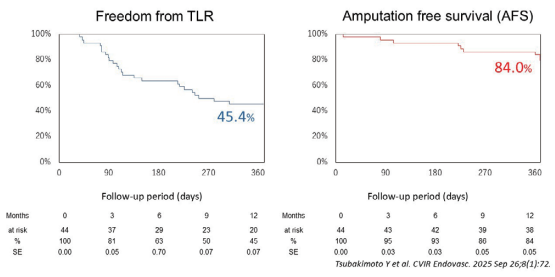
【What's known?】

Chronic limb-threatening ischemia (CLTI) often involves complex infrapopliteal (IP) chronic total occlusions (CTOs), where endovascular therapy (EVT) remains technically challenging. Antegrade recanalization frequently fails due to long occlusions, severe calcification, and poor distal runoff. Retrograde techniques have been developed to improve success, including trans-collateral angioplasty (TCA), which accesses the distal true lumen via collateral channels. Although several case reports have suggested the feasibility of TCA, systematic evidence regarding its procedural efficacy, safety, and long-term outcomes remains scarce.

【What's new?】

In this retrospective single-center study including 44 IP CTO lesions in CLTI patients treated with TCA between 2020 and 2022, overall EVT success was achieved in 95.5% (95% CI 84.9–98.7). Lesion crossing was accomplished by TCA alone in 70.5%, while distal puncture was additionally required in 13.6%. Collateral vessel-related complications occurred in 11.3% (6.8% injury, 2.3% occlusion or spasm), but no vessel dissections were observed. Within 30 days, perioperative complications occurred in 20.5%, mainly gastrointestinal bleeding and stroke. At one year, freedom from target lesion revascularization was 45.4%, and amputation-free survival reached 84.0%.

TCA offers a feasible and relatively safe retrograde approach for complex IP CTOs when antegrade attempts fail, providing high procedural success and acceptable complication rates in selected CLTI cases.



Tsubakimoto Y et al. CVIR Endovasc. 2025 Sep 26;8(1):72.

MO-071 Paclitaxel distribution assessment after drug-coated balloon treatment in the superficial femoral artery: SNOW grade

○Takeo Horikoshi, Toshiki Takei, Toru Yoshizaki, Tsuyoshi Kobayashi, Takaitsu Nakamura, Akira Sato

Department of Cardiology, University of Yamanashi

【What's known?】

What's known

Drug-coated balloons (DCBs) are increasingly being used to treat superficial femoral artery lesions during endovascular therapy. With many reports of favorable long-term clinical outcomes, the rate of DCB use is expected to increase. Although angioscopic imaging has reported adhesion of paclitaxel to vessel surface, no reports have qualitatively evaluated the adhesion of the paclitaxel.

【What's new?】

Key Question

How can paclitaxel distribution after drug-coated balloon treatment in the superficial femoral artery be systematically evaluated using angioscopy?

Study Patients and structures

This study included 18 patients (20 limbs) who underwent EVT for SFA lesions using DCBs. Angioscopic observation was performed before and after DCB treatment. The amount of paclitaxel distribution was systematically graded using the novel surface observation by angioscopy of wall drug-distribution. Clinical factors were statistically analyzed to determine their relationship with the drug-distribution.

Key Finding

The SNOW grade, a novel angioscopic grading system, effectively quantifies paclitaxel distribution. Appropriate size DCBs to vessel diameter result in significantly better drug application.

Take-home Message

The selection of an appropriately sized DCB is paramount for effective therapy. Specifically, we demonstrate that an undersized DCB may lead to insufficient and heterogeneous drug application, a finding that potentially explains a common mechanism of treatment failure.

MO-072 Prognostic Impact of Inframalleolar Occlusive Disease in Patients with Chronic Limb-Threatening Ischemia

○Shuko Iwata[1)], Yoshifumi Mizuguchi[2)], Riho Suzuki[3)], Yuichiro Hosoi[4)], Yuki Tanaka[2)], Yusuke Kimishima[1)], Takashi Miwa[1)], Michinao Tan[1)], Kazushi Urasawa[1)]

[1)] Caress Memorial Hospital, [2)] Sapporo Kosei General Hospital, [3)] Sapporo City General Hospital, [4)] Sapporo Higashi Tokushukai Hospital

【What's known?】

Percutaneous deep venous arterialization (pDVA) has been reported as a novel revascularization method for patients with chronic limb-threatening ischemia (CLTI) and a no-option anatomic pattern. No-option anatomy for endovascular therapy (EVT) is characterized by severe medial arterial calcification (MAC), lack of target vessel outflow, and occlusion of the deep plantar arch. However, the prognosis of patients with these anatomical characteristics—who are potential candidates for pDVA—remains unclear. The aim of this study was to evaluate the anatomical features and clinical outcomes of patients with severe inframalleolar (IM) occlusion.

【What's new?】

We evaluated 237 limbs from 237 patients who underwent revascularization for IM occlusion between January 2016 and December 2023. The median time from EVT to death was 354 ± 35 days, and multivariate analysis identified severe MAC, absence of target vessel outflow, and deep plantar arch occlusion as independent predictors of poor prognosis.

In conclusion, the prognosis of patients with CLTI and a no-option anatomic pattern is closely associated with the severity of their anatomical characteristics.

MO-073 Prognostic Significance of the Geriatric Nutritional Risk Index in Patients with Both Lower Limb Artery Disease and Heart Failure: Outcomes from the Multicenter Retrospective SETers Study

○Narumi Irie, Yuki Shima, Gakuto Bando, Kazunori Mushiake, Hiroyuki Tanaka, Mitsuru Abe

Department of Cardiovascular Medicine, Kurashiki Central Hospital

【What's known?】

Geriatric nutritional risk index (GNRI) has been reported as a predictor in patients with lower limb artery disease (LEAD) or heart failure. However, it remains unclear whether the GNRI is useful for predicting the prognosis of LEAD patients with a history of heart failure.

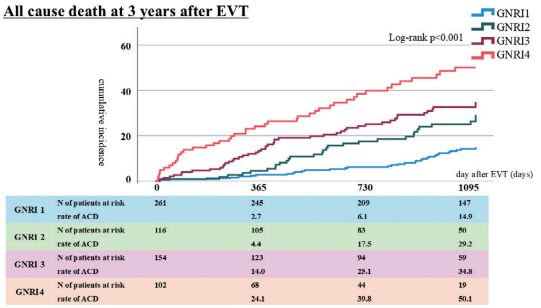
【What's new?】

We retrospectively analyzed 633LAED patients underwent endovascular therapy (EVT)with a history of heart failure between 2018 to 2020 at 13 Japanese cardiovascular centers. We divided patients intofour groups based on GNRI quartiles. The primary outcome was the cumulative incidence of all-cause death at 3 years after EVT.

During follow-up, 153 all-cause deaths were recorded. The incidence of all-cause death differed significantly among GNRI groups (GNRI1: 14.9%, GNRI2: 29.2%, GNRI3: 34.8%, GNRI4: 50.1%; log-rank p < 0.001, Figure).

In the analysis of cause-specific mortality, cardiovascular and inflectional death also differed significantly GNRI groups (cardiovascular death: GNRI1 7.1%, GNRI2: 15.0%, GNRI3: 19.5%, GNRI4: 36.4%; log-rank p < 0.001, inflectional death: GNRI1: 3.0%, GNRI2: 9.4%, GNRI3: 12.0%, GNRI4: 16.0%; log-rank p < 0.001).

GNRI is significantly associated with all-cause mortality in patients with LEAD and heart failure undergoing EVT. GNRI may be useful for risk stratification in this population.



MO-074 Tibial artery patency after endovascular therapy via a transtibial artery approach in patients with lower extremity artery disease

○Haruya Yamane, Kazuho Ukai, Kuniyasu Ikeoka, Yasunori Ueda

Cardiovascular Division, National Hospital Organization Osaka National Hospital

【What's known?】

Transtibial artery approach is a less invasive option for endovascular therapy (EVT) in patients with lower extremity artery disease (LEAD). However, long-term access vessel outcomes after EVT have been poorly investigated.

【What's new?】

This is a single-center, retrospective observational study that included patients with LEAD who underwent femoropopliteal EVT via a transtibial artery approach. The primary endpoint was newly developed tibial artery stenosis or occlusion detected by ultrasonography at 6 months post-EVT. A total of 94 vessels (91 patients) were retrospectively analyzed. The tibial artery stenosis or occlusion was observed in 21 vessels (22%), including 2 (2%) at puncture-site, 10 (11%) at non-puncture-site (10 vessels, 11%), and 8 (9%) with diffuse lesion. Multivariate analysis revealed that cannulated sheath diameter to tibial artery diameter (sheath-to-artery ratio) was significantly associated with tibial artery stenosis or occlusion (odds ratio, 1.89; 95% confidence interval, 1.30–2.78; p=0.002). Receiver operating characteristic analysis identified sheath-to-artery ratio >0.99 as the optimal cutoff (sensitivity 85.7%; specificity 58.9%; area under the curve 0.77). In conclusion, the incidence of tibial artery stenosis or occlusion was as high as 22% at 6 months after the EVT performed via transtibial artery approach. The sheath-to-artery ratio was an independent predictor of this adverse outcome.

MO-075 Safety of Popliteal Sciatic Nerve Block in Endovascular Therapy

○Masayuki Takahara, Masashi Yamamoto
Kimitsu Central Hospital

【What's known?】
Background:
Popliteal sciatic nerve block is frequently performed for perioperative analgesia in lower limb procedures. However, its safety during endovascular therapy (EVT) has not been well investigated.

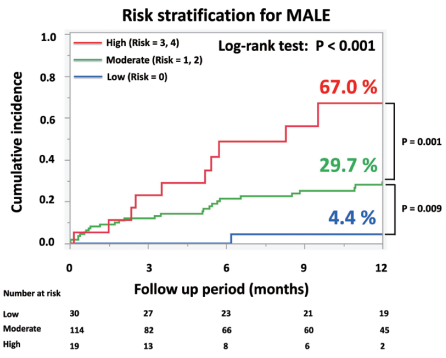
【What's new?】
Objective:
This study aimed to evaluate the safety of popliteal sciatic nerve block performed during EVT.
Methods:
This was a single-center, retrospective study including 25 procedures in 17 patients who underwent popliteal sciatic nerve block during EVT between June 2024 and September 2025. Procedural success and safety outcomes were assessed up to one-month post-procedure.
Results:
The underlying conditions were chronic limb-threatening ischemia (CLTI) in 22 cases (88%) and acute limb ischemia (ALI) in 3 cases (12%); no patients had intermittent claudication.
The procedural success rate of the popliteal sciatic nerve block was 100%, with a mean procedure time of 7.4 ± 4.0 minutes. No complications, such as vascular injury, nerve damage, hemorrhage, or infection, occurred during the procedure or at the one-month follow-up.
Target lesions for EVT were located in the iliac region (n=2, 8%), femoropopliteal region (n=12, 48%), and below-the-knee (BTK) region (n=22, 88%). The procedural success rate for EVT was 100%, and no major EVT-related complications were observed.
Conclusion:
Popliteal sciatic nerve block performed during EVT appears to be safe.

MO-076 Integrating Social Determinants of Health into Risk Stratification of Major Adverse Limb Events after Endovascular Therapy for Chronic Limb-Threatening Ischemia

○Hiroaki Nohara
Osaka Rosai Hospital, Division of Cardiology

【What's known?】
Patients with chronic limb-threatening ischemia (CLTI) often present with complex medical and social backgrounds. Although clinical predictors of major adverse limb events (MALE) after endovascular therapy (EVT) have been well characterized, the prognostic impact of social determinants of health (SDOH) remains poorly defined. Incorporating SDOH into conventional risk assessment may improve individualized decision-making and long-term outcomes in CLTI management.

【What's new?】
We analyzed 163 consecutive CLTI limbs treated with EVT between 2018 and 2024. SDOH variables included nursing-care requirement, welfare status, nursing-home residency, and presence of a key person. The primary endpoint was MALE (major amputation or target-vessel revascularization). Multivariable Cox regression identified nursing-care requirement, hemodialysis, Rutherford 6, and below-the-knee run-off 0 as independent predictors. Stratification by the cumulative number of these factors demonstrated a stepwise increase in 1-year MALE incidence: 4.4% (low risk = 0 factors), 29.7% (moderate risk = 1–2), and 67.0% (high risk = 3–4; p < 0.001). This simple model integrating social and clinical determinants allows precise MALE risk stratification in CLTI patients undergoing EVT and offers incremental prognostic value beyond traditional clinical factors.



MO-077 Efficacy of the Wall Pierce Technique for Difficult Sheath Insertion into the Common Femoral Artery

○Tomohisa Koyama

Department of Cardiology, Saiseikai Yokohama-city, Eastern Hospital

【What's known?】

Background:

The Wall Pierce Technique (WPT) has been reported as a useful method for addressing difficult sheath insertion during endovascular therapy (EVT). WPT, derived from the PIERCE concept, uses a 12-gauge needle to penetrate and enlarge the vessel wall around the guidewire, thereby facilitating sheath insertion in a simple and cost-effective manner.

【What's new?】

Methods:

We retrospectively analyzed 38 cases of percutaneous coronary intervention (PCI) or EVT performed via the common femoral artery (CFA) between January 2021 and October 2025 to evaluate the efficacy and safety of WPT. The primary endpoint was successful sheath insertion; secondary endpoints included puncture-site complications, guidewire damage, and need for access-site change.

Results:

Mean age was 72.7 years; 23 men and 15 women. Twenty patients were on hemodialysis, and 31 had chronic limb-threatening ischemia. Indications included post-endarterectomy (6), severe calcification (31), and multiple prior punctures (1). Sheath sizes were 5 Fr (13), 6 Fr (8), 7 Fr (15), and 8 Fr (2). All achieved successful sheath insertion without complications.

Conclusions:

WPT is a safe and effective adjunctive technique for difficult sheath insertion during CFA access, minimizing the need for access-site change.

MO-078 Chronic Clinical Findings after Rheocarna Therapy in a Chronic Limb-threatening Ischemia Patient with Inframalleolar Lesions

○Akinori Satake

Narita Memorial Hospital

【Case overview】

An 87-year-old man was referred to our hospital for non-healing ulcers on the right third, fourth, and fifth toes. The patient was diagnosed with chronic limb-threatening ischemia. Pre-treatment angiography of the right lower extremity revealed inframalleolar lesions.

【Procedure summary】

We failed to perform endovascular treatment because of severe calcification. Therefore, we treated the patient with a novel low-density lipoprotein apheresis device (Rheocarna).

【Clinical time course and implication (or perspective)】

Angiography performed four days after therapy revealed significant improvement in microcirculation. Two years after therapy, he managed to avoid major amputation and achieve wound healing. In addition, angiography revealed that the microcirculation was maintained.

MO-079 30cases of Endovascular Treatment to SFA lesion with radial approach

○Kento Matsui, Taichi Hirano, Kazuki Tsunoda, Yusuke Tomoi, Yoshimitsu Soga, Kenji Ando

Kokura Memorial Hospital

【Case overview】
50-80s patients who claim intermittent claudication and have stenosis of superficial femoral artery(SFA)

【Procedure summary】
Parent Select 127cm was inserted from the left radial artery to common femoral artery. The patient's left upper limb was flexed to facilitate manipulation, and the operator performed the procedure cephalad to the patient. A 300 cm guidewire was crossed the lesion, the lesion was dilated with SABER X RADIANZ, and paclitaxel was applied with Ranger Monorail or Luminor.

【Clinical time course and implication (or perspective)】
Trans-Radial Intervention(TRI) allows patients to walk immediately after the procedure and does not require long periods of bed rest, so it is a less invasive treatment than Trans-Femoral Intervention(TFA), and there is less burden on medical staff as it does not require assistance.
In recent years, the number of cases in which TRI is selected for the iliac artery lesion has increased. This time, we reported 30 cases in which TRI was performed on the superficial femoral artery lesion. Cerebral infarction and radial artery occlusion, which are a particular concern in TRI, did not occur. In one case, wire perforation of the posterior tibial artery occurred when inserting the guiding catheter. TRI may be useful as a less invasive treatment method for the superficial femoral artery lesion.

MO-080 A Case of Successful Hemostasis of Common Iliac Artery Rupture by Sealing Collateral Inflow from Internal Iliac Artery

○Yuki Sakamoto, Takayoshi Toba, Hiroyuki Kawamori, Yoichiro Sugizaki, Koshi Matsuhama, Nobuhiro Watanabe, Hiromasa Otake

Division of Cardiovascular Medicine, Department of Internal Medicine, Kobe University Graduate School of Medicine

【Case overview】
An 80-year-old woman presented with intermittent claudication in her left leg. The left ankle–brachial index was 0.65. Contrast-enhanced computed tomography revealed chronic total occlusion (CTO) of the left common iliac artery (CIA) with severe calcification and tortuosity. Symptoms persisted despite optimal medical therapy, and endovascular treatment (EVT) was planned.

【Procedure summary】
The left radial and left femoral arteries were selected as approach sites. A 0.014-inch guidewire crossed the CTO using the controlled antegrade and retrograde subintimal tracking technique. Post-wiring intravascular ultrasound showed a large hematoma at the bend of the CIA. Immediately after the guiding sheath was advanced retrogradely to the proximal CIA, the patient developed hemodynamic shock. Angiography revealed extravasation at the CIA bend. Balloon tamponade was promptly performed, and covered stents (CS) were implanted from the CIA to the external iliac artery; however, bleeding continued. Angiography revealed ongoing extravasation caused by inflow from the internal iliac artery (IIA) into the hematoma. We then dilated the CS across the IIA origin using a large balloon, resulting in complete hemostasis.

【Clinical time course and implication (or perspective)】
The patient was discharged without any symptoms. This case highlights the crucial role of sealing collateral inflow to ensure complete hemostasis after CS deployment.

MO-081 ARC Line Technique: Amplatz-Assisted Line to Complete ARCADIA in an Angulated Calcified Proximal Common Iliac Artery Lesion

○Yasunari Sakamoto, Keisuke Hirano, Yuki Suzuka, Hiroyuki Omori, Akinobu Takemura, Emi Tsuzaki, Ojiro Miyamoto, Takahiko Suzuki

Division of Cardiology, Toyohashi Heart Center

【Case overview】

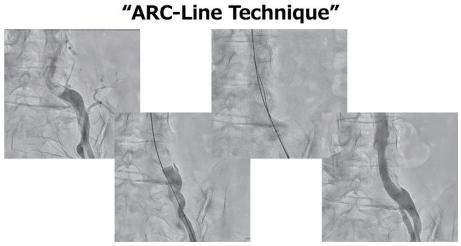
A woman in her seventies with Rutherford category 3 claudication had a PACSS 3 severely calcified proximal common iliac artery lesion with marked angulation.

【Procedure summary】

Angiography demonstrated a severely angulated and calcified proximal common iliac artery (Figure, left). Initial wiring with a Jupiter S6 entered the edge of the calcified plaque, as confirmed by IVUS, indicating a risk of vessel injury if dilated. The wire was exchanged for an Amplatz Super Stiff wire using a 0.035-inch Sergeant microcatheter, which straightened the angulated vessel and created an "ARC line," an Amplatz-assisted line to complete ARCADIA (Figure, center). A second 0.018-inch CROSSLEAD Penetration wire was then guided centrally under angiographic control, and IVUS confirmed intra-calcium positioning. Lesion preparation with a SHIDEN HP 8 × 40 mm balloon was followed by LIFESTREAM 6 × 37 mm stent graft implantation. High-pressure post-dilatation (20 atm) achieved good expansion without complications (Figure, right).

【Clinical time course and implication (or perspective)】

This case demonstrates that the ARC line technique can improve intra-calcium wire control and enhance procedural safety in angulated calcified iliac lesions.



MO-082 Successful Rescue of Acute Aortic Dissection Using a 14 mm Peripheral Self-Expanding Stent in the Severely Narrowed Ascending Aortic True Lumen

○Akiko Tanaka, Hiroaki Akai, Naho Ito, Hiromasa Okada, Kazunori Horie

Department of Cardiovascular Medicine, Sendai Kosei Hospital

【Case overview】

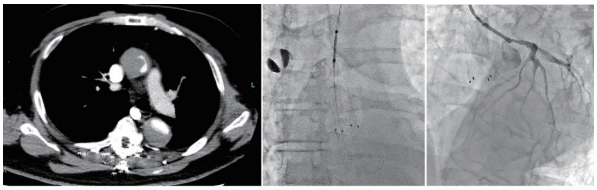
A man in his 50s with a history of thoracoabdominal aortic graft replacement was transferred in shock with sudden chest and back pain and systolic blood pressure around 50 mmHg. Contrast-enhanced CT revealed acute aortic dissection with false lumen thrombosis extending to the coronary arteries, resulting in near-occlusion of the ascending aortic true lumen.

【Procedure summary】

Because induction of general anesthesia was extremely risky, percutaneous revascularization was performed under local anesthesia via transradial access. A 14 mm × 60 mm self-expanding peripheral stent (E-Luminexx) was deployed in the narrowed ascending aorta, successfully restoring systemic circulation and resolving shock. Subsequently, an additional stent was implanted in the LMT of the coronary artery.

【Clinical time course and implication (or perspective)】

After revascularization, the patient's hemodynamics stabilized, allowing safe transition to definitive surgical repair. Prompt percutaneous revascularization of the ascending aortic true lumen was lifesaving in this critical case of acute aortic dissection and may represent an emergent bridging strategy when immediate surgery is not feasible.



Contrast-enhanced CT showing near-occlusion of the ascending aortic true lumen, fluoroscopic image during deployment of a 14 mm self-expanding stent, and coronary angiography obtained after aortic stent placement.

MO-083 Endovascular Limb Salvage After Bypass Graft Failure by Recanalization Through Anastomotic Stent Struts Using a VBX Stent

○Takahito Kohara

Tokushima Red Cross Hospital, Depart. of Cardiology

【Case overview】
A 57-year-old woman with chronic limb-threatening ischemia (CLTI, Rutherford 6) presented after multiple failed bypasses of the left leg.

【Procedure summary】
Four years earlier, she underwent a femoropopliteal bypass with a prosthetic graft for chronic total occlusion (CTO) of the superficial femoral artery (SFA), followed by stent placement for anastomotic stenosis. One year prior, recurrent graft occlusion caused digital ulceration and rest pain, leading to a femoro-anterior tibial bypass, which also occluded, resulting in tissue necrosis. Endovascular revascularization was performed via an ipsilateral antegrade approach. The SFA CTO was crossed using the knuckle technique with IVUS guidance, and the bypass anastomotic stent struts were traversed with a combination of 0.018- and 0.014-inch wires. Because the popliteal CTO could not be crossed antegradely, a bidirectional approach via the dorsalis pedis artery enabled successful pull-through. Balloon angioplasty (SFA–ATA) restored flow, but significant stenosis remained due to stent strut constriction. To secure luminal patency and prevent rupture, a 7.0-mm VBX balloon-expandable stent was deployed, followed by full-length bare-metal stenting of the proximal SFA.

【Clinical time course and implication (or perspective)】
Adequate flow to the distal leg was achieved, and limb salvage was successful. VBX provided safe, effective scaffolding where self-expandable stents posed rupture risk.

MO-084 FRAP-CROSS technique: FRAcking and rendezous-Pierce for intracalcium CROSSing

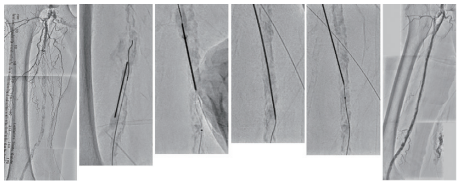
○Ricky Wang-hei Leung[1)], Takuya Haraguchi[2)]

[1)] Department of Medicine, Queen Mary Hospital, [2)] Sapporo Cardiovascular Clinic

【Case overview】
A 90-year-old male with bilateral SFA DCOs and severe intermittent claudication was treated using the FRAP-Cross technique.

【Procedure summary】
For the right SFA, three Fracking and two Rendezvous-PIERCE sessions achieved complete all-intracalcium wiring, enabling successful DCB angioplasty.
For the left SFA, four Fracking and two Rendezvous-PIERCE sessions achieved guidewire crossing. Areas of residual under-expansion were treated with Jetstream atherectomy and additional Fracking, resulting in sufficient luminal gain.
Final angiography and IVUS confirmed adequate lumen expansion bilaterally, and both lesions were treated successfully with a stentless DCB strategy.

【Clinical time course and implication (or perspective)】
Post-operative recovery was uneventful. The patients symptoms improved after procedure.



MO-085 Seasonal Trends of wound healing in patients with chronic limb-threatening ischemia -Insights from SAPLING database-

○Yosuke Hata, Shin Okamoto, Kiyonori Nanto, Takuya Tsujimura, Sho Nakao, Masaya Kusuda, Wataru Ariyasu, Subaru Fujii, Toshiaki Mano

Cardiovascular Center, Kansai Rosai Hospital

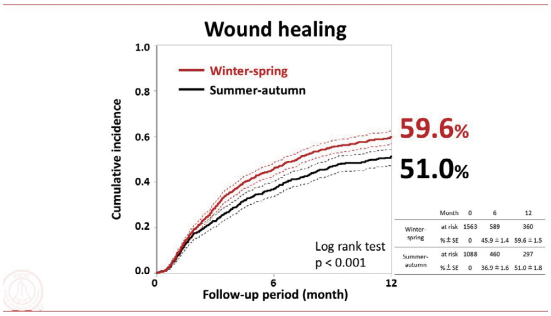
【What's known?】

Seasonality in the incidence of chronic limb-threatening ischemia (CLTI) has been described, peaking in March and dipping in September, but whether wound healing after endovascular therapy (EVT) follows a seasonal pattern remains uncertain.

【What's new?】

We conducted a multicenter, retrospective observational study including 2,651 CLTI patients with active wounds who underwent EVT between April 2010 and March 2024. Patients were grouped by EVT month into winter–spring (January–June) and summer–autumn (July–December). Anatomic severity was graded by the Global Limb Anatomic Staging System (GLASS). The primary endpoint was 1-year wound healing, compared between groups using Kaplan–Meier analysis. Independent predictors of healing were identified with Cox proportional hazards models.

Compared with the winter–spring group, the summer–autumn group was younger, had a higher prevalence of dialysis, and showed greater anatomic complexity by GLASS in femoropopliteal/infrapopliteal and pedal segments. One-year wound healing was significantly higher in winter–spring than in summer–autumn (59.6% vs. 51.0%; log-rank p<0.001). In multivariable Cox analysis, winter–spring presentation remained independently associated with a higher hazard of wound healing (HR 1.19, 95% CI 1.05–1.35; p=0.006).



MO-086 Impact of Concomitant PCI on Long-Term Outcomes in Patients Undergoing Endovascular Therapy: Insights from SETers study

○Shingo Kurimoto, Takahito Kohara, Hiroto Tamura, Kenichiro Yuba

Tokushima Red Cross Hospital

【What's known?】

Background

Patients undergoing endovascular therapy (EVT) for peripheral artery disease often overlap with those requiring coronary intervention. Whether percutaneous coronary intervention (PCI) performed near the time of EVT affects prognosis remains unclear.

【What's new?】

Methods

We performed a multicenter, retrospective study across institutions in the Chugoku and Shikoku regions of Japan. All consecutive patients who underwent EVT between January 2018 and December 2020 were included. Patients were divided into two groups: PCI within 3 months before or after EVT (EVT+PCI) and EVT alone. The primary outcomes were unplanned PCI, acute coronary syndrome (ACS), and all-cause mortality at 3 years. Propensity score matching was applied.

Results

Among 1,685 patients, 252 (15%) underwent PCI within 3 months of EVT. After matching, the EVT+PCI group had higher rates of unplanned PCI (P<0.001) and ACS (P=0.004), while mortality was not significantly different (P=0.162).

Conclusion

PCI within 3 months of EVT was associated with more unplanned PCI and ACS but not increased mortality. Careful coronary evaluation and appropriate intervention at the time of EVT may be important for optimizing long-term outcomes.

MO-087 Impact of Fibrosis-5 Index on lower extremity artery disease patients undergoing endovascular therapy

○Gakuto Bando, Yuki Shima, Narumi Taninobu, Kazunori Mushiake, Hiroyuki Tanaka, Mitsuru Abe

Department of Cardiovascular Medicine, Kurashiki Central Hospital

【What's known?】
Patients with lower extremity artery disease (LEAD), particularly those with chronic limb-threatening ischemia (CLTI), often present with systemic inflammation, malnutrition, and impaired hepatic reserve, contributing to adverse outcomes. The Fibrosis-5 (FIB5) index, a composite marker of liver function and nutritional status, may have prognostic value in this population. However, the clinical implications for LEAD remain unclear.

【What's new?】
We retrospectively analyzed 330 consecutive patients undergoing EVT between January 2018 and December 2020. The study population was divided into two groups according to FIB5 index≥-4. We compared the clinical outcomes after EVT between two groups.
Among 330 patients, 154 were high FIB5 group and 176 were low FiB5 group. There was a significant difference of all-cause death after EVT between high and low FIB5 groups (14.9% vs. 32.7%, log-rank $p < 0.001$). Among patients with intermittent claudication, there was no significant difference between two groups (9.8% vs. 14.1%, log-rank $p = 0.34$);however, in those with CLTI, the high FIB5 group showed a significantly lower mortality rate (23.7% vs. 54.1%, log-rank $p = 0.002$).
The low FIB5 group with CLTI showed worse clinical outcomes. FIB5 index may be useful for predicting prognosis in CLTI patients.

MO-088 Tip Detection–Antegrade Dissection and Re-entry (TD-ADR) Technique for Diffuse, Heavily Calcified Femoropopliteal CTOs

○Yasuhiro Ueda, Katsunori Wakayama, Ryohei Yoshikawa

Department of Cardiovascular Medicine, Sanda City Hospital

【What's known?】
Chronic total occlusions (CTOs) with diffuse and severe calcification in the femoropopliteal artery remain technically challenging because intra-calcification tracking and true lumen re-entry are often difficult.

【What's new?】
The Tip Detection-Antegrade Dissection and Re-entry (TD-ADR) technique, performed under pull-back intravascular ultrasound (IVUS) guidance with real-time visualization of the wire tip, has emerged as an effective method for controlled re-entry.
In this report, we describe the technical details and practical considerations of the TD-ADR technique for diffuse, heavily calcified femoropopliteal CTOs, supported by representative cases. The procedure starts with manipulation of a first guidewire using the drilling or knuckle wire technique to create a subintimal space. A second guidewire is then inserted, and a pull-back type IVUS is advanced over the first wire. By moving the IVUS catheter back and fortharound the tip of the second guidewire, the wire's orientation can be visualized, enabling intentional and accurate re-entry from the subintimal space by identifying the true lumen.
In CTOs with diffuse and severe calcification, true lumen passage is frequently impossible, making subintimal tracking unavoidable. TD-ADR facilitates precise, IVUS-guided re-entry and represents a useful treatment strategy for such complex lesions.

MO-089 Combined Coronary and Lower Extremity CT Angiography with FFR Analysis for CAD Screening in Patients with LEAD: A Preliminary Study

○Ayaka Yu, Kenji Suzuki, Kyosuke Hosokawa, Hirohisa Harada
Tokyo Saiseikai Central Hospital

【What's known?】
Atherosclerotic diseases frequently overlap as polyvascular disease. Previous studies have reported that coronary artery disease (CAD) is present in more than 50% of patients with lower extremity artery disease (LEAD), suggesting a high prevalence of polyvascular involvement.

【What's new?】
At our hospital, we have begun screening for CAD in LEAD patients by performing coronary CT angiography (CCTA) alongside lower extremity CT angiography (LE-CTA), with additional fractional flow reserve (FFR) CT analysis.
From April to September 2025, we performed this combined approach in 10 LEAD patients. The average contrast volume was 107 ml, with no increase required. In all cases, both coronary and lower extremity arteries were successfully evaluated. Coronary angiography based on CCTA findings in 4 cases (40%), and CAD was detected in 4 cases (40%).
Although further cases are needed for validation, this diagnostic approach may be useful for screening overlapping LEAD and CAD without additional or invasive testing.

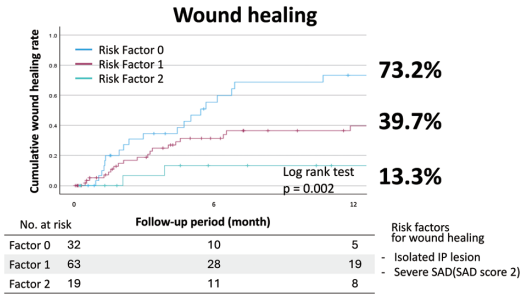
MO-090 Predictors of Wound Healing of Chronic Limb-threatening Ischemia with Inflammatory Nonatherosclerotic Disease

○Naoya Otsuki[1)], Yosuke Hata[1)], Subaru Fujii[1)], Daichi Yoshii[2)], Yoshiteru Okina[2)], Taku Toyoshima[2)], Osamu Iida[2)], Hiroaki Nohara[3)], Kazuho Ukai[4)], Haruya Yamane[4)], Kuniyasu Ikeoka[4)], Toshiaki Mano[1)]

[1)] Cardiovascular Center, Kansai Rosai Hospital, [2)] Osaka Police Hospital Cardiovascular Division, [3)] Division of Cardiology, Osaka Rosai Hospital, [4)] Cardiovascular Division, NHO Osaka National Hospital

【What's known?】
The wound healing rate in chronic limb-threatening ischemia (CLTI) patients with inflammatory nonatherosclerotic disease is worse than those of atherosclerotic disease. However, angiographic predictors of wound healing in this population remain unclear.

【What's new?】
Methods: This multicenter retrospective study included 118 patients with CLTI accompanied by tissue loss and inflammatory nonatherosclerotic disease who underwent endovascular therapy between April 2010 and March 2024. Angiographic evaluation included lesion distribution, global limb anatomic staging system, small artery disease (SAD), and medial arterial calcification. Predictors of wound healing were analyzed using Cox proportional hazards model. Cumulative wound healing rates stratified by the predictors were compared using Kaplan-Meier analysis.
Results: Fifty patients achieved wound healing during follow-up period. Multivariable analysis identified isolated infrapopliteal (IP) lesion [hazard ratio (HR) 0.51; 95% confidence interval (CI) 0.29-0.91] and SAD score (HR 0.68; 95% CI 0.46-0.99) as predictors of wound healing. Stratification by severe SAD (SAD score 2) and isolated IP lesion showed that the 1-year cumulative wound healing rates were 73.2%, 39.7%, and 13.3% in patients with no, one, and two factors, respectively. (Figure)
Conclusion: Isolated IP lesion and SAD score were independent predictors of wound healing in CLTI patients with inflammatory nonatherosclerotic disease.



MO-091 Impact of deep femoral artery dominance on clinical outcomes following drug-coated balloon angioplasty for superficial femoral artery chronic total occlusion

○Kohei Yamaguchi[1)], Shinsuke Mori[1)], Takahiro Tokuda[2)], Shunsuke Kojima[3)], Kenji Ogata[4)], Akiko Tanaka[5)], Tatsuya Nakama[3)]

[1)] Department of Cardiology, Saiseikai Yokohama City Eastern Hospital,
[2)] Department of Cardiology, Nagoya Heart Center,
[3)] Department of Cardiology, Tokyo Bay Medical Center,
[4)] Department of Cardiology, Miyazaki Medical Association Hospital,
[5)] Department of Cardiology, Sendai Kosei Hospital

【What's known?】
Deep femoral artery (DFA) is an important collateral pathway in cases of superficial femoral artery (SFA) chronic total occlusion (CTO). However, there are no reports on the outcomes of endovascular therapy (EVT) for SFA CTO in cases with a well-developed DFA (DFA dominance).

【What's new?】
We analyzed 216 de novo femoropopliteal (FP) CTO lesions treated with DCB angioplasty, extracted from the LEADers FP registry, which included 2176 cases registered from January 2018 to December 2021 at eight Japanese cardiovascular centers. These lesions were divided into two groups based on angiographical DFA dominancy: DFA dominance group (70 lesions) and DFA non-dominance group (146 lesions). Kaplan-Meier analysis showed that the 2-year primary patency rate was 51.4% in the DFA dominance group and 64.7% in the DFA non-dominance group (p=0.02). However, there were no significant differences in the incidence of acute limb ischemia or amputation-free survival between the groups. While DCB angioplasty in DFA dominance cases does not appear to increase adverse events, its efficacy may be inferior compared to DFA non-dominance cases. In such cases, careful consideration might be required regarding the choice of the finalize device or whether revascularization is necessary in the first place.

MO-092 Recurrent acute occlusion after endovascular therapy successfully managed with continuous intra-arterial infusion of vasodilators and anticoagulant in focal below-the-knee acute limb ischemia

○Kousuke Akao, Yohei Ueno, Mitsuo Sobajima, Koichiro Kinugawa

Second Department of Internal Medicine, University of Toyama

【Case overview】
An 83-year-old man with a history of IgG4-related disease presented with sudden onset of coldness and pain in the left foot. Contrast-enhanced computed tomography revealed arterial occlusion extending from the anterior tibial artery to the dorsalis pedis artery.

【Procedure summary】
Endovascular therapy (EVT) was performed using a thromboaspiration catheter (Indigo), followed by balloon angioplasty. Although initial reperfusion was achieved, acute re-occlusion occurred immediately. Therefore, a second EVT session was performed using intravascular ultrasound (IVUS) and a larger-sized balloon, achieving better results than the first session and successful reperfusion.
However, re-occlusion occurred again shortly thereafter, and a third EVT session was performed. During this procedure, wire manipulation induced vasospasm distal to the dorsalis pedis artery, which was considered a contributing factor to the repeated occlusions. Therefore, after EVT, the sheath was left in place, and a microcatheter was positioned in the anterior tibial artery for continuous intra-arterial infusion of nitroglycerin, alprostadil, and heparin. No further occlusion occurred, and the patient was transitioned to oral vasodilators.

【Clinical time course and implication (or perspective)】
This case suggests that continuous intra-arterial infusion of vasodilators and heparin may serve as an effective adjunctive strategy during EVT for thrombotic occlusion complicated by vasospasm.

MO-093 Acute Limb Ischemia Secondary to Compartment Syndrome After Intramuscular Hemorrhage Successfully Treated with Catheter Thrombectomy and Surgical Angioplasty

○Hiroto Aikawa, Koki Shibata, Ryota Noike, Mikito Toda
Department of Cardiovascular Medicine, Tokyo Metropolitan Ebara Hospital

【Case overview】
A 53-year-old man developed acute right leg ischemia after a calf contusion with intramuscular hemorrhage. Despite compression bandaging, he experienced progressive sensory disturbance and foot coldness from day 7 post-injury. Examination revealed cyanosis and weak Doppler signals, and CT showed occlusion from the distal superficial femoral to the popliteal artery.

【Procedure summary】
Antegrade femoral access and catheter thrombectomy retrieved multiple thrombi but achieved only partial distal flow despite additional balloon dilatation. A second thrombectomy using an 8 Fr sheath and Parent 5082 catheter provided transient improvement, but residual thrombus caused re-occlusion. Considering limited efficacy of endovascular therapy, surgical thrombectomy and popliteal artery angioplasty under prone positioning were performed, achieving complete and sustained revascularization.

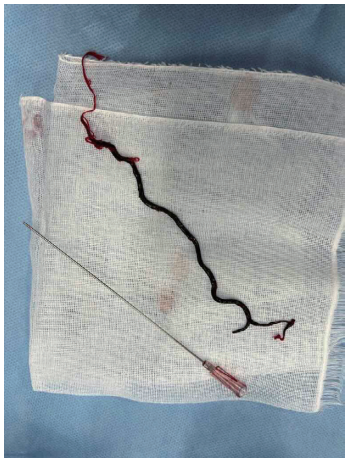
【Clinical time course and implication (or perspective)】
The postoperative course was uneventful, and the ankle-brachial index improved to 1.0. The patient was discharged after 10 days without wound complications and resumed normal daily activities. No scaffold device was implanted due to the patient's young age and active lifestyle. This case highlights that when endovascular therapy alone is insufficient, early consideration of surgical intervention and a multidisciplinary approach are crucial for limb preservation in acute limb ischemia secondary to compartment-related thrombosis.

MO-094 EVT for SMA and Left Lower Limb Embolism Caused by Atrial Fibrillation

○Munenori Ota, Yasuhisa Kurita, Takao Matsui, Ryusuke Yamamoto, Hiroaki Hirase
Takaoka Minami Heart Center

【Case overview】
A man in his seventies hospitalized for shoulder surgery developed abdominal pain on the postoperative day(POD) 2 and had left leg pain on POD6. Contrast-enhanced CT revealed embolic occlusions of the superior mesenteric artery (SMA), deep femoral artery (DFA), and distal popliteal artery. Cardiac CT demonstrated a left atrial thrombus, indicating embolism due to paroxysmal atrial fibrillation.

【Procedure summary】
Thrombectomy for SMA embolism was performed on POD6, achieving successful recanalization. EVT for the lower limb was conducted on POD11, showing a large thrombus. Aspiration through the guiding sheath removed proximal thrombus, though distal emboli persisted.



【Clinical time course and implication (or perspective)】
Ischemic colitis gradually improved. The SMA occlusion was located distal to the right colic artery, preventing total bowel ischemia and allowing recovery despite delayed intervention. In contrast, the longer interval before EVT for limb ischemia allowed thrombus organization, reducing aspiration efficacy. The Indigo aspiration system might have been effective in such cases.
This case highlights the diagnostic difficulty of SMA embolism with mild symptoms and underscores the importance of early recognition and optimal EVT timing in multi-territory embolism associated with atrial fibrillation.

MO-095 A Case of Claudication in Premenopausal Female Diagnosed with Popliteal Artery Entrapment Syndrome During Endovascular Treatment

○Ryoko Nakamura, Masashi Fukunaga, Kunihiko Nishian, Machiko Nishimura, Reiko Fujiwara, Daizo Kawasaki

Department of Cardiology, Morinomiya Hospital

【Case overview】

A 50'-year-old female with a history of dyslipidemia, smoking, and a family history of cardiovascular disease presented with intermittent claudication of the right leg. Computed tomography angiography (CTA) revealed occlusion from the right proximal popliteal artery (PopA) to the proximal below-the-knee artery.

【Procedure summary】

Endovascular treatment (EVT) was performed. A guidewire was advanced into the posterior tibial artery, followed by percutaneous balloon angioplasty (POBA). Intravascular ultrasound (IVUS) demonstrated minimal atherosclerotic changes proximal to the lesion. The treated segment showed no significant dissection after POBA, and a small amount of thrombus was noted along the vessel wall.

Given the limited atherosclerotic involvement, we suspected an alternative cause of occlusion. Angiography and IVUS were re-evaluated during passive dorsiflexion and plantarflexion of the ankle, which revealed dynamic compression of the PopA by an extravascular structure during dorsiflexion. Combined with preoperative CT findings, the diagnosis of popliteal artery entrapment syndrome (PAES) was established. After EVT, radical surgery was performed at another vascular surgery department.

【Clinical time course and implication (or perspective)】

We report a case of PAES diagnosed during EVT. IVUS provided critical information for identifying dynamic PopA compression, demonstrating its utility in pathophysiological assessment.

MO-096 The effectiveness of angiogram during knee joint flexion in intervention for a severely calcified popliteal artery

○Takaaki Ozawa, Hikaru Sugimoto, Jun Yoshimura, Ryotaro Maeda, Nobuyasu Itoh, Hideo Tsubata, Naohiko Nakanishi, Kan Zen, Takeshi Nakamura, Satoaki Matoba

Department of Cardiology, Kyoto Prefectural University of Medicine

【Case overview】

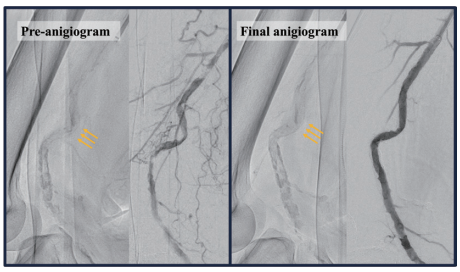
A 59-year-old male with right severe intermittent claudication was diagnosed as lower extremity artery disease and underwent EVT.

【Procedure summary】

The first angiogram showed severe calcified stenosis in the right popliteal artery. The angiogram during knee joint flexion revealed that stenosis getting worse due to torsion of popliteal artery. Because the severely calcification just before vascular torsion was suspected to be a factor of worsening stenosis, after successful wiring, we debulked severe calcification using JETSTREAM SC and XC catheters. Then pre-dilation was performed a 6.0-mm cutting balloon, and the target lesion was dilated a 6.0-mm-DCB. The final angiogram revealed optimal revascularization without any complication. The angiogram during knee joint flexion after treatment showed improvement of vascular folding (Figure1).

【Clinical time course and implication (or perspective)】

In this case, flexion of the knee caused torsion and stenosis at the boundary between the plate-like severe calcification and normal vessels, potentially creating a risk for future restenosis or re-occlusion. Actually, another patient with similar severe calcification of popliteal artery had occurred very early re-occlusion due to vascular folding and stenosis. The angiogram images of severely calcified popliteal arteries during knee joint flexion may play an important role in determining the strategy in EVT. We share the impressive images of both cases.



MO-097 Hybrid Treatment for Recurrent Acute Limb Ischemia

○Yuya Asano, Taku Kato, Tokuaki Bando, Shoki Ameno, Yoshihiro Azuchi, Yusuke Hori, Keisuke Shoji, Akiteru Kojima, Eigo Kishita, Yusuke Nakagawa, Masayuki Hyogo, Takahisa Sawada

Department of Cardiology, Japanese Red Cross Kyoto Daiichi Hospital

【Case overview】
A 70-year-old man developed acute limb ischemia (ALI) six years ago due to chronic occlusion of the abdominal aorta and underwent endovascular therapy (EVT). However, he subsequently experienced two recurrent episodes of ALI caused by repeated stent occlusions, for which an axillobifemoral bypass was performed three years ago.He presented again with ALI due to occlusion of the bypass graft.

【Procedure summary】
Hybrid revascularization consisting of bilateral femoral thromboendarterectomy combined with adjunctive EVT was performed, achieving satisfactory restoration of limb perfusion and successful limb salvage.

【Clinical time course and implication (or perspective)】
This case highlights the complexity of selecting an appropriate treatment strategy in patients with recurrent ALI and limited revascularization options, and suggests that hybrid revascularization may serve as an effective limb salvage approach in the setting of repeated graft failure and complex vascular anatomy.

MO-098 A Case of Ruptured Popliteal Artery Aneurysm Treated with Viabahn Stent Graft

○Masaya Yuzawa, Keigo Kajiwara, Takehiro Kato, Rikako Saito, Hiroya Watanabe, Mituyo Ito, Yusuke Samejima, Chihiro Fukuyama, Kento Yabe, Hiroki Takenaka, Naohiko Nemoto, Hitoshi Anzai

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【Case overview】
An 86-year-old woman came to our hospital with swelling and pain around her right knee.

【Procedure summary】
She had been treated at another hospital for a suspected urinary tract infection five days earlier. At that time, a 45-mm right popliteal artery aneurysm was found but was not causing symptoms. Two days later, she developed more pain and bruising around the knee and was transferred to our hospital for further care.
On arrival, her blood pressure was stable but her heart rate was 109 bpm. CT angiography showed fat stranding around the aneurysm, suggesting rupture. Because of her age and infection risk, we decided on endovascular treatment. From the right common femoral artery, a saccular aneurysm of the distal superficial femoral artery was seen. Two Viabahn stent grafts (10 mm × 10 cm and 10 mm × 5 cm) were placed, and post-dilatation completely sealed the aneurysm.

【Clinical time course and implication (or perspective)】
CT after the procedure showed no endoleak and complete thrombosis. Her pain and swelling improved, and she was discharged on day 35.
Ruptured popliteal artery aneurysm is rare. Endovascular stent grafting can be a good option for elderly high-risk patients.We report this case with a brief review of the literature.

MO-099 Novel Noninvasive Evaluation of Microcirculation Using GOKO Bscan-ZD in a Patient with CLTI: A Case Report

○Takafumi Fujita, Jonald Ochia Lucero, Makoto Sugihara, Shin-ichiro Miura
Fukuoka University School of Medicine, Japan

【Case overview】
A 50s male with ischemic multiple toe gangrene (W2, I1, FI0 WIfI CS3)

【Procedure summary】
EVT was unsuccessful for BK solitary lesions, particularly those with BTA occlusion, and Rheocarna therapy was subsequently initiated. On angiography performed after seven sessions of Rheocarna therapy, improved blood flow velocity, wound blush, and venous return were observed compared with the initial angiography. Noninvasive assessment using the GOKO Bscan-ZD also confirmed improvement in microcirculation following the initiation of Rheocarna.

【Clinical time course and implication (or perspective)】
The wound site completely healed after metatarsal amputation.

MO-100 The completely different clinical courses of the leg treated with the Bone Marrow Mononuclear Cell (BM-MNC) transplantation and the other foot in a Bilateral CLTI case

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【Case overview】
A woman in her 80s with a history of hypertension and dyslipidemia developed refractory ulcers in both lower extremities and was diagnosed with CLTI six years ago. The WIFI classification of her right leg was W1, I3, FI1 stage3 Rutherford class 5 and left leg was W1, I3, FI3 stage4 Rutherford class 6.

【Procedure summary】
The BM-MNC transplantation was performed on only on the left leg, and the wound completely healed. The wound on the right leg also healed with conventional treatment alone, however frequent endovascular treatment (EVT) became necessary for rest pain. In contrast, no additional EVT was required for the left leg.

【Clinical time course and implication (or perspective)】
Finaly, 5 years after the last EVT, the long term follow-up angiography was performed due to a small new wound developed on the left leg. The angiography demonstrated improved microcirculation in the inframalleolar region and EVT was success easily. BM-MNC transplantation has been reported as a safe and potentially effective treatment for CLTI patients with microvascular dysfunction. The decisive defference in clinical course between the legs in this case may be attributable to the BM-MNC transplantation.

MO-101 Association Between Lipoprotein(a) and Rutherford Classification in Patients With Lower Extremity Artery Disease

○Toshiki Takei, Takeo Horikoshi

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【What's known?】

Lipoprotein(a) [Lp(a)] is an established causal factor in atherosclerotic cardiovascular disease and is associated with the incidence of peripheral artery disease (PAD) and adverse limb events. However, its relationship with the severity of lower extremity artery disease (LEAD) remains unclear. Determining whether elevated Lp(a) reflects LEAD severity may improve risk stratification and guide lipid management strategies in patients undergoing endovascular therapy (EVT).

【What's new?】

In 350 total cases with LEAD who underwent EVT, we investigated the association between Lp(a) and disease severity based on the Rutherford classification. Patients were categorized as non-severe (RC <5) or severe (RC ≥5). Median Lp(a) levels were higher in the severe group compared with the non-severe group (19.5 vs 13.6 mg/dL, p = 0.006). Univariable and multivariate logistic regression analyses were performed to assess associations between lipid parameters and disease severity. After adjustment for age, body mass index, hypertension, dyslipidemia, diabetes, and dialysis, standardized Lp(a) remained independently associated with RC ≥5 (OR 1.37, 95% CI 1.06–1.76, p = 0.015). Elevated Lp(a) is associated with disease severity, suggesting its role as a residual risk factor beyond traditional lipids. Comprehensive lipid profiling, including Lp(a), may improve risk stratification and guide preventive strategies in patients undergoing EVT.

MO-102 A Case of Sarcoma Detected in Thrombus Aspirated During Treatment for Acute Limb Ischemia

○Chihiro Fukuyama, Hitoshi Anzai, Keigo Kajiwara, Takehiro Kato, Rikako Saito, Masaya Yuzawa, Hiroya Watanabe, Mitsuyo Ito, Yusuke Samejima, Kento Yabe, Hiroki Takenaka, Naohiko Nemoto

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【Case overview】

A man in his 70s presented with sudden bilateral leg weakness following two weeks of leg pain and was transported to a nearby hospital. He had had chronic atrial fibrillation treated with rivaroxaban 10 mg daily. Contrast-enhanced CT revealed occlusion of the terminal aorta, bilateral common iliac arteries, and popliteal arteries, as well as a large non-enhancing mass filling the left atrial appendage, suggesting an embolic source. The patient was subsequently transferred to our hospital for further treatment.

【Procedure summary】

Angiography confirmed bilateral iliac occlusion, and stents were deployed from the terminal aorta to both common iliac arteries. Additional occlusions distal to the popliteal arteries were treated by thrombus aspiration using the Indigo system and adjunctive balloon angioplasty, resulting in restored flow to both feet.

【Clinical time course and implication (or perspective)】

Despite ongoing DOAC therapy, an embolic event occurred, and anticoagulation was changed to apixaban 5 mg twice daily. The patient's symptoms gradually improved after the procedure. However, histopathological examination of the aspirated material revealed undifferentiated pleomorphic sarcoma. He was referred to an orthopedic oncology center for further evaluation.

We report this case of acute limb ischemia caused by embolic material containing sarcomatous components, along with a review of the relevant literature.

MO-103 From Coiling to Stenting: A Complex Vertebral-Jugular Arteriovenous (AV) Fistule and Extracranial Vertebral Artery Aneurysm (EVAA) Case with Rare Traumatic injuries Complication

○Catarina Lilian Christine[1)], Johanes Nugroho Eko Putranto[2)], Danang Himawan Limanto[3)], Dhihintia Jiwangga Suta Winarno[4)], Cornelia Angela Tanaem[1)], Valerie Grecia[1)]

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【Case overview】

A 44-year-old woman presented with frequent dizziness since adolescence and a recurrent right-sided neck mass that first appeared in 2023 and recently increased in size. The mass was pulsatile with a palpable thrill. CT angiography showed an aneurysmal lesion in the proximal right vertebral artery forming an AV fistula draining into the right subclavian vein, with dilation of the right vertebral artery and its branches.

【Procedure summary】

Endovascular treatment was performed using coil embolization and covered stent placement in the right subclavian artery. However, several intraoperative complications occurred, including coil migration into the right atrium, which was successfully retrieved via femoral venous snaring. Subsequently, a thrombus developed and thrombectomy was performed using an AngioJet device with suction applied for 390 seconds, followed by balloon angioplasty of the subclavian stent. The patient also developed a massive hemothorax that required thoracotomy and intercostal vessel ligation.

【Clinical time course and implication (or perspective)】

The patient was discharged in stable condition. After the whole procedure, multiple thromboses were found at the femoral access, associated with low platelet aggregation results identified one week after discharge. Endovascular repair is chosen for an alternative to open surgery for complex vertebrojugular AV fistula with vertebral artery aneurysm, because it's less invasive than open surgery.

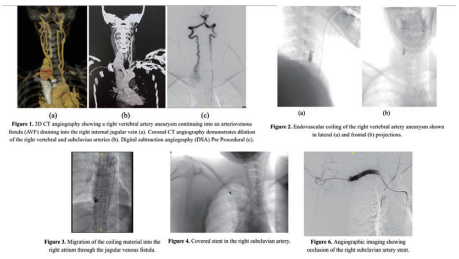

Figure 1. 3D CT angiography showing a right vertebral artery aneurysm continuing into an arteriovenous fistula (AVF) draining into the right internal jugular vein (a). Coronal CT angiography demonstrates dilation of the right vertebral and subclavian arteries (b). Digital subtraction angiography (DSA) Pre Procedural (c).

Figure 2. Endovascular coiling of the right vertebral artery aneurysm shown in lateral (a) and frontal (b) projections.

Figure 3. Migration of the coiling material into the right atrium through the jugular venous fistula.

Figure 4. Covered stent in the right subclavian artery.

Figure 6. Angiographic imaging showing occlusion of the right subclavian artery stent.

MO-104 Can large language models holistically manage acute cerebrovascular accident? A pilot study

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University of Sydney

【What's known?】

Large language models (LLMs) are emerging succinct, adaptable and accessible and clinical reasoning tools, however their ability to manage acute cerebrovascular disease has not been evaluated. This study compares the ability of ChatGPT, Gemini, and Claude to holistically manage acute cerebrovascular disease presentations.

【What's new?】

Ten cerebrovascular cases were given to each LLM with a standardised template. Outputs were assessed across various domains with composite scores encompassing diagnosis, investigation, operative management, medical therapy, non-pharmacological measures, multidisciplinary involvement, and carotid duplex ultrasound interpretation. Claude achieved the highest mean composite score (81.2 ± 8.8), followed by ChatGPT (74.9 ± 10.5) and Gemini (74.8 ± 10.6). Claude significantly outperformed ChatGPT and Gemini ($p<0.05$).

All models described the correct surgical approach (open vs endovascular) in 80% of cases, with ChatGPT and Claude proposing accurate perioperative medication in 90% of cases. Medical optimisation of comorbidities in the peri-stroke period was highly accurate – between 80-100% for antiplatelet choice, dyslipidaemia, glycaemia and blood pressure.

Carotid duplex interpretation was uniformly poor, across all models averaging 34% in identification of stenosis severity based upon ASUM Criteria. Unsafe advice was provided in 10/10/30% by Claude, ChatGPT and Gemini respectively. ChatGPT demonstrated the greatest clinical initiative, suggesting additional management not flagged by humans in 70% of cases.

MO-105 Short-Term Clinical Outcomes of Auryon Laser Atherectomy in Calcified Common Femoral Artery Disease: A Single-Center Study in Thailand

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【What's known?】

Background:

Revascularization is essential in chronic limb ischemia, but the common femoral artery(CFA) remains challenging. While endarterectomy is the gold standard, it carries higher morbidity; balloon angioplasty is less durable, and stenting risks failure. Laser-atherectomy with drug-coated balloon (DCB) angioplasty may offer a safer, minimally invasive alternative.

Purpose:

To compare short-term outcomes of CFA endarterectomy versus Laser-atherectomy(Auryon) with DCB angioplasty in calcified CFA and superficial femoral artery(SFA) orifice disease.

【What's new?】

Methods:

This retrospective, single-center study included 40 patients: 20 underwent endarterectomy and 20 received laser atherectomy plus DCB angioplasty. Ninety-day outcomes were assessed.

Results:

Baseline characteristics were similar(mean age 73.5 vs 75.9 years). Pre- and post-procedure luminal areas were 20.4 mm^2 and 65.3 mm^2 for endarterectomy, and 37.7 mm^2 and 57.8 mm^2 for the endovascular group. Endarterectomy patients had more aortoiliac occlusive disease. At 30 and 90 days, outcomes were comparable, with all patients asymptomatic at 90 days. Endarterectomy achieved greater luminal gain but required longer hospitalization and had higher complication rates.

Conclusion:

Laser-atherectomy with DCB angioplasty achieved outcomes comparable to endarterectomy, with shorter hospital stay and fewer complications, supporting its role as a safe, effective alternative.

MO-106 Quantitative Investigation of Microcirculatory Status in Diabetic Foot Toes Using Non-Invasive Photoacoustic Scanning Imaging

○Jianming Guo

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【What's known?】

Peripheral arterial disease (PAD) affects 200 million patients worldwide. It is characterized by high prevalence, poor prognosis, and substantial healthcare costs. With global aging and changes in dietary habits, its incidence is increasing annually, making diagnosis and treatment critically important. Among various factors, the microcirculation of extremities is a key determinant in PAD management. However, conventional imaging methods face challenges in non-invasiveness, resolution, and field of view when assessing microcirculation in limb extremities.

【What's new?】

Here, we present a workflow for characterizing microcirculation in the lower limb extremities using panoramic photoacoustic computed tomography (PACT), enabling high-resolution and wide-field imaging of peripheral vessels. Based on a clinical study involving 24 PAD patients and 21 healthy volunteers, we extracted seven key features to establish a PAD peripheral vascular scoring system based on photoacoustic tomography. Using this system, we developed a classifier to distinguish suspected PAD patients from healthy individuals, achieving a maximum area under the receiver operating characteristic curve of 0.964. Furthermore, based on the scoring system and more detailed features, we evaluated the potential of the peripheral vascular score in predicting and assessing surgical outcomes. This study demonstrates that PACT can provide a quantitative assessment of microcirculatory status throughout the progression of PAD.

MO-107 The Impact of pedal artery characteristics in CLTI patients on bypass surgery

○Takuo Nomura

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【What's known?】

In patients with CLTI, diabetic or end-stage renal disease causes medial arterial calcification（MAC） and small artery disease（SAD） in the pedal arteries, impairing blood flow distribution.

We investigated the impact of MAC and SAD on bypass surgery outcomes.

【What's new?】

Of 132 bypass surgeries performed between January 2019 and September 2025, 118 evaluable cases were included. Patient characteristics were diabetes 84%, dialysis 75%, MAC score mild/moderate/severe 24%/51%/25%, SAD 0/1/2 21%/54%/25%.

The 1-year wound healing rate was 92%/88%/65% for MAC score mild/moderate/severe, with severe MAC group showing significantly poorer outcomes（P=.004）. Similarly, for SAD 0/1/2, the rates were 92%/86%/69%, with SAD2 group showing significantly poorer healing（p=.007）.

Multivariate analysis identified SAD2 as a factor associated with wound healing（HR 0.62, p=.04）.

Postoperative blood flow improvement showed no significant difference by MAC severity（p=.13） but showed a significant difference by SAD severity（p<.001）.

The 2-year survival rate was 37%（p=.009） in the severe MAC group and 44%（p=.02） in the SAD2 group, both significantly worse.

MAC severity was significantly associated with survival prognosis more than nutrition or frailty（HR 2.1, p=.04）.

In bypass surgery for CLTI, SAD severity was a factor related to wound healing, while MAC severity was a factor related to survival prognosis.

MO-108 CT-Based Evaluation of Plaque Hardness and Guidewire Crossing in Femoropopliteal EVT

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【What's known?】

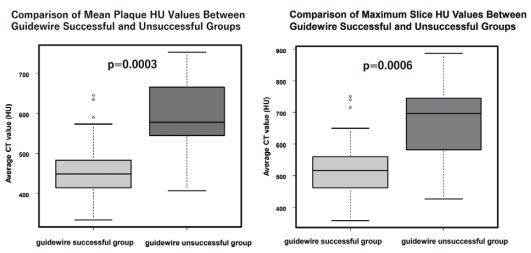
Background:Guidewire passage through calcified plaques is a key determinant of procedural success in femoropopliteal EVT. An association between plaque CT attenuation（Hounsfield Unit; HU） and guidewire passage has been reported using dedicated software, but that approach had limited generalizability. This study evaluated the relationship using standard DICOM data.

【What's new?】

Methods:Sixty-six lesions from 39 patients who underwent femoropopliteal EVT between October 2020 and November 2024 were retrospectively analyzed. Three consecutive 5-mm slices with the largest summed plaque area were selected per lesion. Calcified plaques were manually traced, and attenuation in HU was measured. Mean and maximum HU values（from three slices） were calculated. Associations between guidewire crossing and HU or lesion length were examined using logistic regression.

Results:Median mean HU was higher in uncrossed lesions（577 vs. 449 HU, p=0.0003） and maximum HU（696 vs. 516 HU, p=0.0006）. ROC analysis showed cutoffs of 516 HU（mean, AUC 0.851） and 648 HU（max, AUC 0.831）. Multivariate analysis identified mean HU（OR 0.983, p=0.001） and max HU（OR 0.987, p=0.002） as predictors of failure.

Conclusions:Plaque hardness based on the three consecutive slices with the largest summed plaque area was associated with guidewire crossing failure.



MO-109 Risk of Distal Embolization Following Atherectomy by Blades-Up Mode of JETSTREAM

○Natsumi Yanaka, Atsuya Murai, Tomoya Fukagawa, Kohei Yamaguchi, Masahiro Miyata, Masakazu Tsutsumi, Shinsuke Mori, Norihiro Kobayashi, Yoshiaki Ito

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【What's known?】
JETSTREAM atherectomy is commonly used during endovascular therapy (EVT) to treat heavily calcified femoropopliteal lesions. The JETSTREAM XC device has two operational modes: blades-down (BD) mode, which utilizes a distal cutter, and blades-up (BU) mode, which utilizes an expandable cutter.

【What's new?】
This study aimed to evaluate the association between the use of BU mode and the risk of distal embolization.

Methods
From March 2023 to August 2025, 80 femoropopliteal lesions were treated with the JETSTREAM system in our institution. Of these, 36 lesions were treated with BU mode and 44 lesions were treated without BU mode. The primary endpoint was the occurrence of distal embolization. The secondary endpoint was the incidence of the slow-flow phenomenon.

Results
Residual stenosis was significantly lower in the BU group (17% vs. 25%, $p = 0.043$). The rate of distal embolization was significantly higher in the BU group (38% vs. 18%,$p = 0.038$). The slow-flow phenomenon was also more frequent in the BU group (72% vs. 36%,$p = 0.001$).

Conclusion
The use of the BU mode achieved effective debulking and lower residual stenosis, although it was accompanied by higher incidence of distal embolization and slow-flow phenomenon.

MO-110 Clinical impact of the age, creatinine, and ejection fraction (ACEF) score on clinical outcome in patients with LEAD

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【What's known?】
Patients with LEAD have an increased risk of adverse cardiovascular events and mortality. The age, creatinine, and ejection fraction (ACEF) score is a simple and practical risk stratification tool. The purpose of this study was to evaluate the prognostic value of the ACEF score in predicting cardiovascular events in patients with LEAD.

【What's new?】
Methods:
Between January 2018 and December 2021, 327 consecutive patients undergoing initial EVT were retrospectively analyzed. They were classified into two groups based on the ACEF score: ≥2 and <2. The primary endpoint was a composite of all-cause death, acute myocardial infarction, heart failure hospitalization within 3 years of EVT.
Result:
Of 327 patients, 100 (30%) were divided into the high-risk group (ACEF score ≥2).
In high- risk group, the cumulative incidence of composite endpoint was significantly higher than the low-risk group (60 % vs 20.7% log-rank $p<0.001$).
In CLTI group, the cumulative incidence of composite endpoint was significantly higher in the high-risk group (64.9% vs 35.2%, log-rank $p<0.001$).
Conclusion:
High ACEF score is associated with higher all cause death, acute myocardial infarction, heart failure hospitalization. ACEF score could be effective for identifying patients at high risk of cardiovascular events in patients with LEAD.

MO-111 Impact of Ultrasound-Guided Popliteal Sciatic Nerve Block on Endovascular Therapy for Below-the-Knee Lesions in Chronic Limb-Threatening Ischemia

○Riho Suzuki, Yutaka Dannoura, Naoya Asakawa, Takao Makino, Hisashi Yokoshiki
Sapporo City General Hospital

【What's known?】
Ultrasound-guided popliteal sciatic nerve block (PSNB) has been reported to effectively reduce pain during endovascular therapy (EVT) for chronic limb-threatening ischemia (CLTI). However, its impact on procedural parameters of EVT remains unclear.

【What's new?】
This single-center retrospective study included 180 CLTI patients undergoing EVT for BTK lesions between July 2024 and June 2025. Patients treated with PSNB (n = 73) were compared with those treated without PSNB (n = 107). Propensity score matching extracted 65 pairs. There was no significant difference in technical success between two groups (96.9% vs. 96.9%, $p > 0.99$). Procedure time from puncture to sheath removal was significantly shorter in the PSNB group (53.9 ± 30.2 min vs. 66.8 ± 37.3 min, $p = 0.03$). The mean duration required to perform PSNB was 6.6 ± 2.4 minutes. The failure rate of DSA imaging due to leg movement was significantly lower in the PSNB group (18.5% vs. 53.8%, $p < 0.001$). Cumulative dose-area product was significantly lower in the PSNB group (8.9 ± 6.9 Gy·cm² vs. 12.4 ± 11.4 Gy·cm², $p = 0.04$).
In conclusion, ultrasound-guided PSNB is a safe adjunct to EVT for BTK lesions, reducing procedure time, motion-related imaging failure, and radiation exposure.

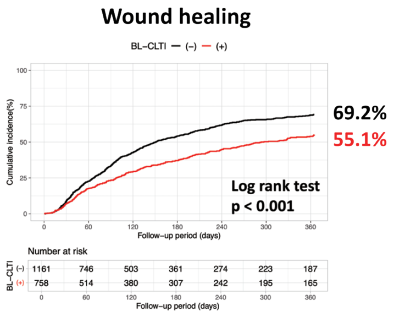
MO-112 Wound Healing after Endovascular Treatment in Patients with Bilateral versus Unilateral Chronic Limb-Threatening Ischemia

○Subaru Fujii[1)], Yosuke Hata[1)], Naoya Otsuki[1)], Daichi Yoshii[2)], Yoshiteru Okina[2)], Taku Toyoshima[2)], Osamu Iida[2)], Hiroaki Nohara[3)], Kazuho Ukai[4)], Haruya Yamane[4)], Kuniyasu Ikeoka[4)], Toshiaki Mano[1)]

[1)] Kansai Rosai Hospital, Cardiovascular Center, [2)] Osaka Keisatsu Hospital, [3)] Osaka Rosai Hospital, [4)] Osaka National Hospital

【What's known?】
Background: Patients with chronic limb-threatening ischemia (CLTI) remain at high risk of death and amputation after endovascular treatment (EVT). The prognostic impact of bilateral (BL) versus unilateral (UL) CLTI on wound healing is uncertain.

【What's new?】
Methods: We conducted a multicenter, retrospective study of 1,919 CLTI patients with ischemic wounds treated with EVT from 2010 to 2024. Patients were classified as BL- or UL-CLTI; in those with bilateral wounds, the more severe limb was analyzed. The primary endpoint was the 1-year wound healing rate by Kaplan–Meier methods. Logistic regression identified factors associated with BL-CLTI. Cox models evaluated predictors of time to wound healing.



Results: Of 1,919 patients, 758 had BL-CLTI and 1,161 had UL-CLTI. Hemodialysis and connective tissue disease were strongly associated with BL-CLTI (both $p<0.001$). One-year wound healing rates were 55.1% and 69.2% in the BL and UL groups, respectively (log-rank $p<0.001$). In multivariable Cox analysis, BL-CLTI was an independent predictor of delayed wound healing (hazard ratio [HR], 0.68; 95% CI, 0.59–0.79; $p<0.001$).
Conclusion: BL-CLTI is significantly associated with delayed wound healing after EVT.