MP-001 Outcomes of Endoluminal Stent-Grafts Versus Drug-Based Scaffolds in Extremely Long-Stented Lesions (>30cm)

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【What's known?】

Extremely long femoropopliteal lesions remain a major challenge in peripheral artery disease due to high restenosis and reintervention rates. This retrospective single-center study compared endoluminal stent-grafts and drug-based scaffolds in lesions requiring stenting over 30 cm.

【What's new?】

A total of 254 patients were included (stent-grafts = 142; drug-based scaffolds = 112). Mean age was 77 years, 60% were male, and 40% had chronic limb-threatening ischemia. Lesion length (303 mm vs 291 mm, $p = 0.204$) and vessel diameter (6.04 mm vs 6.02 mm, $p = 0.790$) were similar between groups. The stent-graft group had more occlusions (75.4% vs 55.4%) and smaller scaffold diameters (6.0 mm vs 6.6 mm, $p < 0.001$), whereas the drug-based scaffold group required more devices (3.0 vs 2.0, $p < 0.001$). Adjunctive DCB use was comparable. Kaplan–Meier analysis demonstrated no significant difference in primary patency (log-rank $p = 0.954$), and multivariate analysis did not identify any independent predictors of patency loss. In conclusion, among patients with extremely long femoropopliteal lesions requiring extensive scaffolding, clinical outcomes were comparable between endoluminal stent-grafts and drug-based scaffolds, suggesting both are viable options for complex long-segment disease.

MP-002 Efficacy and Safety of Percutaneous VA-ECMO and Impella Decannulation Using Endovascular Balloon Dilation and Perclose Closure Device: Insights from multicenter experience

○Hirokazu Miyashita[1)], Naoki Hayakawa[2)], Hikaru Tanemura[1)], Shun Sawada[1)], Eiji Koyama[1)], Motoaki Kai[1)], Hiromi Miwa[2)], Yasuyuki Tsuchida[2)], Shinya Ichihara[2)], Kazuki Tobita[1)]

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【What's known?】

Percutaneous removal of venoarterial extracorporeal membrane oxygenation (VA-ECMO) and Impella cannulas using intravascular balloon dilation combined with the Perclose closure device has demonstrated promising hemostasis outcomes. However, prior studies were limited by small sample sizes.

【What's new?】

This multicenter, retrospective study included consecutive patients undergoing percutaneous VA-ECMO and Impella decannulation at two cardiovascular centers between September 2019 and December 2025. A total of 148 patients who underwent removal with intravascular balloon dilation and the Perclose device were analyzed. The primary endpoint was successful hemostasis; the secondary endpoint was surgical conversion.

The mean age was 67.5 years, and 42% were female. Balloon access routes included distal radial/radial (63%), transfemoral (21%), and transbrachial (16%) approaches. Mean balloon diameter and inflation time were 7.5 mm and 14.9 minutes, respectively; mean total procedure time was 62 minutes. Procedural success was achieved in 98.8% of cases, with no surgical conversions, procedure-related deaths, or postprocedural infections observed.

In conclusion, percutaneous VA-ECMO and Impella decannulation using intravascular balloon dilation with Perclose closure demonstrated high procedural success and excellent safety, supporting its utility as a minimally invasive and reliable strategy for ECMO/Impella removal.

MP-003 Recurrent In-Stent Thrombosis after Iliac Vein Compression Syndrome: A Challenging Case Requiring Multiple Endovascular Interventions in Japan

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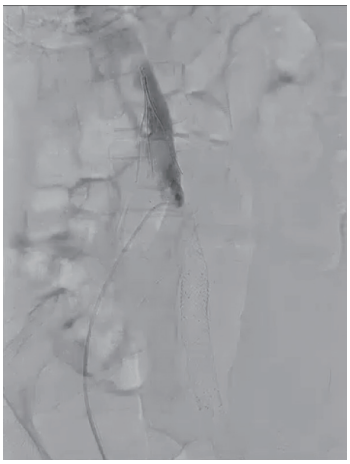
Department of Cardiology, Asahi General Hospital

【Case overview】

An 82-year-old woman with a history of left lower extremity deep venous thrombosis (DVT) secondary to iliac vein compression syndrome presented with recurrent swelling and pain after discontinuing anticoagulation. CT imaging revealed extensive thrombus from the external iliac to popliteal vein. Initial heparin therapy failed, requiring endovascular intervention.

【Procedure summary】

An inferior vena cava filter was placed, followed by balloon fragmentation and manual aspiration thrombectomy. Due to underlying compression and large thrombus burden, arterial bare nitinol stents were deployed from the common iliac to femoral vein. Shortly after, recurrent in-stent thrombosis developed. Repeat intervention was performed, but dislodged thrombus was captured in the filter. Catheter-directed thrombolysis (CDT) with heparin and argatroban was initiated. After CDT dissolved the filter thrombus, final aspiration and additional stenting achieved patency with clinical improvement.



【Clinical time course and implication (or perspective)】

This case demonstrates the complexity of managing recurrent in-stent thrombosis under device limitations in Japan, where mechanical thrombectomy devices and dedicated venous stents are unavailable. Multiple interventions including aspiration thrombectomy, arterial stents, and CDT ultimately provided successful salvage, offering important lessons for acute DVT management in resource-limited settings.

MP-004 A First Case of Successful Bypass Surgery Using a Prosthetic Graft for Left External Iliac Artery Occlusion Caused by External Iliac Artery Endofibrosis

○Shuji Kurata

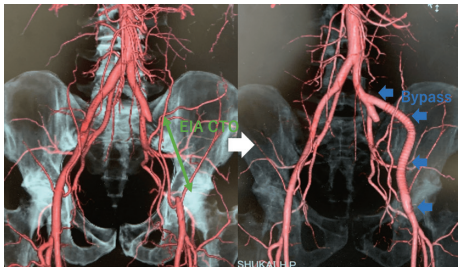
Department of Surgery,Shonan Fujisawa Tokushukai Hospital

【Case overview】

The patient was a 41-year-old man with no significant medical history and a former member of the Japanese national duathlon team. Thirteen years earlier, he experienced left leg pain during a race and was forced to withdraw. Since then, intermittent claudication had persisted, and although he had been examined by several orthopedic surgeons, the cause remained unidentified. About one year ago, his symptoms worsened, prompting him to visit our hospital. The ABI waveform was flat, and CT revealed occlusion of the left external iliac artery. Further examinations ruled out atherosclerotic, congenital, and acquired thrombotic diseases, leading to the diagnosis of external iliac artery endofibrosis, a rare condition observed in athletes.

【Procedure summary】

As a treatment strategy, EVT, thrombectomy, and patch angioplasty were considered; however, a left CIA–CFA bypass using a prosthetic graft was deemed the most appropriate option due to its superior reliability and long-term durability, and the procedure was performed.



【Clinical time course and implication (or perspective)】

The surgery was successful and completed without complications. The patient is very satisfied with the outcome.However, careful long-term follow-up is necessary to monitor future outcomes.To our knowledge, this is the first reported case of bypass surgery for external iliac artery endofibrosis in Japan.

MP-005 Usefulness of the Wingman Crossing Catheter for Severely Calcified Peripheral Arterial Lesions With Device-Passage Failure: A Single-Center Experience

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

【What's known?】
Severely calcified peripheral arterial lesions may allow guidewire passage but still prevent the advancement of subsequent devices, resulting in device passage failure during endovascular therapy. This issue is frequently encountered in femoropopliteal and below-the-knee interventions. Even high-deliverability small-diameter balloons and microcatheters may fail to cross when severe calcification is present, leading to procedural failure. In such situations, an additional tool to facilitate device passage is required to complete revascularization. The Wingman crossing catheter, featuring a needle-like, uniquely beveled tip designed to create an entry pathway through tight calcified segments, has been used to address this problem; however, clinical evidence specifically focused on its role in device-passage failure despite successful wire crossing has remained limited.

【What's new?】
In this single-center retrospective study including 79 patients with 81 severely calcified lesions, the Wingman crossing catheter achieved successful device passage in 74 of 79 cases (94%) after failure of devices to cross despite wire passage. Wingman enabled device advancement even when these devices were unable to traverse the lesion due to severe calcification. These findings clarify the clinical role of Wingman as a practical adjunct specifically for device-passage failure and support its use as a real-world solution to a clinically significant challenge in endovascular therapy.

MP-006 Endovascular Treatment Strategies for Acute Upper Limb Arterial Occlusion: A Three-Case Series

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

【Case overview】
We report three cases of acute hand ischemia resulting from axillary to brachial artery occlusion, primarily caused by thromboembolism in patients with chronic atrial fibrillation. All patients (aged 55-89 years, two females) presented with acute onset of pain, sensory loss, and motor impairment, with a time from symptom onset to treatment of approximately 3–6 hours. One patient had anticoagulation interrupted prior to onset, while the other two developed occlusion despite being on therapeutic anticoagulation. Distal radial and ulnar artery occlusions observed during the procedures were considered secondary distal embolization from the proximal thrombus.

【Procedure summary】
Endovascular therapy via a common femoral artery approach was attempted in all cases using a 6Fr-75cm Crossroad sheath and a 6Fr-100cm guiding catheter. Repeated thrombus aspiration was performed, with adjunctive balloon dilation and vasodilator infusion. In one patient with a greater height, catheter reach was insufficient, and surgical conversion was performed.

【Clinical time course and implication (or perspective)】
Two cases achieved flow restoration, while one required surgical management. Our experience suggests that patients up to 160cm in height may be suitable for endovascular treatment using a 75cm system, whereas taller patients may require longer devices or early surgical consideration. Tourniquet-assisted proximal flow control may help reduce distal embolization during aspiration.

MP-007 Comparison of Clinical Outcomes Between Rheocarna and Hyperbaric Oxygen Therapy in Dialysis Patients With No-Option Chronic Limb-Threatening Ischemia

○Riho Suzuki[1)], Shuko Iwata[2)], Yutaka Dannnoura[1,2)], Michinao Tan[2)], Takao Makino[1)], Hisashi Yokoshiki[1)]

[1)] Sapporo City General Hospital, [2)] Caress Memorial Hospital

【What's known?】
In Japan, more than half of patients with chronic limb-threatening ischemia (CLTI) are on dialysis, far exceeding rates in Western countries. Dialysis is associated with poorer outcomes and no-option CLTI, for which adjunctive therapies such as Rheocarna and hyperbaric oxygen therapy (HBO) are used, though comparative evidence is limited.

【What's new?】
This multicenter retrospective study analyzed 80 dialysis patients with no-option CLTI treated with Rheocarna or HBO between June 2019 and August 2024. Rheocarna significantly increased skin perfusion pressure (SPP) and reduced fibrinogen and low-density lipoprotein (LDL)-cholesterol levels, whereas HBO significantly reduced C-reactive protein (CRP) and fibrinogen without affecting SPP. At 1 year, the wound-healing rate was higher with Rheocarna (63.4% vs 39.5%, $p = 0.042$), overall survival was higher with HBO (55.5% vs 88.5%, $p < 0.001$), and major amputation rates were similar (67.0% vs 71.3%, $p = 0.564$). Multivariate analysis identified serum albumin ≥ 3.0 g/dL and Rheocarna as predictors of wound-healing, while age ≥ 70 years and non-ambulatory status were independent predictors of poor survival; HBO was associated with improved survival. In conclusion, Rheocarna was associated with improved wound healing, whereas HBO contributed to better overall survival in dialysis patients with no-option CLTI.

MP-008 Impact of Diabetes on Hyperbaric Oxygen Therapy for Chronic Limb-Threatening Ischemia

○Riho Suzuki[1)], Shuko Iwata[2)], Yutaka Dannoura[1)], Michinao Tan[2)], Takao Makino[1)], Hisashi Yokoshiki[1)]

[1)] Sapporo City General Hospital, [2)] Caress Memorial Hospital

【What's known?】
Most previous studies on hyperbaric oxygen therapy (HBO) have focused on ischemic ulcers in diabetic patients, and few have compared post-HBO outcomes between diabetic and non-diabetic patients with chronic limb-threatening ischemia (CLTI).

【What's new?】
This multicenter retrospective observational study enrolled 139 patients with CLTI who underwent HBO as adjunctive treatment after revascularization between June 2019 and August 2024. In the diabetes group, males were more prevalent (77.9% vs. 37.1%, $p < 0.001$) and heart failure was more common (59.6% vs. 37.1%, $p = 0.03$), whereas non-diabetic patients were more often non-ambulatory (18.3% vs. 37.1%, $p = 0.04$) and had a higher prevalence of non-atherosclerotic disease (6.7% vs. 22.9%, $p = 0.02$).
Amputation-free survival (AFS) was significantly higher in diabetic patients (68.0% vs. 53.0%, $p = 0.04$), while wound healing rate and major amputation did not differ between groups (49.9% vs. 44.8%, $p = 0.14$; 78.4% vs. 65.7%, $p = 0.18$). In multivariate analysis, diabetes remained an independent favorable prognostic factor for AFS (HR 0.47, $p = 0.014$), whereas wound healing did not differ by diabetic status. These findings suggest that diabetic patients may derive greater benefit from HBO therapy.

MP-009 Laser Atherectomy Versus Balloon Angioplasty for Chronic Total Occlusions in Thromboangiitis Obliterans

○Jianming Guo

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【What's known?】

Objective: Thromboangiitis obliterans (TAO) causes severe lower limb ischemia, where conservative management is often insufficient. Endovascular therapy is important, but evidence comparing device efficacy, particularly for excimer laser atherectomy (ELA), is limited.

【What's new?】

This study compared the short-term efficacy and safety of balloon angioplasty versus ELA for long TAO occlusions, and assessed whether laser debulking combined with drug-coated balloons (DCB) offers superior outcomes.

Methods: In this single-center retrospective analysis, 61 patients (62 limbs) with complex TAO occlusions (Oct 2021-Oct 2024) were divided into a balloon group (n=22; DCB=16, POBA=6) and a laser group (n=40; ELA+POBA=31, ELA+DCB=9). Outcomes included technical success, primary patency, target lesion revascularization (TLR), ulcer healing, and limb salvage.

Results: The cohort was 21% claudicant and 79% chronic limb-threatening ischemia. Technical success was high (balloon 95.5% vs laser 97.5%; P> .050). The 12-month primary patency was 48.32% (balloon) vs 59.28% (laser; P= .892), highest in the ELA+DCB subgroup (64.81%). TLR rates were 68.18% vs 75.00% (P= .585). Overall limb salvage was 93.5%. In Rutherford 5 patients, ulcer healing was 81.0%, highest with ELA+DCB (87.5%). The laser group showed lower new ulcer incidence (17.2% vs 30.8%). No serious adverse events occurred.

MP-012 Long-term Outcomes after Drug-Coated Balloon Angioplasty for Critical Limb Ischaemia

○Bibombe Mwipatayi
Royal Perth Hospital

【What's known?】
To evaluate the long-term clinical outcomes of patients who underwent drug-coated balloon (DCB) angioplasty for critical limb ischemia (CLI).
This study analyses a subgroup of patients with CLI from the Biolux P-III registry. The primary outcome was freedom from clinically driven target lesion revascularisation (cd-TLR), over five years. Secondary outcomes included major target-limb amputation, vascular-related mortality, and all-cause mortality.
Among 328 patients with CLI, freedom from cd-TLR at 12, 24, and 60 months was 91.4% (95% CI, 88.1–93.9), 88.0% (84.0–91.0), and 85.3% (79.6–89.6), respectively. Corresponding rates among non- CLI patients were 93.3% (90.8–95.2), 88.7% (85.5–91.2), and 78.3% (72.9–82.7). At 60 months, 93.3% (89.5–95.7) of patients with CLI remained free from major target-limb amputation, compared with 99.3% (97.8–99.8) in the non- CLI group. Overall survival rate at five years was 47.9% in the CLI cohort, with vascular-, cardiovascular-, and non-cardiovascular-related deaths accounting for 8.8%, 24.2%, and 31.9%, respectively.
The survival rate in the non- CLI patients was 76.7%, with corresponding mortality rates of 1.7%, 33.9%, and 32.2%.

【What's new?】
Drug-coated balloon angioplasty for CLI ensures lasting vessel patency and a high freedom from CD-TLR for up to five years. Patients with this condition face higher rates of major amputation and vascular-related mortality.

MP-017 Preliminary Impressions from the Australian review of Inner-branched Repair for Complex Aortic Pathology (AIRCAP) Study

○Alan D Rossman, Michael Na, Vikram Puttaswamy
Department of Vascular and Transplant Surgery, Royal North Shore Hospital

【What's known?】
The inner-branched endovascular aortic repair (iBEVAR) treats complex thoracoabdominal and juxta/pararenal aortic pathology. Most published Artivion iBEVAR outcomes originate from high-volume European centers. This study reports the first multicentre Australian experience, establishing a foundation for review of real-world early outcomes.

【What's new?】
Methods: All Australian vascular surgeons performing Artivion iBEVAR (September 2021-March 2024) were invited to retrospectively complete standardised case forms. Data included demographics, procedural details, technical success, graft/branch patency, hospital stay, and perioperative morbidity and mortality.

Results: Data was available for 21 of 41 cases (51%). Indications varied; 16 custom and five off-the-shelf devices were used. Technical success (JVS-defined) was achieved in 85% of cases. Three procedures (14%) were emergent. Device-related complications (19%, n=4) included four visceral branch occlusions (one requiring dialysis, one re-intervention), one stroke, and one spinal cord ischemia. Overall mortality was 14% (n=3): two device-related and one unrelated.

Conclusion: Early Australian experience suggests iBEVAR is feasible and technically successful in selected centres. Notable perioperative morbidity highlights the importance of careful patient selection, device customisation, and ongoing registry follow-up to assess longer-term outcomes.

MP-018 From Chaos to Catheter: A Decade of Evolving Code Crimson Protocols and the Rise of Endovascular-First Trauma Care

○Alan D Rossman, Vikram Puttaswamy
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【What's known?】
Uncontrolled haemorrhage is the leading preventable cause of trauma death, necessitating rapid haemostatic control protocols. The New South Wales Code Crimson (CC) enables rapid multidisciplinary activation and direct transfer of exsanguinating patients to theatre. At Royal North Shore Hospital (RNSH), the protocol evolved in 2018 toward an endovascular-first model in 2020 (EV-CC).

【What's new?】
Methods
We collected data for all CC activations at RNSH (2018–2025) and a retrospective "CC-like" cohort (2015–2017) was identified by a 90%-sensitive pre-protocol criteria algorithm.

Results
Of 161 patients meeting CC criteria over ten years, 136 were taken to theatre. 46 underwent endovascular intervention (26 first-line), including 11 endovascular balloon occlusion of the aorta. First-line endovascular use increased from 20.9% (CC-like) to 48.5% (EV-CC). Mortality was unchanged after excluding 39 unsurvivable injuries.

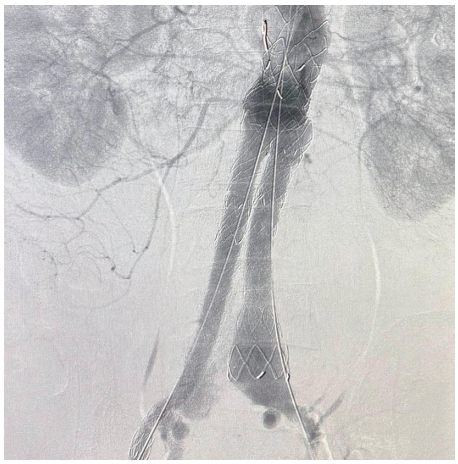
Conclusion
This largest Australian CC analysis shows the transition to EV-CC increased early endovascular technique use without raising mortality, supporting the integration of endovascular capability into major trauma workflows.

MP-019 Troubleshooting Jailed Olive Tip in Endovascular Aortic Repair of Impending Rupture Abdominal Aorta Aneurysm

○Salma R. Basuki
Melinda Cardiovascular Center

【Case overview】
A 74-year-old male presented with abdominal discomfort and pulsation for one year. Physical examination revealed a palpable abdominal mass. Ultrasound and CT angiography showed a fusiform infrarenal abdominal aortic aneurysm (AAA) measuring 9.34 cm with signs of impending rupture.

【Procedure summary】
Endovascular Aortic Repair (EVAR) was performed via bilateral femoral access. Initial percutaneous access failed, requiring surgical cutdown. A stent graft was deployed successfully; however, advancement of the ipsilateral limb was complicated by entrapment of the olive tip in the right external iliac artery. Right brachial access and percutaneous transluminal angioplasty enabled successful retrieval. A type IB endoleak at the left limb required an additional extension graft, during which a second olive tip entrapment occurred and was resolved using balloon-anchor technique via brachial access. Final angiography showed only minimal type IV endoleak.



【Clinical time course and implication (or perspective)】
Postoperatively, the patient reported complete resolution of abdominal discomfort, stable vital signs, and no limb ischemia or access complications. This case illustrates that although EVAR is an effective treatment for impending AAA rupture, intra-operative challenges such as access failure, device entrapment, and endoleak may occur. Careful pre-procedure planning, recognition of iliac tortuosity or stenosis, and preparedness for alternative access and bailout techniques are essential for procedural success and patient recovery.

MP-020 Going Out on a Limb: The Distal Transradial Approach for Dialysis Access Intervention

○Asanka R Wijetunga
University of Sydney

【What's known?】
The distal transradial approach (DRA) to arteriovenous fistula (AVF) endoluminal intervention accesses the radial artery via the anatomical snuffbox. The technique aims to optimise sheath stability and reduce rates of periprocedural complication. Though ubiquitous in coronary catheterisation, little data demonstrates its utility in vascular access intervention.

【What's new?】
Our study is the first to aggregate international results - totalling 293 patients from five studies - to demonstrate the promise of the DRA to AVF intervention. The weighted mean age was 72.1 and 91.2% were radiocephalic AVFs. Pooled technical success was 98.6% (95%CI 96.5-99.4%), wih no cases of access-related steal syndrome, major haematoma or pseudoaneurysm. One radial artery occlusion (0.34%, 95%CI 0.06–1.9) and six minor haematomas (2.1%, 95%CI 0.94–4.4) were described, all non-operatively managed. Mean sheath size was 5.8 ± 0.44Fr. Mean procedure time was 55 minutes. Various closure techniques, including Nichiban STEPTY and between 15-120 mins manual pressure have been successfully employed. Six-month primary and secondary patency were 82% and 91% respectively. Larger prospective studies are warranted to validate these findings and define optimal patient selection.

MP-021 Elucidating the technique and evaluating the effectiveness of juxta-anastomotic stenting of the arteriovenous fistula

○Asanka R Wijetunga
University of Sydney

【What's known?】
Juxta-anastomotic stenosis is a common cause of arteriovenous fistula (AVF) dysfunction or failure to mature. While percutaneous transluminal angioplasty (PTA) is the first-line endovascular treatment, its durability is limited, achieving primary patency rates as low as 50% at 12 months. Furthermore, whilst open revision can achieve primary patencies of 80-90% at 12 months, complication rates are high, often at 5-10%. This systematic review and pooled analysis aims to evaluate the efficacy of juxta-anastomotic stenting as a more durable endovascular option.

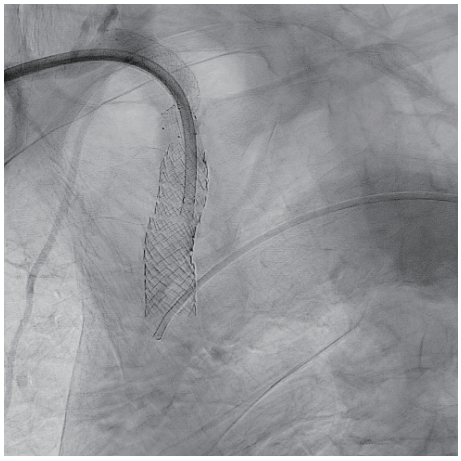
【What's new?】
After reviewing our unit's technique, we describe the results of a a systematic review, which includes nine studies comprising 261 stents placed in 254 radiocephalic and 7 brachiocephalic AVFs. The self-expanding uncovered Supera stent was the most widely used, in over 150 cases. Pooled primary patency rates at 3/6/12/24 months were 93%, 84%, 60%, and 46%, respectively. Pooled primary assisted patency rates were 92%, 90%, 84%, and 72% at the same time points. The overall pooled technical success rate was 99.1%, with no Clavien-Dindo grade III-V periprocedural complications reported. Though these results support its use as an effective adjunct to angioplasty, further work is needed to compare its efficacy to that of open revision.

MP-022 Endovascular Treatment of an Suspected Infectious Brachiocephalic Artery Aneurysm with Concomitant Subclavian Artery Occlusion: A Successful Covered Stent Repair

○Ricky Wang-hei Leung[1)], Takuya Haraguchi[2)]
[1)]Department of Medicine, Queen Mary Hospital, [2)]Sapporo Cardiovascular Clinic

【Case overview】
A 70-year-old man with a history of rectal cancer surgery in July 2025, presented with pleuritic chest pain and pharyngeal discomfort. CT revealed a newly developed brachiocephalic artery aneurysm (33 × 35 mm) and right subclavian artery occlusion, which were absent on CT three months earlier. Laboratory tests showed elevated WBC and CRP, suggesting a possible infectious aneurysm.
He was transferred to our center for EVT after initial antibiotic therapy.

【Procedure summary】
Bilateral access was obtained via the right femoral artery (7 Fr) and right brachial artery (8 Fr).
IVUS-guided bidirectional wiring was performed to recanalize the totally occluded right subclavian artery. After successful wire externalization, a SMART 8.0 × 40 mm was implanted across the occlusion.
Subsequently, a VBX 8.0 x 59 mm covered stent graft was deployed across the brachiocephalic aneurysm to achieve complete exclusion.
Final IVUS and angiography confirmed full recanalization of the subclavian artery and complete sealing of the aneurysm.



【Clinical time course and implication (or perspective)】
The patient's postoperative course was uneventful.
Follow-up CTA at 1 week showed patent stent flow and no endoleak; blood cultures were negative, and inflammatory markers normalized.
At 1-month CT, the aneurysm showed slight shrinkage with no signs of infection.

MP-023 Successful bailout of the filter wire “KANTON phenomenon” after JETSTREAM atherectomy for a calcified CTO in the SFA

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Division of Cardiology, Toyohashi Heart Center

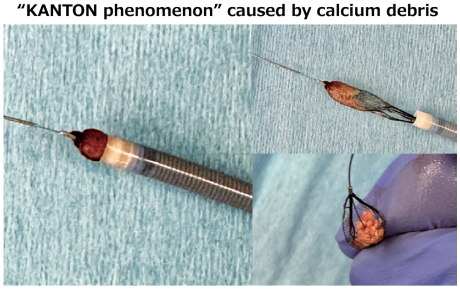
【Case overview】

A man in his seventies with Rutherford category 3 claudication on hemodialysis presented with a PACSS 4 calcified CTO in the distal left SFA.

【Procedure summary】

The lesion was crossed with an intra-calcium wiring strategy using CROSSLEAD Penetration. Plaque modification with the WINNER technique and the CUTE technique enabled IVUS passage, confirming intra-calcium wiring. After exchange to a Parachute filter wire, JETSTREAM XC 2.4/3.4 mm was performed. Excessive calcified debris caused filter wire entrapment. A 0.035-inch Sergeant microcatheter was advanced to cover the filter wire, and a second wire was passed beside it. Balloon dilatation from the second wire was attempted but insufficient. To prepare a second filter if debris spilled during retrieval, a 4 Fr TEMPO was reintroduced. Interference between the two catheters unexpectedly created a coupling effect, releasing the filter wire. However, the filter wire was stuck again at the tip of the 7 Fr Parent Cross guiding seath and was removed together. A 0.035-inch wire was left to preserve access and allow sheath re-insertion. No debris drop or slow-flow occurred, and final dilatation was safely performed with a DCB.

“KANTON phenomenon” caused by calcium debris



【Clinical time course and implication (or perspective)】

This case highlights the “KANTON phenomenon” after atherectomy and the importance of bailout strategies to avoid procedural failure.

MP-024 Successful Limb Salvage by Percutaneous Deep Venous Arterialization for Superficial Femoral Artery Occlusion after Below-Knee Amputation due to Acute Limb Ischemia

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

Department of Cardiology, Shonan Kamakura General Hospital

【Case overview】

A 67-year-old Vietnamese man with a history of stroke presented with acute right lower limb ischemia. He was diagnosed with external iliac artery occlusion at another hospital 2 days later from acute onset, but only prostaglandin infusion was administered. He referred to our hospital on day 5 due to worsening lower limb discoloration. Although we performed endovascular therapy (EVT), effective reperfusion could not be achieved. Limb necrosis was so severe, and below knee amputation was performed on hospital day 21. However, wound healing was poor.

【Procedure summary】

Angiography revealed re-occlusion of the superficial femoral artery with poor collateral only. Thrombectomy by percutaneous Fogarty removed large thrombi, but no distal flow was restored. Next, using a double snare-piercing technique, arteriovenous communication was created at the popliteal level, and an interwoven bare-nitinol stent (SUPERA™) was deployed to establish percutaneous deep venous arterialization (pDVA). Subsequent duplex ultrasound confirmed sustained perfusion, and wound healing gradually improved. The patient was discharged to rehabilitation on day 132 without requiring additional amputation.

【Clinical time course and implication (or perspective)】

pDVA may represent a viable limb salvage option in chronic limb-threatening ischemia patients with femoro-popliteal lesions after BK amputation. We will reveal the details of the case in this report.

MP-025 Intravascular Ultrasound–Guided Reentry via an Occluded Tibial Artery Enabling a Trans-Ankle Retrograde Approach for Long Femoropopliteal Occlusion

○Yuji Ohno

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【Case overview】
Trans-ankle intervention (TAI) is a practical retrograde access route when conventional distal puncture sites are not feasible. Long superficial femoral artery (SFA) occlusions extending into the popliteal artery are suitable targets for TAI. When one of the tibial arteries is occluded, retrograde access through the occluded vessel may be preferred to preserve the remaining patent tibial artery, and intravascular ultrasound (IVUS)–guided reentry can facilitate this approach.
A 70-year-old man presented with lifestyle-limiting claudication. Computed tomography angiography revealed a long SFA chronic total occlusion (CTO) extending to the distal popliteal artery and an occluded posterior tibial artery (PTA).

【Procedure summary】
The distal PTA was punctured under duplex ultrasound guidance, but the guidewire entered the subintimal space. IVUS-guided reentry was then performed at the proximal PTA using the tip-detection method, successfully establishing a retrograde approach. Subsequent bidirectional recanalization with drug-coated balloon angioplasty for the superficial femoral artery and additional balloon angioplasty for the PTA achieved complete revascularization without access-site complications, preserving antegrade flow in both the posterior and anterior tibial arteries.

【Clinical time course and implication (or perspective)】
After the procedure, his symptoms markedly improved.
IVUS-guided reentry through an occluded tibial artery can enable a trans-ankle retrograde approach and facilitate successful revascularization in complex femoropopliteal occlusions.

MP-026 Effect of Sciatic Nerve Block on the Quality of Digital Subtraction Angiography During Endovascular Therapy

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【What's known?】
Digital subtraction angiography (DSA) is an essential imaging technique for evaluating vascular anatomy during endovascular therapy (EVT). However, patient movement significantly reduce DSA quality.

【What's new?】
Recently, sciatic nerve block (SNB) has been used in our institution prior to EVT to reduce procedural pain. We hypothesized that SNB may also improve DSA image quality by minimizing patient motion. This study aimed to evaluate the effect of SNB on the quality of DSA during EVT.

Methods
From February 2023 to April 2025, 340 below-the-knee (BTK) lesions were treated at our hospital. 105 cases were treated with SNB prior to EVT, while 231 cases were performed without SNB. The primary outcome was the rate of evaluable DSA acquisition, defined as DSA images in which the outline of the main vessels of interest could be clearly traced to the distal segments. DSA images were assessed by two examiners to enhance objectivity.

Results
The rate of evaluable DSA acquisition was significantly higher in the SNB group compared to the non-SNB group (89 ± 13% vs. 79 ± 21%$p < .001$).

Conclusion
The use of sciatic nerve block may improve the quality of DSA imaging during EVT for BTK lesions.

MP-027 A case of successful revascularization of a severely calcified lesion using Jetstream and Fracking based on calcification distribution

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【Case overview】
An 84-year-old man presented with left intermittent claudication caused by severe calcified stenosis extending from the left common femoral artery (CFA) to the middle part of the superficial femoral artery (SFA).

【Procedure summary】
Endovascular treatment was attemoted considering the patient's frailty. A 6-Fr guiding sheath was inserted through the right CFA. First, Fracking was performed in the left CFA to achieve adequate lumen expansion and advance the guiding sheath to the left distal CFA. Then, Jetstream was applied from the proximal to the middle segment of the left SFA.However, balloon dilation after debulking of the calcification did not achieve sufficient lumen gain, and additional treatment was required. Accordingly, Fracking was performed for deep calcification in the left SFA and resulted in excellent lumen expansion. Finally, DCB dilation was carried out and the final angiogram demonstrated good distal flow.

【Clinical time course and implication (or perspective)】
After the treatment, the ABI improved to 0.99 and symptoms improved. The Jetstream and Fracking were applied to superficial and deep calcifications, respectively, achieving favorable results through a lesion-specific approach.For severely calcified femoropopliteal lesions, appropriate devices and techniques based on calcification distribution may be crucial for optimal outcomes.

MP-028 Insights into flow impairment associated with Jetstream atherectomy for calcified femoropopliteal disease: A JOKER registry subanalysis

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【What's known?】
Endovascular treatment for calcified lower limb arteries remains challenging. The Jetstream atherectomy device has shown effectiveness for calcified femoropopliteal lesions; however, flow impairment due to distal embolization remains a concern. This study aims to identify factors associated with Jetstream-related flow impairment.

【What's new?】
A retrospective multicenter study analyzed 241 patients (308 lesions) treated with Jetstream between November 2022 and December 2024. The mean lesion length and distal reference vessel diameter were 17.6 ± 10.5 cm and 5.2 ± 1.0 mm, respectively. Chronic total occlusion was observed in 19.5% of lesions, with PACSS grade 4 calcification in 63.3%. Single-cutter and expandable-cutter catheters were used in 37.0% and 77.2% (blades-up 99.5%) of cases. Embolic protection was applied in 49.7% (filter 17.9%, popliteal external compression 35.7%).
Jetstream-related flow impairment occurred in 17.2%. Diabetes mellitus ($p = 0.047$; HR 2.44 [1.01–5.90]) was an independent risk factor, while popliteal external compression ($p = 0.04$; HR 0.38 [0.15–0.95]) significantly reduced the risk.Flow was restored in 91% of cases with adjunctive treatment; five showed no improvement. No major amputations or acute occlusions occurred.
Jetstream carries a measurable risk of flow impairment, particularly in diabetic patients, while popliteal external compression appears effective for prevention.

MP-029 THE "ONSEN" TECHNIQUE: A NOVEL APPROACH TO IMPROVE VESSEL COMPLIANCE IN ACUTE LIMB ISCHEMIA WITH WARM SALINE

○Leenawat Jamjumrat[1)], Saritphat Orrapin[3)], Borirak Chareonsil[1)], Boonying Siribumrungwong[3)], Masanaga Tsujimoto[2)], Terdpoom Benyakorn[3)], Chulaluck Dodnhu[1)], Chamaiporn Bumrung[1)], Takuya Haraguchi[2)]

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【What's known?】
Contemporary series have demonstrated that endovascular revascularization is both safe and effective, with success rates in acute limb ischemia (ALI). However, revascularization of small vessels such as below-the-ankle (BTA) and below-the-elbow lesions remains challenging due to poor run-off, high thrombus burden, and microcirculatory failure. We propose a novel technique which intra-arterial flushing with warm saline improved vessel compliance, termed the "Onsen Technique" (OT) as warm water immersion induces vasodilation.

【What's new?】
We describe four cases improved vessel compliance and enhanced microvascular perfusion in thrombotic occlusions after intra-arterial flushing with warm saline. We propose a novel technique, termed the "Onsen Technique" (OT). In this technique, saline warmed to approximately 40 ℃ is flushed distally before and after angioplasty until visible skin color changes are achieved, thereby enhancing acute luminal gain at the capillary level. The angiography after OT demonstrated improved tibial and digital artery visualization. Clinically, the partial foot skin turned red, warm and toe cyanosis decreased.

MP-030 Endovascular Treatment for a ruptured lumbar artery aneurysm with fibroadipose vascular anomaly in a small abdominal aorta

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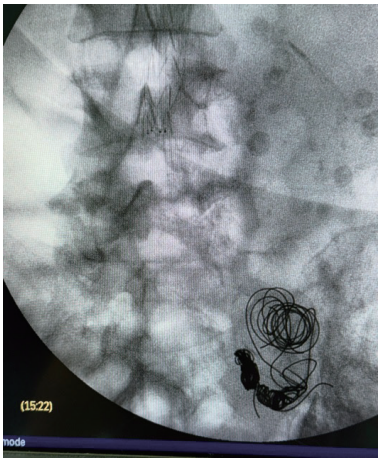
【Case overview】
50s female presenting with chronic lower back pain 10 years and a palpable lumbar mass who developed sudden severe pain at the site of the mass. Diagnosed rupture of a saccular lumbar artery aneurysm, with an additional inferior gluteal artery aneurysm supplying the tumor from CTA.

【Procedure summary】
The infrarenal aorta measured 12 mm in diameter. Due to the emergency situation and limited device availability, a 15 mm × 80 mm iliac limb stent was deployed to cover the origin of the lumbar artery. A few weeks later, coil embolization was performed to occlude the inferior gluteal artery aneurysm.



【Clinical time course and implication (or perspective)】
Ultrasound-guided biopsy revealed benign fibroadipose tissue consistent with fibroadipose vascular anomaly. Post-stent deployment angiography demonstrated complete exclusion of the lumbar artery aneurysm without endoleak or contrast extravasation. Follow-up imaging confirmed thrombosis of the aneurysm sac. Subsequent coil embolization resulted in complete thrombosis of the gluteal aneurysm and cessation of tumor perfusion.

MP-031 Staged treatment of bilateral venous malformations of the pyriform sinuses: case report

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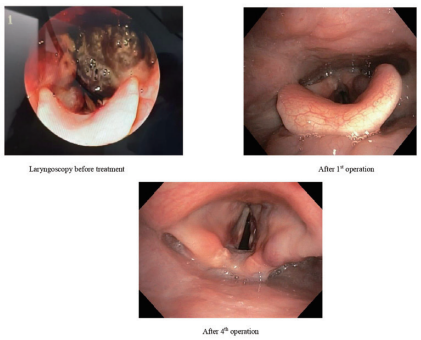
【Case overview】

A 27-year-old woman was admitted with complaints of shortness of breath persisting for the last two years. Videolaryngoscopy revealed a hemangioma of the larynx and second-degree laryngeal stenosis. Contrast-enhanced computed tomography showed a pathological neoplasm of the laryngopharynx at the level of the hyoid bone with significant stenosis of the laryngeal lumen. The lesion extended to the right peripharyngeal space and caudally to the visceral and carotid spaces of the neck, reaching the upper mediastinum.

【Procedure summary】

A multidisciplinary concilium consisting of a vascular surgeon, thoracic surgeon, otorhinolaryngologist, and endoscopist concluded that, given the progressive nature of the disease, surgical intervention was indicated. The planned treatment consisted of puncture scleroembolization of the malformation in the sternal sinus. Considering the high postoperative risks of bleeding and respiratory compromise, a tracheostomy was first performed, followed by puncture scleroembolization as the initial stage. Four stages of puncture scleroembolization of the venous malformation of the great-glass sinus were subsequently completed.



【Clinical time course and implication (or perspective)】

Eight months after the first operation, video-assisted thoracobronchoscopy demonstrated regression of the malformation. The patient was later examined by a thoracic surgeon, and reconstructive-plastic tracheal reconstruction with excision of granulation stenosis was performed. The postoperative period was uneventful, and the patient was discharged without complications.

MP-032 Popliteal artery entrapment syndrome status post Jetstream atherectomy for in-stent restenosis and total occlusion

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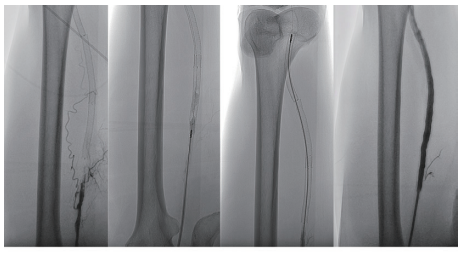
【Case overview】

A 64-year-old man with dyslipidemia, hypertension, and recurrent popliteal artery entrapment syndrome had undergone retraction of gastrocnemius muscle and adductor magnus release and multiple percutaneous transluminal angioplasty(PTA) with stents from the superficial femoral artery(SFA) ostium to the popliteal artery. He presented with new claudication and resting left calf pain. Examination showed decreased lower-limb pulses and Ankle brachial index of left lower limb is 0.62. CT angiography revealed total occlusion of the left popliteal, anterior tibial, peroneal, and dorsalis pedis arteries. With peripheral artery disease, Rutherford class 4, he underwent successful PTA, resulting in markedly improved arterial flow and significant symptom relief. Post procedure ABI of left lower limb is 1.32.

【Procedure summary】

CTO crossing was achieved using a V18 wire with CXI support. An Abbott Emboshield NAV6 distal protection device was placed, followed by JETSTREAM atherectomy from the SFA to the popliteal artery for in-stent restenosis. Balloon angioplasty was performed from the SFA to the posterior tibial artery. Drug-coated balloons (2.5 × 150 mm for the left PTA and two 6.0 × 200 mm for the SFA–popliteal segment) were applied. The final angiogram demonstrated restored antegrade flow.



【Clinical time course and implication (or perspective)】

The patient's symptoms improved markedly after the procedure.

MP-033 Kissing Stent Technique for Chronic Bilateral Innominate Vein Occlusion in Superior Vena Cava Syndrome: A Complex Venous Reconstruction

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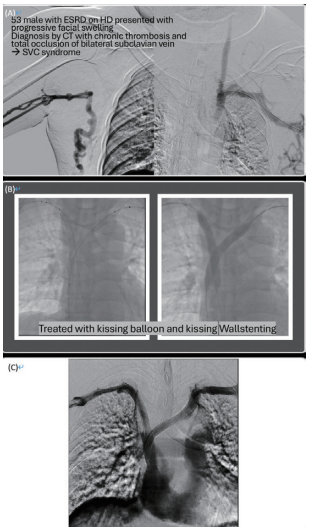
【Case overview】

A 53-year-old man with diabetes, end-stage renal disease on regular hemodialysis, and chronic obstructive pulmonary disease presented with progressive facial edema for one year. Computed tomography revealed chronic thrombosis of the bilateral innominate veins with multiple collateral formations, leading to superior vena cava (SVC) syndrome.

【Procedure summary】

Bilateral upper extremity venous access was obtained via echo-guided puncture of the basilic veins. Venography confirmed total occlusion of both innominate veins. Using V-18 and Conquest 40 guidewires, successful recanalization was achieved from the SVC to both innominate veins. Sequential balloon angioplasty was performed, followed by deployment of a 16×90 mm Wallstent from the SVC to the left innominate vein and a 14×90 mm Wallstent to the right side. Post-dilatation restored adequate venous flow. The patient's facial edema improved markedly after the procedure.



【Clinical time course and implication (or perspective)】

This case highlights the technical feasibility of complete endovascular reconstruction for chronic bilateral innominate vein occlusion in SVC syndrome, emphasizing the importance of a multi-access approach, sequential high-pressure balloon angioplasty, and the application of a **kissing stent technique** to achieve optimal venous outflow in complex central venous interventions.

MP-034 Background: Impact of lower extremity arterial calcification score on the patency of drug-coated balloon angioplasty for de novo femoropopliteal artery disease

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【What's known?】

Peripheral artery calcification is a key determinant of poor outcomes after endovascular treatment (EVT); however, reliable quantitative indicators of calcification severity are limited.

【What's new?】

Purpose: This study evaluated the prognostic value of the lower extremity arterial calcification score (LEACS), calculated from preprocedural lower limb computed tomography (CT), in patients undergoing drug-coated balloon (DCB) angioplasty for femoropopliteal (FP) artery disease.

Methods: Among 144 consecutive patients treated with DCB for de novo FP lesions between April 2018 and June 2023, those who underwent lower limb CT before EVT were analyzed. LEACS was calculated by summing calcification scores from the superficial femoral artery ostium to the popliteal artery. Patients were divided into higher and lower LEACS groups using a cut-off value of 1750. The primary endpoint was 1-year primary patency.

Results: The higher LEACS group had significantly lower 1-year patency (57.2% vs. 85.4%, p = 0.025) and freedom from target vessel revascularization (73.0% vs. 97.1%, p = 0.047). Multivariate analysis identified higher LEACS (OR 2.75, 95% CI 1.19–6.36, p = 0.018) and smaller vessel diameter (<5 mm; OR 2.53, 95% CI 1.74–4.18, p = 0.038) as independent predictors of restenosis.

Conclusion: LEACS from CT effectively predicts outcomes after DCB angioplasty in FP artery disease.