Peripheral Vascular Disease

1 Clinical Outcomes and Cost Comparisons of Stent and Non-Stent Interventions in Infravenous Peripheral Artery Disease: Insights From the Excellence in Peripheral Artery Disease (XLPAD) Registry
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The contemporary limb outcomes and costs of stent-based vs non-stent based strategies in endovascular revascularization of femoropopliteal (FP) peripheral artery disease are not well understood. We present data on 2910 FP interventions in 2162 patients from the ongoing United States multicenter Excellence in Peripheral Artery Disease registry between 2006-2016 to compare stent vs non-stent treatment outcomes and associated costs in FP interventions.

Coronary Artery Disease

10 OCT Analysis of Very Early Strut Coverage of the Synergy Stent in Non-ST Segment Elevation Acute Coronary Syndrome Patients
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Early endothelialization of drug-eluting stents is a major challenge to reduce the risk of stent thrombosis and the duration of dual-antiplatelet therapy in high bleeding-risk patients. Our aim was to evaluate very early strut coverage with optical coherence tomography of the Synergy stent at 1 month in 3839 stent struts from 24 non-ST segment elevation acute coronary syndrome patients.

Transcatheter Aortic Valve Replacement

15 Immediate Improvement in Left Atrial Function After Transcatheter Aortic Valve Replacement on Doppler Echocardiography
Derek Phan, MD; Armen Chalian, MD; Raj Makkar, MD; Robert J. Siegel, MD; Florian Rader, MD, MS

More than half of embolic strokes occur >24 hours after transcatheter aortic valve replacement (TAVR) and are therefore not directly procedure related. We aimed to determine immediate changes in left atrial (LA) function after TAVR, which may alter short-term and long-term stroke risk after TAVR. Transesophageal and transthoracic echocardiograms were therefore measured in 85 patients to evaluate LA appendage velocities and Doppler echocardiographic markers of function.

Cardio-Oncology

21 A Cancer Paradox: Machine-Learning Backed Propensity-Score Analysis of Coronary Angiography Findings in Cardio-Oncology
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Cancer has been proposed as a cardiovascular risk factor. We assessed the cardiovascular risk profile and coronary angiography findings of 240 cancer patients and 240 patients without cancer to compare the burden of angiographically detected coronary atherosclerosis.
Transcatheter Aortic Valve Replacement

Comparison Between Traditional and Guide-Catheter Extension Reverse Controlled Antegrade Dissection and Retrograde Tracking: Insights From the PROGRESS-CTO Registry
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The most common re-entry technique during retrograde chronic total occlusion (CTO) percutaneous coronary intervention (PCI) is reverse controlled antegrade and retrograde tracking (rCART). The use of guide-catheter extensions can facilitate rCART, but has received limited study. We compared the clinical and procedural characteristics and outcomes of traditional rCART vs guide-catheter extension rCART vs cases in which both techniques were used (combined rCART) in patients with successful retrograde CTO crossing in a contemporary, multinational, CTO-PCI registry.

Coronary Artery Disease

Impella CP Dislodgment, Swap, or Removal: Current Practices
Edo Kaluski, MD; Safi U. Khan, MD; Sudhakar Sattur, MD; Dan Sporn, MD; Maninder Singh, MD

The Impella CP (ICP) catheter offers hemodynamic superiority over the intra-aortic balloon pump. However, device-specific issues are occasionally encountered, especially when long-term mechanical circulatory support is required. We review the literature regarding the potential problems, including ICP dislodgment, ICP mechanical failure, and the need to remove the ICP while maintaining arterial access to either insert a new mechanical circulatory support device or to perform suture-based arteriotomy site closure, and also review the possible solutions to these issues.

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CLINICAL IMAGES

E1 Challenging Aorto-Coronary Occlusion: Which Solution?
Giovanni Lorenzoni, MD; Pierluigi Merella, MD; Gavino Casu, MD

Aorto-coronary occlusion is a particularly difficult lesion to treat, especially in an emergent setting. To our knowledge, this is the first description of the use of a microcatheter not to support the guidewire, but to open an aorto-coronary calcific occlusion with antegrade approach in an emergent situation.
CLINICAL IMAGES

E2 Coronary Artery Tenting After Bypass Grafting: A Key Issue During Percutaneous Coronary Intervention of a Chronic Total Occlusion
Alfonso Jurado-Román, MD, PhD; José Ramón Rumoroso, MD; José Abellán-Huerta, MD, PhD; María T. López-Lluva, MD; Ignacio Sánchez-Pérez, MD; Fernando Lozano Ruiz-Poveda, MD, PhD
This image series shows how bypass grafts may tent the vessel to which they are anastomosed, potentially changing the expected course of the native coronary vessel. This fact must be taken into account during CTO-PCI, and this case emphasizes the importance of careful analysis of coronary anatomy with several angiographic projections.

CLINICAL IMAGES

E4 Combined Percutaneous Treatment of Severe Tricuspid Regurgitation and Left Atrial Appendage Closure
Carlos Arellano-Serrano, MD; Vanessa Moñivas, MD, PhD; Rodrigo Estévez-Loureiro, MD, PhD
LAA closure and MitraClip implantation in the tricuspid position in the same procedure is a feasible and safe option in patients with a high surgical risk suffering from severe symptomatic tricuspid regurgitation and bleeding complications under anticoagulant therapy.

CLINICAL IMAGES

E6 Optical Coherence Tomography Evaluation of Coronary Dissection and Intramural Hematoma
Umair Hayat, MBBS; Paul D. Williams, MD; David Austin, MD
Image shows an extensive intramural hematoma causing luminal compression corresponding to the angiographic stenosis. Although intramural hematomas are identifiable on intravascular ultrasound, OCT offers superior characterization and exclusion of alternate diagnoses, such as plaque erosion.

CLINICAL IMAGES

E7 “Single Arm–Double Access” for CTO Intervention
Michael Koutouzis, MD, PhD; Eleftherios Kontopodis, MD; Andreas Tassopoulos, MD; Ioannis Tsiafakidis, MD; Nikolaos Oikonomidis, MD; Efstatios Lazaris, MD
To our knowledge, this is the first reported case of a dual-access approach for CTO intervention using transradial and ipsilateral transulnar access. Although retrograde CTO intervention is a challenging procedure, a single arm-double access approach seems to be a feasible alternative that may be useful in patients with limited access-site availability.

CLINICAL IMAGES

E8 A Novel Approach to Aortoiliac Bifurcation Stenting Using a Single Balloon-Expandable Stent
Mohammed Alomar, MD; Rajiv Tayal, MD, MPH; Michael Amponsah, MD; Marc Cohen, MD; Najam Wasty, MD
Contrary to popular wisdom, predominantly unilateral aortoiliac bifurcation disease can be safely treated with a single stent if the contralateral common iliac ostium is protected with matching balloon inflation. Larger studies on this novel approach with a longer clinical follow-up are needed to validate our results.