

1.5×9 mm, 1.5×20 mm, 2.5×25 mm, 2.75×15 mm, 2.75×18 mm, and 2.75×23 mm non-compliant (NC) balloons, followed by a 2.5×20 mm scoring balloon and a 2.5×15 mm cutting balloon. Although the cutting balloon ruptured at 14 atm, adequate plaque modification could not be achieved. Given the development of a limited dissection with preserved TIMI grade 3 flow and the absence of symptoms, the procedure was terminated, and rotational atherectomy was planned.

Second Session (April 8, 2026): The lesion was successfully crossed with the support of a microcatheter. Following predilation, rotational atherectomy was performed using a 1.75-mm burr. Subsequent high-pressure dilations with a 3.25-mm cutting balloon, a 3.0×12 mm NC balloon inflated up to 34 atm, and a 3.5×15 mm NC balloon inflated up to 26 atm failed to achieve adequate lumen expansion. The lesion was considered balloon-undilatable, and repeat intervention with either intravascular lithotripsy (IVL) or an OPN balloon was planned. Following the procedure, new-onset atrial fibrillation developed, and oral anticoagulation therapy was initiated.

Third Session (April 27, 2026): The previously rotablated resistant lesion was re-crossed with a guidewire. A 2.5×15 mm OPN balloon was inflated up to 40 atm, followed by additional high-pressure dilation with a 3.0×20 mm NC balloon. Despite these interventions, persistent balloon waist was observed, and adequate lumen expansion could not be achieved. No perforation, no-reflow phenomenon, or hemodynamic instability occurred during the procedure. Given the failure to achieve technical success despite sequential plaque modification techniques, further attempts at revascularization were abandoned, and optimal medical therapy was pursued. The patient was discharged without cardiac symptoms.

Conclusion: In severely calcified CTO lesions, technical success may not always be achieved despite the sequential use of advanced plaque modification techniques, including rotational atherectomy, cutting balloons, and ultra-high-pressure balloons. This case highlights that balloon-undilatable calcified CTO lesions represent one of the most challenging scenarios in interventional cardiology. Intravascular imaging-guided procedural planning and the timely use of emerging calcium-modification technologies, such as IVL, may represent potential strategies to improve procedural success in similar cases.

SS-17

Rotablation-Assisted Complex Left Main Coronary Trifurcation Intervention in Severe Calcification: A Successful IVUS-Guided Complex Percutaneous Coronary Intervention

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Introduction and Aim: Left main coronary artery (LMCA) trifurcation lesions, particularly in the presence of severe calcification, represent some of the most complex interventions in interventional cardiology. In patients who are unsuitable for surgical revascularization or decline surgery, rotational atherectomy-assisted percutaneous coronary intervention may provide a successful alternative.

Case Report: A 69-year-old man was admitted with non-ST-segment elevation myocardial infarction and acute decompensated heart failure. Coronary angiography revealed a severely calcified Medina 0,1,1 LMCA trifurcation lesion, accompanied by a chronic total occlusion of the distal right coronary artery. Although surgical revascularization was recommended by the Heart Team, the patient declined surgery, and a high-risk percutaneous intervention was planned. For lesion preparation, rotational atherectomy was performed using a 1.5-mm burr, followed by implantation of a drug-eluting stent from the LMCA into the circumflex artery. During the procedure, impairment of LAD flow developed and was successfully managed using the T and small protrusion (TAP) technique, followed by final kissing balloon inflation and proximal opti-

mization technique. Intravascular ultrasound confirmed adequate stent expansion and complete apposition. The procedure was completed without complications, with restoration of TIMI grade 3 flow on final angiography. Follow-up angiography demonstrated patent stents, while the patient showed a marked improvement in functional capacity and an increase in left ventricular ejection fraction during follow-up.

Conclusion: This case demonstrates that, in patients with severely calcified LMCA trifurcation lesions, a strategy combining rotational atherectomy, an appropriate bifurcation technique, and IVUS-guided stent optimization may provide a safe and successful treatment option for high-risk patients.

Keywords: Left main coronary artery trifurcation, rotational atherectomy, intravascular ultrasound (IVUS).

SS-18

Management of Aorto-Ostial Stent Protrusion Using the Side Flap Technique in Acute Coronary Syndrome Developing During Chemotherapy: A Case Report

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Introduction and Aim: Aorto-ostial stent implantation is a technically challenging percutaneous coronary intervention due to anatomical considerations and difficulties in achieving optimal stent positioning. Stent protrusion into the aorta may make subsequent re-entry into the stent lumen difficult and compromise adequate catheter support during further interventions. The Side Flap technique is an alternative approach that enables the creation of a new functional lumen by passing through the side wall of the stent in selected cases where re-entry into the original stent lumen is not feasible. In this case, we present the successful management of aorto-ostial stent protrusion using the Side Flap technique during coronary intervention performed for chest pain and elevated troponin levels that developed during chemotherapy.

Case Report: A 65-year-old man with a history of hypertension and coronary artery disease, including previous coronary stent implantation, was admitted for evaluation of chest pain and elevated troponin levels that developed during chemotherapy for lung cancer. Electrocardiography showed sinus rhythm. Echocardiography revealed a left ventricular ejection fraction of 60%, mild mitral and tricuspid regurgitation, and grade I diastolic dysfunction. Coronary angiography demonstrated an 80% stenosis at the LAD ostium, a patent stent in the mid-LAD segment, a 30% stenosis in the CX-OM2 segment, and severe stenoses in the ostial (90%) and mid (95%) segments of the nondominant RCA. Percutaneous coronary intervention (PCI) to the LAD was planned, and the left main coronary artery (LMCA) was engaged with a 7-French 3.5 guiding catheter. After wiring the LAD and CX, balloon angioplasty of the LAD was performed using a 2.0×25 mm balloon. Subsequently, a 3.5×38 mm drug-eluting stent (DES) was deployed from the LMCA ostium into the LAD. The stent was assessed in different angiographic projections and positioned with 1–2 struts extending into the aorta. During stent deployment, the patient took a deep inspiration, resulting in approximately 10 mm of stent protrusion into the aorta. Because of the stent protrusion into the LMCA ostium, inability to re-cross the stent lumen with a guidewire, and compromised CX flow, the guidewire was advanced from the LMCA into the LAD by passing through the edge of the protruding stent struts. At this stage, the Side Flap technique was performed using a 3.5×10 mm balloon, resulting in lateral displacement of the protruding stent segment and creation of a functional lumen. Proximal optimization technique (POT) was then performed in the LMCA using a 5.0×8 mm balloon. A 3.5×23 mm DES was implanted between the two stents in the LAD. The CX was rewired with a floppy guidewire, and the stent struts were dilated using a 2.5×15 mm balloon. A 3.0×34 mm DES was subsequently implanted in the CX using the TAP technique. After kiss-

ing-balloon dilatation with 3.0×12 mm and 3.5×12 mm non-compliant balloons, final POT was performed using a 5.0×8 mm non-compliant balloon (Video 1). The patient was prescribed dual antiplatelet therapy with acetylsalicylic acid and clopidogrel. Follow-up coronary angiography was planned for 6 months later. However, approximately 5 months later, the patient died following the development of hemoptysis.

Conclusion: Aorto-ostial stent protrusion can significantly complicate re-entry into the stent lumen, particularly during complex bifurcation procedures. The Side Flap technique may offer an alternative solution in selected cases where re-entry into the original stent lumen is not feasible. This case demonstrates that aorto-ostial stent protrusion in complex LMCA-LAD-CX bifurcation anatomy can be successfully managed using the Side Flap technique in combination with the TAP technique.

Keywords: Excessive ostial stent protrusion, Side Flap technique, aorto-ostial lesion.

SS-19

Conservative Management of Dunning Class III Aortocoronary Dissection Introduction and Aim

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Introduction and Aim: Iatrogenic left main coronary artery (LMCA) dissection with retrograde extension into the ascending aorta is a rare but potentially catastrophic complication of coronary angiography and percutaneous coronary intervention (PCI). According to the Dunning classification, Class III dissections (>40 mm extension into the ascending aorta) are generally considered the most severe form and have traditionally been associated with emergency surgical repair. However, recent evidence suggests that conservative management may be feasible in carefully selected hemodynamically stable patients after successful sealing of the coronary entry site. We present a rare case of Dunning Class III iatrogenic aortocoronary dissection that was successfully managed with PCI followed by conservative medical therapy.

Case Report: A 68-year-old man with a history of anterior myocardial infarction one month earlier was admitted for elective PCI of the left circumflex artery (LCx). The left coronary system was engaged with an EBU guiding catheter, and baseline angiographic images were obtained. Following predilatation of the target LCx lesion, angiography unexpectedly demonstrated an iatrogenic LMCA dissection extending to the aorto-ostial region. The left anterior descending artery (LAD) was immediately wired, and a stent was implanted from the LMCA to the LAD, completely covering the LMCA ostium and successfully sealing the entry point of the dissection. Control angiography demonstrated disappearance of contrast staining extending into the aortic root. However, a residual dissection flap remained confined between the LCx ostium and the previously implanted LCx stent. The LCx was rewired and a two-stent bifurcation strategy using the TAP (T-stenting and Small Protrusion) technique was successfully performed, resulting in complete stenting of the LMCA bifurcation without residual dissection or angiographic complications. The patient was admitted to the coronary intensive care unit for close monitoring. Transthoracic echocardiography showed a left ventricular ejection fraction of 45–50% without pericardial effusion. During follow-up the patient developed back pain, prompting computed tomography (CT) aortography, which demonstrated an extensive peri-aortic hematoma extending from the coronary ostium to the aortic arch and proximal left subclavian artery, consistent with Dunning Class III aortocoronary dissection. Cardiovascular surgery consultation recommended conservative management because the patient remained hemodynamically stable without ongoing ischemia. Strict blood pressure and heart rate control were achieved and laxative therapy was added to minimize Valsalva-related increases in intrathoracic pressure. No electrocardiographic changes,

hemodynamic deterioration, electrical instability or pericardial effusion developed during hospitalization. Follow-up CT aortography on Day 4 demonstrated regression of the peri-aortic hematoma, while repeat imaging on Day 20 confirmed complete resolution. The patient was discharged uneventfully on hospital Day 21 with outpatient follow-up.

Conclusion: This case demonstrates that even Dunning Class III iatrogenic aortocoronary dissection can be successfully managed without surgery when the coronary entry site is promptly sealed with PCI and the patient remains clinically stable. Careful patient selection, multidisciplinary decision-making, strict anti-impulse medical therapy and serial CT imaging may provide a safe alternative to surgical intervention in selected cases. This rare case contributes to the limited literature supporting conservative management of extensive iatrogenic aortocoronary dissections.

Keywords: Iatrogenic aortoostial dissection, dunning class III, Left main coronary artery, PCI, conservative management.

SS-20

Diagnostic Pitfall in Hypotension After Complex PCI: Incidental Pericardial Effusion and Femoral Access-Site Perforation

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Introduction and Aim: Acute hypotension following percutaneous coronary intervention (PCI) requires the prompt exclusion of potentially life-threatening complications, including coronary perforation, cardiac tamponade, acute stent thrombosis, and vascular access-site complications. We present a case of hemodynamic deterioration after complex PCI in which a concomitantly detected pericardial effusion created a diagnostic challenge, while the actual cause was a perforation at the external iliac artery–common femoral artery (CFA) junction that was successfully managed by an endovascular approach.

Case Report: A 58-year-old man with hypertension and established coronary artery disease was admitted for elective PCI. He had previously undergone PCI of the left anterior descending artery (LAD) and circumflex artery (Cx) for an acute coronary syndrome in December 2025. During the index procedure, a 4.0×24 mm drug-eluting stent (DES) was implanted from the left main coronary artery extending into the LAD. A 3.5×18 mm DES was implanted in the proximal Cx, and overlapping 3.0×35 mm and 3.5×43 mm DESs were deployed from the distal right coronary artery to the ostium. Following the procedure, the patient was transferred to the coronary intensive care unit for monitoring. After removal of the right femoral arterial sheath, the patient developed tachycardia and hypotension. Bedside echocardiography demonstrated a 1-cm pericardial effusion. Given the recent complex PCI, coronary perforation with hemopericardium was initially considered the leading diagnosis, and the patient was urgently transferred back to the catheterization laboratory. However, serial blood gas analyses also demonstrated a progressive decline in hemoglobin levels, raising concern for ongoing hemorrhage. Repeat coronary angiography via the left femoral artery demonstrated patent coronary stents without evidence of coronary perforation. Subsequently, the right iliofemoral arterial system was assessed using a crossover approach from the left femoral artery. Digital subtraction angiography revealed marked active contrast extravasation consistent with arterial perforation at the external iliac artery–CFA junction. A 10×37 mm BeGraft covered stent was implanted across the perforation site. Final angiography demonstrated complete cessation of contrast extravasation with preserved distal arterial flow. Following the intervention, the patient's blood pressure and heart rate normalized, and hemoglobin levels stabilized. Serial echocardiographic examinations showed no significant progression of the pericardial effusion, confirming that it was not responsible for the hemodynamic deterioration.

Conclusion: The detection of pericardial effusion in a patient who develops acute hypotension after complex PCI may readily direct diagnostic attention