

tion was observed distal to the stent. The left circumflex (LCX) artery was dominant and showed widespread coronary artery disease. Notably, no significant early restenosis was observed in the LAD segment previously treated with the DCB. The thrombosed segment in the RCA was crossed with a guidewire. Sequential predilations were performed at high pressures reaching 20–26 atm using 2.5×12 mm, 2.75×20 mm, 3.0×12 mm, 4.0×12 mm, and 4.0×6 mm NC balloons. Following antithrombotic treatment, a 3.5×16 mm DES was implanted. Finally, successful angiographic patency was achieved after post-dilatation with a 4.0×6 mm NC balloon at 26 atm pressure. The most striking finding in this case is the thrombosis of the newly implanted RCA stent within just one week, clinically presenting as an inferior myocardial infarction. Stent thrombosis is a multifactorial complication. Mechanical factors such as under-expansion, malapposition, residual dissection, and complex coronary anatomy can play a major role, alongside the disruption of antiplatelet therapy. The patient experiencing severe nausea and vomiting prior to the myocardial infarction suggests that oral antiplatelet therapy compliance or gastrointestinal absorption may have been impaired. Failure to achieve adequate platelet inhibition, particularly in the early period post-stent implantation, poses a significant risk for stent thrombosis.

Conclusion: The second notable feature of this case is that the LAD segment, where a different revascularization strategy was applied in the same patient, remained patent in the early period. One of the major advantages of DCB therapy is the delivery of the antiproliferative drug to the vessel wall without leaving a permanent metal implant behind. The absence of early significant restenosis in the DCB-treated segment makes this case compelling in terms of early angiographic outcomes of DCB therapy versus stent thrombosis.

Keywords: DCB, stent thrombosis, nausea.

SS-11

A Challenging Pair: Management of an Ostial Lesion and Spontaneous Atherosclerotic Coronary Artery Dissection

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Introduction and Aim: Unlike spontaneous coronary artery dissection, coronary artery dissections developing on the background of atherosclerotic coronary artery disease are associated with plaque burden and structural abnormalities of the vessel wall. Ostial coronary lesions also represent a technically challenging subgroup in percutaneous coronary interventions (PCI) due to their anatomically critical location, involvement of the vascular orifice and proximal segment, requirement for precise stent deployment, and difficulty in achieving optimal lesion coverage. Herein, we present the management of a case presenting with both an ostial lesion and an atherosclerotic coronary artery dissection.

Case Report: A 56-year-old male patient presented to the emergency department complaining of typical chest pain. Initial electrocardiogram (ECG) revealed no ischemic changes, and cardiac troponin levels were negative. The patient underwent coronary angiography (CAG) with a preliminary diagnosis of unstable angina pectoris. CAG demonstrated non-critical plaques in the left anterior descending artery (LAD), an ostial 70–80% stenosis in the first diagonal branch (D1) (Medina 0-0-1 lesion), followed immediately by a coronary dissection line approximately 20 mm in length. Since the patient was hemodynamically stable, the lesion was an ostial diagonal stenosis, and distal TIMI 3 flow was preserved, conservative medical management was decided for both the coronary dissection and the ostial lesion. A follow-up CAG was scheduled to evaluate complete healing of the coronary dissection. During a two-week period of medical follow-up, the patient remained symptomatic, and a follow-up CAG was performed. Angiography showed no regression in

the dissection line and persistent stenosis. Due to persistent symptoms and an unhealed dissection, inverted provisional PCI from the LAD to D1 was planned. Percutaneous transluminal coronary angioplasty was initially performed from the LAD to D1 using a 2.75×25 mm semi-compliant balloon, followed by the implantation of a 3.0×32 mm drug-eluting stent (DES). Finally, the proximal optimization technique was performed at the proximal segment of the stent using a 4.0×8 mm non-compliant balloon. Post-procedural full patency (TIMI 3 flow) was successfully achieved. The patient was discharged asymptotically with optimized medical therapy.

Conclusion: In atherosclerotic coronary artery dissections, particularly in cases accompanied by ostial lesions, treatment strategy should be individualized by considering both the clinical status and anatomical features. Selected patients who are stable with preserved distal flow and no persistent ischemia or symptoms may be followed conservatively; however, revascularization should be considered in the presence of ongoing ischemia, refractory symptoms, or high-risk anatomy. While intravascular ultrasound (IVUS) or optical coherence tomography (OCT) provides significant contributions to determining the treatment strategy by evaluating the extent of dissection and plaque morphology, the intervention must be meticulously planned due to the technical challenges associated with ostial lesions.

Keywords: Coronary artery dissection, conservative management, delayed stenting, coronary angiography, follow-up.

SS-12

Staged Percutaneous Revascularization of High-Risk Multivessel Coronary Artery Disease Involving Chronic Total Occlusion and a Complex Bifurcation Lesion: A Case Report

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Introduction and Aim: Although coronary artery bypass grafting (CABG) is the guideline-endorsed treatment for multivessel coronary artery disease in the presence of chronic total occlusion (CTO), staged percutaneous coronary intervention (PCI) represents an effective alternative in patients who decline surgery or are unsuitable surgical candidates. In this case, we present successful percutaneous revascularization completed in three sessions in a patient with extensive, high SYNTAX score (39) coronary artery disease involving the left main coronary artery (LMCA), left anterior descending artery (LAD), circumflex artery (Cx), and right coronary artery (RCA), who declined CABG.

Case Report: A 68-year-old male patient's myocardial perfusion scintigraphy (MPS) performed prior to angiography revealed a fixed defect (scar) in the apex, apical anterior wall, inferior wall apical-mid-basal segments, and mid-basal inferoseptal wall, with no significant findings in favor of ischemia. Coronary angiography demonstrated 70–80% stenosis in the distal LMCA, 100% occlusion (CTO) of the LAD, 70–80% stenosis in the first diagonal branch (D1), 80–90% stenosis in the Cx, 80–90% stenosis in the third obtuse marginal branch (OM3), and 80–90% stenosis in the RCA. As the patient, for whom CABG was recommended, declined surgery, staged PCI was planned. In the first session, the RCA ostium was engaged, and the critical lesion was crossed with a floppy guidewire; near-complete patency was achieved following predilation with a 3.5×15 mm non-compliant (NC) balloon and implantation of a 4×20 mm drug-eluting stent (DES). In the second session, as the Cx lesion could not be crossed with a floppy wire, it was crossed with a Fielder XT-R wire under microcatheter support; following exchange for an extra-support wire and subsequent balloon predilations, a 2.75×38 mm DES was implanted, and post-dilation was performed with a 2.75×23 mm NC balloon. In the patient, who was considered at high surgical risk, the LAD CTO segment was crossed with various wires under microcatheter support during the third session, and the lesion was assessed with intravascular ultrasound (IVUS) following predilation. A 2.25×20 mm and a

2.75×24 mm DES were implanted in the LAD, and bifurcation stenting from D1 into the LAD was performed with a 2.75×24 mm DES using the mini-crush technique, followed by kissing balloon application. After post-dilation with NC balloons, mini-crush stenting was performed with a 3.5×12 mm DES in the LAD and a 3.5×20 mm DES from the LMCA into the Cx; final kissing balloon inflation was completed with 3.5×10 mm NC balloons, and the LMCA was post-dilated with a 4.5×8 mm NC balloon, achieving complete patency. No complications were observed. Echocardiography revealed an ejection fraction (EF) of 30–35%, dilated left ventricular (LV) dimensions, LV systolic dysfunction, and advanced hypokinesia in the basal-mid and apical segments of the inferior wall, the

apicoseptal segment, and the apical segment of the anterior wall. Mild mitral regurgitation, trace aortic regurgitation, and mild tricuspid regurgitation were noted, and right heart structures were normal. The patient was discharged on trimetazidine, pantoprazole, doxazosin, metoprolol, acetylsalicylic acid, prasugrel, spironolactone, ramipril, and dapagliflozin.

Conclusion: In patients with high-risk multivessel coronary artery disease and CTO who decline surgery, IVUS-guided staged PCI performed with appropriate bifurcation technique may constitute a safe and effective revascularization strategy, resulting in complete patency without complications.



Figure 1.

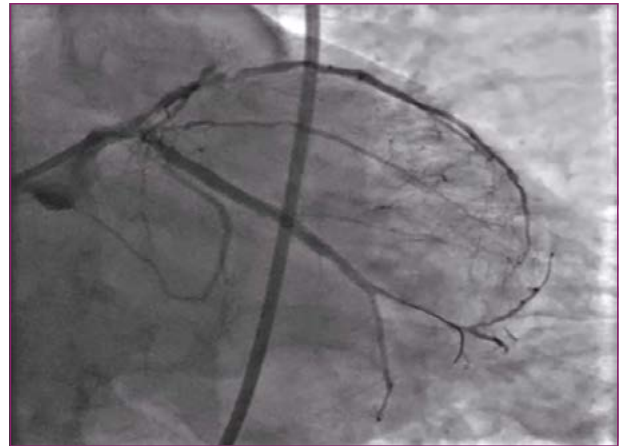


Figure 4.



Figure 2.

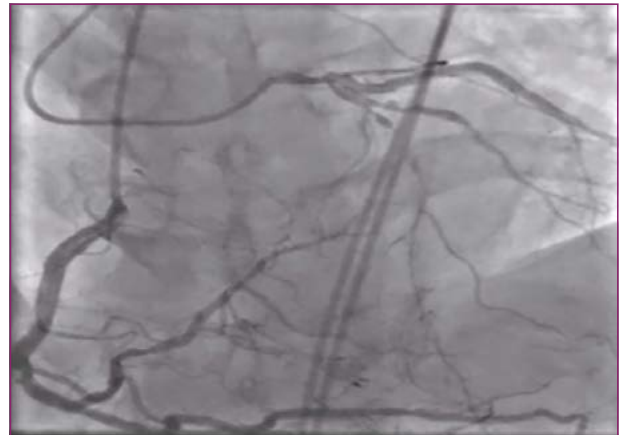


Figure 5.

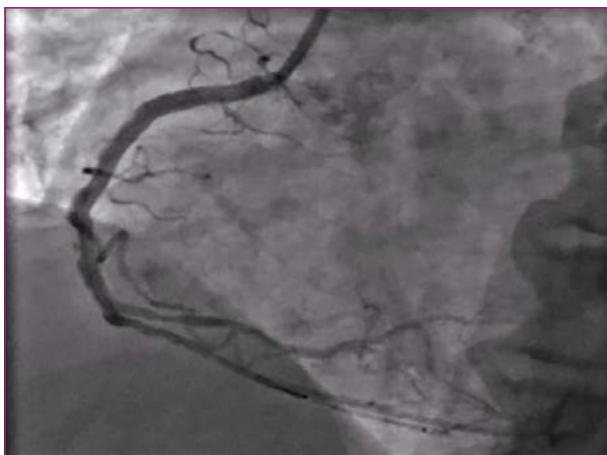


Figure 3.

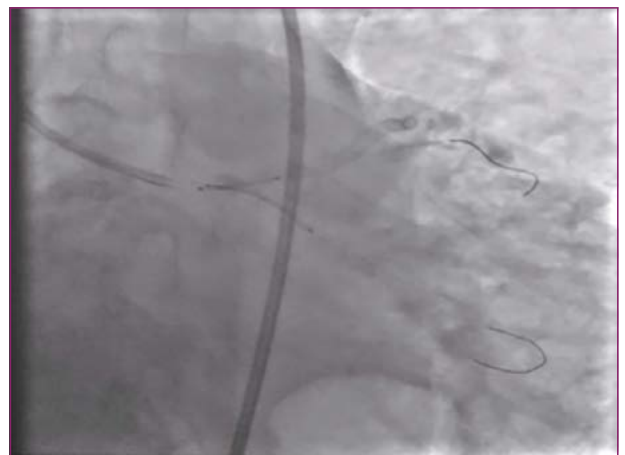


Figure 6.

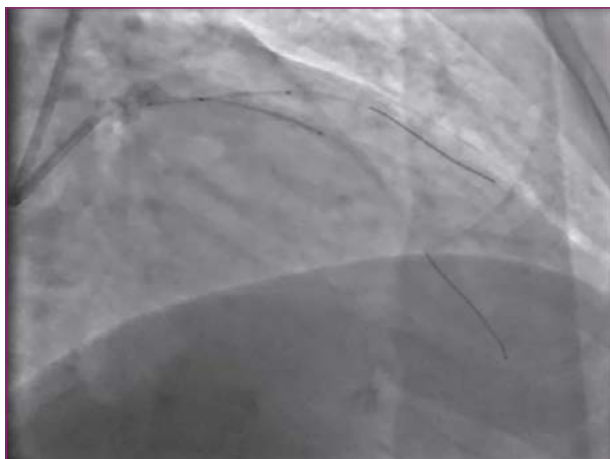


Figure 7.

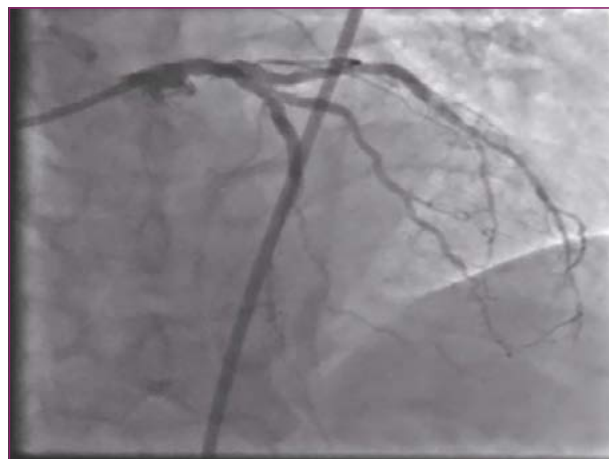


Figure 9.



Figure 8.



Figure 10.

SS-13

Association of Final Kissing Balloon Inflation with Major Adverse Cardiac Events in Provisional Crossover Stenting of Distal Left Main Coronary Bifurcation Lesions: A Single-Centre Retrospective Analysis

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Introduction and Aim: In a provisional single-stent strategy for distal left main (LM) coronary bifurcation lesions, final kissing balloon (FKB) inflation may be performed when stenosis develops at the ostium of the unstented side branch after crossover stenting of the main vessel; whether FKB should be routine or reserved for this situation remains debated. In this study, we compared the characteristics and major adverse cardiac event (MACE) rates of patients who did and did not undergo FKB in a real-world provisional LM bifurcation crossover cohort.

Methods: A total of 150 consecutive patients treated with provisional single-stent LM bifurcation crossover at a single centre were reviewed retrospectively; cases in which a stent was implanted in the side branch were excluded. According to the stent target, 126 cases were classified as LM-left anterior descending artery (LM-LAD) and 24 as LM-

circumflex (LM-Cx) crossover; the proximal optimisation technique (POT) was performed in 98.0% of cases. FKB was performed in cases that developed more than 70% stenosis at the side-branch ostium after crossover (n=17; 11.3%); the remaining 133 cases formed the control group. The primary outcome was MACE (a composite of all-cause death, myocardial infarction and target lesion revascularisation). Group comparisons were made with Fisher's exact test for categorical variables and the Mann-Whitney U test for continuous variables; associations with rare events were modelled with Firth penalised logistic regression. No correction for multiple comparisons was applied, and p values (p<0.05) are descriptive.

Results: In the overall cohort, the median age was 62.5 years, 73.3% of patients were male and 52.0% presented with acute coronary syndrome (ACS); intravascular ultrasound (IVUS) use was limited (7.3%). The FKB and no-FKB groups did not differ significantly in baseline characteristics; the only statistically significant difference was in ejection fraction (median 60% vs 51.2%; p=0.030), although both medians were within normal limits (>50%). Baseline side-branch stenosis was below 50% in both groups and the groups were comparable. MACE occurred in 14.7% of patients (22/150). For the primary outcome, the MACE rate did not differ between the two groups (17.6% vs 14.3%; odds ratio (OR) 1.29; 95% confidence interval (CI) 0.34–4.90; risk difference +3.4%; 95% CI –15.7% to +22.4%; p=0.72). No significant differences were found for in-hospital mortality (0% vs 7.5%), all-cause mortality (11.8% vs 11.3%), myocardial infarction (0% vs 3.0%) or target lesion revascularisation (6.2% vs 1.5%; p=0.60, 1.00, 1.00 and 0.29, respectively). In the Firth models, low haemoglobin (OR 1.49