

C-16 Excimer laser coronary angioplasty followed by drug-coated balloon angioplasty for a
distal right coronary artery bifurcation lesion

Daisuke Isomatsu, Ryoji Koshida, Yoshiyuki Inomata, Fumika Haga, Shohei Ichimura,
Fumiya Anzai, Tomoki Kokubun, Naohiko Watanabe, Mikihiro Kijima
Department of Cardiology, Hoshi General Hospital, Koriyama, Japan

A 55-year-old man presented chest pain at rest and was diagnosed with unstable angina. Coronary angiography (CAG) showed 75% stenosis in #2, 99% stenosis with delayed flow in #3, and 90% stenosis in both the #4AV and #4PD branches. Intravascular ultrasound demonstrated attenuated plaque extending from #3 distal to the distal bifurcation with thrombus. Because distal embolization and plaque shift at the bifurcation were anticipated, lesion modification was performed using a 0.9 mm excimer laser coronary angioplasty (ELCA) catheter. Pullback ablation was performed from the #4PD branch at 45 mJ/mm²/25 Hz, 60 mJ/mm²/60 Hz, and 80 mJ/mm²/80 Hz, and from the #4AV branch at 50 mJ/mm²/50 Hz, and 80 mJ/mm²/80 Hz, with three passes at each setting. Drug-coated balloon (DCB) angioplasty was performed using a SeQuent Please NEO 2.25 x 25 mm from #3 to #4PD and an Agent 2.0 x 15 mm from #3 to #4AV. Final CAG demonstrated satisfactory lumen expansion without flow-limiting dissection or distal embolization. Between December 25, 2024, and March 31, 2026, ELCA was performed in 76 consecutive lesions at our hospital. The final treatment was DCB angioplasty in 46 lesions and drug-eluting stent implantation in 28 lesions. Complications were limited to two access-site hematomas, with no perforation or slow/no-flow. ELCA followed by DCB angioplasty may be a useful treatment option for diffuse distal right coronary artery bifurcation lesions involving small vessels.