

Supplementary material

Kalogeropoulos AS, Karamasis GV, Pavlidis AN, et al. Combined shockwave intravascular lithotripsy and ultrahigh-pressure balloon dilatation for the treatment of stent underexpansion secondary to severe coronary calcification. Kardiol Pol. 2021; 79: 205-206. doi:10.33963/KP.15753

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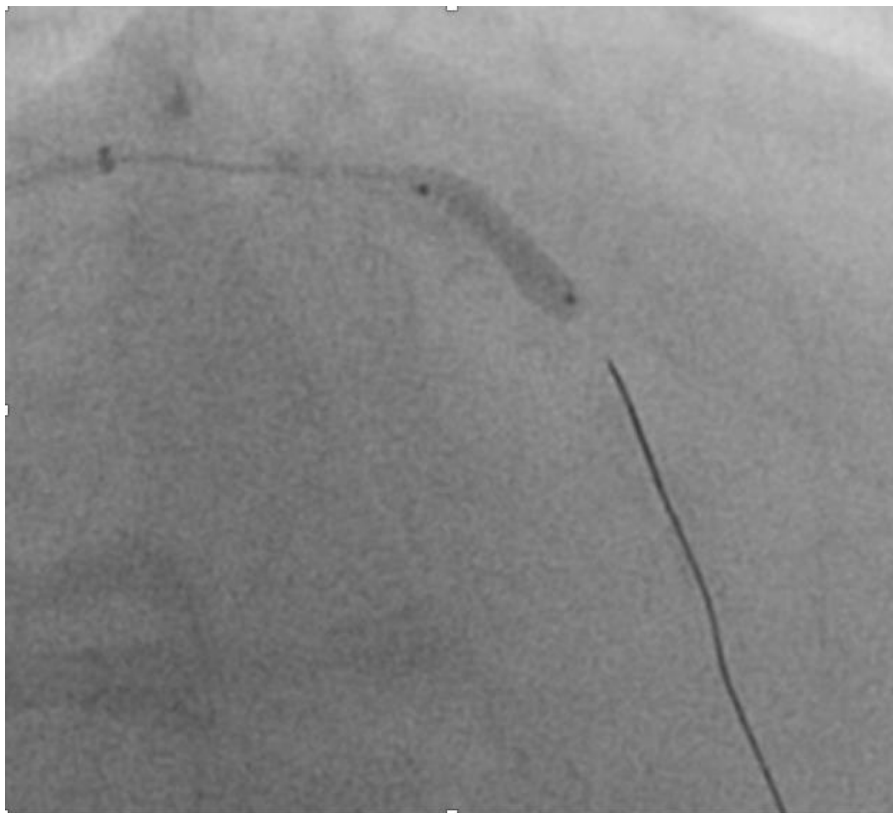


Figure S1.

Initial predilatation of the underexpanded segment of the stent with a 2.75 x 12 mm NCB at 20 atmospheres with inadequate balloon expansion.

NCB: Non-compliant balloon

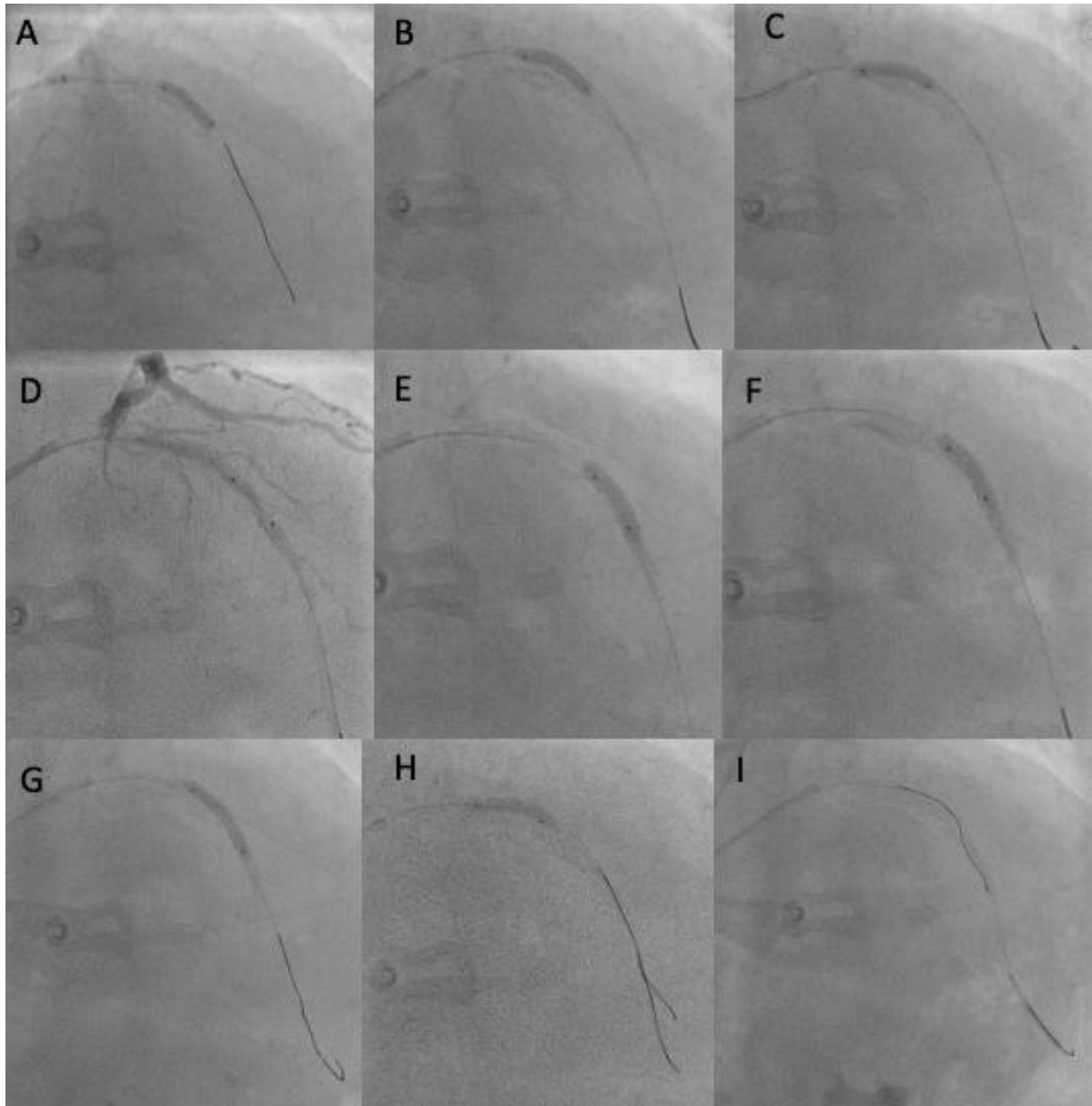


Figure S2A-C: PCI of the underexpanded segments of the previously implanted stents; IVL with 3.0 x 12 mm shockwave balloon inflated at 4-6 atmospheres with delivery of 8 cycles – 10 seconds each – of sonic-pressure waves; **Figure S2D:** Ultra-high pressure OPN balloon angiographic position at the level of stent waste; **Figure S2E-F:** Inflation of the OPN at 40 atmospheres; **Figure S2G-I:** Final angioplasty with paclitaxel drug eluting balloons 3.0 x 20 mm and 3.0 x 15 mm (in-stent) and 2.0 x 30 mm (distal lesion).

PCI: Percutaneous coronary intervention; NCB: Non-compliant balloon; IVL: Intravascular lithotripsy; IVUS: Intravascular ultra-sound; MSA: Minimum stent area

Video S1

Initial coronary angiography showing angiographically visual focal stent underexpansion at the mid segment of the vessel

Video S2

Intravascular ultrasound (IVUS) pullback before percutaneous coronary intervention demonstrating multiple areas of stent underexpansion and malapposition with superimposed significant nodular and circumferential calcification.

Video S3

Coronary angiography after intravascular lithotripsy with a 3.0x12 mm balloon showed persistent focal stent underexpansion at the mid segment of the vessel.

Video S4

Final intravascular ultrasound (IVUS) pullback after percutaneous coronary intervention with intravascular lithotripsy with 3.0x12 mm balloon and ultra-high-pressure OPN 3.0 x 10 mm balloon. The IVUS shows calcium fragmentation at the inflow of the proximal stent and significant improvement of the overall stent expansion and further elimination of strut malapposition.

Video S5

Final coronary angiography