

Percutaneous coronary intervention to resolve acute occlusion complicated by dissection and vascular spasm

Konstantin I Zavialov¹

Levon M. Arzumanyan¹, Marat A. Karimov¹

¹ Department of X-ray Surgical Methods of Diagnostic and Treatment, Bashkir State Medical University Clinic,
Russian Federation

Clinical Case: A 71-year-old patient with long-standing hypertension presented with a 6-month history of progressive exertional angina (CCS Class III) and dyspnea. Coronary angiography revealed critical stenosis of the LAD (95%) and first diagonal branch (95%), mild LCx disease (40%), and severe, catheter-induced or spontaneous RCA spasm resulting in transient total occlusion. Following spasm resolution, an extensive spiral dissection (Type D-F) was identified from segment 1 to 3 of the RCA.

Intervention: The RCA was successfully engaged, and the true lumen was crossed distally using Whisper ES and Asahi Gaia Third guidewires. After sequential pre-dilatation with 2.0mm and 3.0mm non-compliant balloons at 14 atm, the dissected segments were stabilized via overlapping implantation of four drug-eluting stents (Yukon Chrom PC and Cid Cre8, diameters 3.0 to 4.0 mm).

Key Takeaways: 1. Maintain realistic self-assessment of technical competence in high-risk scenarios. 2. Ensure immediate cath-lab availability of a comprehensive inventory of stents and bail-out devices prior to wiring. 3. Utilize multi-angle orthogonal projections to accurately delineate complex anatomy and dissection entry tears