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A 66-year-old man with diabetes mellitus, dyslipidemia, chronic kidney disease (eGFR 55.8 mL/min/1.73 m²), and IgG4-related disease on prednisolone 5 mg/day presented with chest pain of one day's duration. Electrocardiography showed ST-segment elevation in V1-V4 and echocardiography anteroseptal hypokinesis, with elevated cardiac biomarkers. Emergency angiography revealed 75% stenosis of the left anterior descending artery at segment #6 with total occlusion at #7 and TIMI grade 0 flow. Segment #7 was identified as the culprit lesion. Percutaneous coronary intervention was performed via right transradial access with a 6Fr guiding catheter. Guidewire crossing alone did not restore reperfusion. Intravascular ultrasound (IVUS) demonstrated floating thrombus at #7. Aspiration with a 6Fr Rebirth Pro II catheter retrieved white thrombus and restored blood flow through #7; the distal left anterior descending artery (#8) and the second diagonal branch (D2) remained without flow, and IVUS confirmed both vessels, approximately 1.5 mm in diameter, to be thrombus-filled throughout the segments imaged. Further aspiration retrieved red thrombus, although a filling defect persisted. The aspiration catheter could be advanced into the affected distal segments with mild resistance, and repeated passes at this position yielded no additional thrombus. Montepase 200,000 units was administered through a LUMINE side-hole microcatheter positioned adjacent to the thrombus. Aspiration repeated at the identical catheter position retrieved a greater volume of red thrombus than any preceding pass. IVUS demonstrated a markedly reduced but persistent burden, and a second dose of montepase 200,000 units was administered; no further thrombus was retrieved and the filling defect resolved. D2, never directly aspirated, opacified to its distal end. Drug-eluting stent implantation to the proximal lesion followed, with final TIMI grade 3 flow and 0% residual stenosis without complications. Histopathology of the aspirated material showed a fresh thrombus composed predominantly of erythrocytes and platelets with mild inflammatory cell infiltration. Creatine kinase peaked at 1122 U/L after the procedure, left ventricular ejection fraction was 49%, and the patient was discharged on day 11. Discussion Aspiration thrombectomy is no longer recommended for routine use and is reserved for selected cases with high thrombus burden. In the present case, IVUS confirmed persistent distal thrombus after repeated aspiration had ceased to retrieve additional thrombus, and this finding prompted adjunctive local intracoronary thrombolysis. Adjunctive intracoronary thrombolysis during primary PCI has been associated with improved ST-segment resolution without excess bleeding [1], and its combination with aspiration proposed as a strategy for microvascular obstruction [2]. That the largest single aspirate was obtained immediately after montepase raises the possibility that partial in situ lysis reduced thrombus cohesion and wall adherence, rendering previously unretrievable material aspirable. This would be pharmacologically plausible, as plasminogen activators degrade the cross-linked fibrin matrix that maintains thrombus integrity, and is consistent with the observation that thrombi retrieved after thrombolysis in the cerebrovascular literature are significantly smaller [3]. Restoration of flow in D2, which was never directly aspirated, is consistent with an independent contribution of thrombolysis. Serial IVUS assessment guided both escalation and termination of thrombus reduction, a role that angiography alone could not have served. In conclusion, complete reperfusion of a massive thrombus burden was achieved by alternating aspiration thrombectomy with local intracoronary thrombolysis under serial IVUS assessment. The two modalities appeared complementary. References 1. Alyamani M, et al. *Can J Cardiol.* 2021;37:339-346. doi:10.1016/j.cjca.2020.03.0342. Yan D, et al. *Front Cardiovasc Med.* 2025;12:1516054. doi:10.3389/fcvm.2025.15160543. Rossi R, et al. *J Neurol.* 2022;269:1913-1920. doi:10.1007/s00415-021-10758-5