

A Case of vulnerable plaque revealed by coronary CT already ruptured before elective PCI. -Prediction of slow flow phenomenon-

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Case: Fifty year-old male patient with poorly-controlled diabetes mellitus admitted with anterior AMI. Emergency PCI was performed for the mid LAD. Residual mid RCA moderate stenosis was pointed out and coronary CT was performed. It revealed positive remodeling of the artery with low density lipid rich plaque. The CT number of the plaque was 7.25HU, of which included -2HU very low attenuated plaque. Slab MIP color map also showed the pattern of lipid rich plaque, which indicated the risk of slow flow phenomenon during PCI. He was prescribed full medication including antiplatelets and 5mg of rosvastatine for one month with achievement of good LDL-cholesterol control (113mg/dl to 73mg/dl), and the elective PCI for the mid RCA was performed. The pre-CAG revealed ulcer formation at the lesion, which suspected the plaque was already ruptured. IVUS revealed ruptured lipid pool with residual high-quantity of attenuated plaque. We decided to use Filtrap® and Thrombuster III® to deal with predicted slow flow. Stent implantation and post-dilatation was performed with transient slow flow and bradycardia which was successfully recovered with intracoronary nicorandil and ISDN injection, and intravenous atropine and inotropic agent use. We did not need IABP. The post-CAG showed TIMI III flow. CONCLUSION: In this case, medical treatment was not effective enough to prevent plaque rupture, but prevented ACS event even if the lipid pool ruptured. Prediction of slow flow is inevitable to perform safe and successful PCI.