

1097 ST-elevation myocardial infarction with calcified nodule at the right coronary artery ostium treated using stent-less strategy

An 85 year-old female complaining of severe chest pain with coronary risk factors of hypertension, diabetes mellitus, and dyslipidemia was transferred to our hospital. Electrocardiogram showed ST-segment elevation in leads II, III, and aVF. Emergent coronary angiogram showed 99% stenosis with haziness at the ostium of the right coronary artery (RCA). Intravascular ultrasound (IVUS) showed nodular calcification on the RCA ostium. Although, the patient presented with acute coronary syndrome, we thought that percutaneous transluminal coronary rotational atherectomy (PTCRA) was necessary and that stenting should be deferred due to the high incidence of restenosis in this particular lesion.

We performed PTCRA using 1.75 mm and 2.0 mm burrs with an extra support wire. After the PTCRA, IVUS revealed a reduction of the calcified plaque. After balloon dilatation using a cutting balloon (Flextome, 3.5×10 mm), IVUS showed sufficient minimal lumen area. Ten minutes after ballooning, the angiogram did not show any change; therefore, we dilated the drug-eluting balloon (SeQuent Please, 3.0×15 mm) in the lesion. The final angiogram showed TIMI grade 3 flow, and thus, the procedure was completed without stent implantation. A follow-up coronary angiogram performed 6 months after the procedure showed 25% stenosis at the ostium of the RCA. The fractional flow reserve value was 0.89, and thus, additional treatments were not necessary. Altogether, based on the findings of this case we conclude that a stent-less strategy with PTCRA and a drug-eluting balloon is useful for the treatment of ACS with calcified nodules at the RCA ostium.