

Rupture and spontaneous sealing of a coronary aneurysm after drug eluting stenting

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The coronary artery aneurysm (CAA) is relatively rare, but has been diagnosed with increasing incidence by using coronary angiography. We report on a rare case about rupture and spontaneous sealing of coronary aneurysm with atherosclerotic stenotic lesion after drug eluting stenting (DES). A 78-year-old man visited to the cardiology outpatient department and his chief complaint was exertional chest pain. His risk factor for coronary artery disease was hypertension. His echocardiogram showed mild diastolic dysfunction and no regional wall motion abnormalities. Multidetector computed tomography (MDCT) coronary angiography could detect 2.5 mm diameter sized saccular coronary aneurysm and tubular stenosis (60~70%) on proximal right coronary artery (RCA). Antiplatelets were loaded with clopidogrel (600 mg) and aspirin (300 mg) the day before coronary angiography. We used a unfractionated heparin as a anticoagulants. Coronary angiography revealed saccular small coronary artery aneurysm with diffuse, tubular stenosis in the proximal portion of RCA, shown as MDCT coronary angiography. We demonstrated a luminal stenosis with fibrous fatty plaque and 2.5×2.5 mm sized small aneurysms in proximal RCA using intravascular ultrasonography (IVUS). He underwent stenting on the proximal RCA. And then coronary aneurysm was not seen and one side branch of proximal RCA was jailed without luminal defect. After adjunctive ballooning, acute stent thrombosis was occurred. IVUS revealed the thrombus in the intrastent lumen but aneurysm wasn't seen. Thereafter same size stent was deployed and completely overlapped the previous stent. Angiography was performed immediately after overlapping stent and confirmed that presence of intraluminal filling defect suggestive acute stent thrombosis. From this case, we realize that deployment of drug eluting stent at the atherosclerotic coronary artery with aneurysm requires meticulous procedure because CAA has potentially rupture risk.

Long term angiographic behavior of zotarolimus-eluting stent; insight from serial angiographic follow-up

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Background: Though, late luminal loss (LL) in short term angiographic follow-up (FU) was inferior to first generation drug-eluting stent (DES), angiographic evidences which explain attractive long term efficacy of zotarolimus-eluting stent (ZES) are still scarce. It is also uncertain that whether ZES would show late catch-up phenomenon in long term angiographic FU. **Methods:** From April 2006 to March 2008, a total 82 patients who had received Endeavor ZES implantation for de novo coronary lesions were routinely recommended 2 angiographic FUs, first at 6 to 9 months and second at 18 to 24 months post-PCI. Among these patients, we excluded 19 patients due to target lesion revascularization at first follow-up. Angiographic outcome of ZES, such as successive changes of LL, was assessed with quantitative coronary angiography (QCA), and we compared this result with our historical data on first generation DESs. **Results:** Our data from 92 lesions of 63 patients showed that in-stent LL up to first angiographic FU was 0.50 ± 0.36 mm, and additive increment of LL up to second FU (delayed LL) was 0.17 ± 0.38 mm. This angiographic behavior of ZES is somewhat distinct from that of another '-limus' DES, sirolimus-eluting stent (SES), which showed more prominent delayed late loss during the time from first to second angiographic FU. We also found that stent type itself was key determinant for delayed LL among various clinical and angiographic factors. **Conclusion:** Treatment of de novo lesions with Endeavor ZES exhibited considerable amount of additive LL beyond conventional time point of 6 months angiographic FU. But this was not translated into significant luminal deterioration up to about 18 months, and delayed LL in ZES did not exceed LL up to first FU. Our data suggests that ZES has different timeline of angiographic LL compared to SES, and different drug elution kinetics might be the cause of this distinct angiographic behavior.