

Angioscopically-detected Subclinical Stent Thrombosis in a Patient with Cytochrome P450 2C19 Loss-of-function Polymorphism

¹Higashi-osaka City General Hospital

Yoshizumi Takei¹, Minoru Ichikawa¹, Tsuyoshi Nakata¹, Takashi Takagi¹, Kenji Kawai¹, Kenji Fukuda¹, Masahiro Yamagami¹, Yoshiyuki Kijima¹

Genetic polymorphism of cytochrome P450 (CYP) 2C19 determines the clopidogrel action on platelet inhibition. A 77-year-old female with angina pectoris underwent percutaneous coronary intervention (PCI) on significant stenosis of her left anterior descending artery in 2011. Zotarolimus-eluting stent, Endeavor of 3.0*15mm, was successfully implanted, followed by dual antiplatelet therapy, i.e. 100mg aspirin plus 75mg clopidogrel once daily. Follow-up coronary angiography at one year after the PCI revealed in-stent restenosis. Coronary angioscopy found: 1) subclinical stent thrombosis and 2) that stent struts were fully covered with yellow neointima (grade3). VerifyNow P2Y12 assay was 358PRU, being compatible with her CYP2C19 polymorphism, *3*3 homozygote of loss-of-function alleles. Stent thrombosis after drug-eluting stent implantation might be caused not only by incomplete endothelial coverage of stent struts but also by patients' genetic background and by in-stent neoatherosclerosis.