View metadata, citation and similar papers at core.ac.uk

brought to you by CORE

provided by Elsevier - Publisher Connector

ACC.15
TCT@ACC-i2 | innovation in intervention

A1916
JACC March 17, 2015
Volume 65, Issue 10S

IMPACT OF CYTOCHROME P450 2C19 LOSS-OF-FUNCTION POLYMORPHISM ON INTRA-STENT THROMBI AFTER EVEROLIMUS-ELUTING STENT

Poster Contributions
Poster Hall B1
Monday, March 16, 2015, 9:45 a.m.-10:30 a.m.

Session Title: Structural
Abstract Category: 36. TCT@ACC-i2: IVUS and Intravascular Physiology
Presentation Number: 2104-288

Authors: *Natsuko Tahara, Toshiro Shinke, Hiromasa Otake, Tomofumi Takaya, Tsuyoshi Osue, Akihide Konishi, Hiroto Kinutani, Masaru Kuroda, Hachidai Takahashi, Daisuke Terashita, Kenzo Uzu, Daiji Kashiwagi, Koji Kuroda, Yuto Shinkura, Yoshinori Nagasawa, Ken-ichi Hirata, Kobe University Graduate School of Medicine, Kobe, Japan*

Background: We have reported cytochrome P450 (CYP) 2C19 loss-of-function polymorphism was associated with reduced responsiveness to clopidogrel and poor clinical outcome after first-generation drug-eluting stent (DES) implantation. However, its contribution to lesion outcome after everolimus-eluting stent (EES) implantation remains unclear.

Methods: A total of 124 patients (185 lesions) who underwent EES implantation and follow-up optical coherence tomography (OCT) at 8 months were enrolled. Patients were divided into extensive metabolizers (EM), intermediate metabolizers (IM) and poor metabolizers (PM) by CYP2C19 polymorphism and responsiveness to clopidogrel was assessed by measuring VerifyNow platelet reactivity unit (PRU) at 8 months. OCT findings and one-year target lesion revascularization (TLR) were compared among EM, IM and PM.

Results: PRU significantly increased across the patients with EM, IM and PM (EM 183.4±63.1 vs. IM 215.5±64.9 vs. PM 261.7±82.8, p=0.001). The frequency of intra-stent thrombus showed a pattern to increase across the patients with EM, IM and PM (EM 8% vs. IM 12% vs. PM 19%, p=0.31). The incidence of TLR, however, was not different among the groups in this small cohort (EM 6.5%, IM 2.1% and PM 7.7%, P=0.287).

Conclusion: Although significant difference in platelet reactivity and stepwise pattern of intra-stent thrombus, the impact of CYP2C19 polymorphism on lesion outcome is not obvious in patient treated with EES.