



ACC.15

TCT@ACC-12 | innovation in intervention

A1602  
JACC March 17, 2015  
Volume 65, Issue 10S

## Stable Ischemic Heart Disease

## THE RELEVANCE TO CLINICAL OUTCOMES AND RISK FACTORS OF PERI-CONTRAST STAINING (PSS) AFTER SECOND GENERATION DES DEPLOYMENT

Poster Contributions

Poster Hall B1

Saturday, March 14, 2015, 10:00 a.m.-10:45 a.m.

Session Title: Risk Markers, CAD, Prognosis

Abstract Category: 26. Stable Ischemic Heart Disease: Clinical

Presentation Number: 1123-369

Authors: *Takahiro Tokuda, Toshiya Muramatsu, Reiko Tsukahara, Yoshiaki Ito, Hiroshi Ishimori, Keisuke Hirano, Masatsugu Nakano, Masahiro Yamawaki, Motoharu Araki, Norihiro Kobayashi, Hideyuki Takimura, Yasunari Sakamoto, Masakazu Tsutsumi, Hiroya Takafuji, Takuro Takama, Saiseikai Yokohama City Eastern Hospital, Yokohama, Japan*

**Background:** Several studies showed peri-contrast staining (PSS) after sirolimus-eluting stent was associated with target-lesion revascularization (TLR) and very late stent thrombosis. However, the incidence and clinical sequela of PSS after second generation DES implantation are unclear, so we retrospectively evaluate the clinical outcomes.

**Methods:** This study consisted of de novo 2456 lesions in 1955 patients that were treated with second generation DES (zotarolimus-eluting stent: ZES, everolimus-eluting stent: EES, and biolimus-eluting stent: BES). They were evaluated by follow-up angiography within 12 months after stent implantation, from April 2009 to March 2013. We divided into PSS group and non-PSS group and compared the two groups in clinical and angiographical outcomes.

**Results:** We had obtained 2069 lesions follow-up angiography. (84.2%) The mean clinical follow up period was  $668 \pm 316$  days. Baseline clinical and angiographic characteristics were similar between the two groups. (N.S.) Late acquired PSS was observed in 18 lesions (0.73%). In these lesions, 2 lesions (0.08%) were observed in BES, 9 lesions (0.37%) were EES and 7 lesions (0.29%) were ZES. (N.S.) Stent fracture (SF), tortuosity, and hinge motion were more frequently observed in lesions with PSS than in lesions without PSS (11.1% versus 1.6%,  $p=0.03$ , 11.1% versus 1.2%,  $p=0.02$ , 11.1% versus 1.8%,  $p=0.04$ ). Cumulative incidence of TLR and MACE in the PSS group was higher than that in the non-PSS group. (38.9% versus 5.7%, and 44.4% versus 9.2%,  $p<0.0001$ ). There was no significant difference in late and very late stent thrombosis between the two groups. (N.S.) After multivariable analysis, CTO (OR: 4.18, 95% CI: 1.1 to 13.3,  $p=0.04$ ), and reference diameter ( $>2.83$ mm) (OR: 4.05, 95% CI: 1.5 to 12.3,  $p=0.007$ ) were independent predictors for PSS.

**Conclusion:** PSS after second generation DES was a rare phenomenon but appeared to be associated with subsequent TLR.