TCT-470
The Clinical Implication of Neointimal Characteristics Observed in Optical Coherence Tomography after Stent Implantation
Jung-Hee Lee¹, Jung-Sun Kim², Dong-Ho Shin³, Byeong-Keun Kim⁴, Young-Guk Ko⁵, Donghoon Choi⁶, Yungguo Jiang⁷, Myeong-Ki Hong⁸
¹Yonsei University College of Medicine, Seoul, Korea, Republic of, ²Yonsei University, Seoul, Korea, Republic of, ³Yonsei university Severance Cardiovascular Hospital, Seoul, Korea, Republic of, ⁴Severance Cardiovascular Hospital, Seoul, Korea, Republic of, ⁵Severance Cardiovascular Hospital, Yonsei University College of Medicine, Seoul, Korea, Republic of

Background: Recent studies have reported differential morphologic characteristics of neointimal tissue after stenting by optical coherence tomography (OCT). The aim of this study was to investigate the clinical implication of the characteristics of neointimal hyperplasia after stent implantation.

Methods: A total of 492 lesions in 447 patients treated with stents from the Yonsei OCT registry were divided into two groups based on the neointimal characteristics; heterogeneous group including thin-cap fibroatheroma (TCFA) (n=146 lesions in 135 pts) and non-heterogeneous group (homogenous and layered, n=346 lesions in 312 pts). The baseline clinical characteristics, angiographic features and OCT findings were compared between two groups. The major adverse cardiac events [MACEs, restenosis lesions with SF (SF group) and 42 SES restenosis lesions without SF (non SF group) were retrospectively evaluated restenosis rate during follow up after repeated implantation of DES.

Results: Baseline characteristics were similar. One-year cumulative incidence of restenosis after repeat DES implantation for SF group and non SF group which was calculated by Kaplan-Meier method were 68% and 36% (Log-rank test P<0.032), respectively (figure).

Conclusions: Restenosis lesions with SF had significantly high incidence of restenosis after repeat DES implantation.

TCT-471
Relation of Stent Thrombosis to Interruption of Dual Antiplatelet Therapy After Resolute Zotarolimus-eluting Stent Implantation
Deepak L. Bhatt¹, Sigmund Silber², Stephanie Windecker³, Sandeep Brar⁴, Minglei Liu⁴, Xiaohua Chen⁵, Ajay J. Kirtane⁶
¹VA Boston Healthcare System, Brigham and Women’s Hospital, and Harvard Medical School, Boston, USA, ²Heart Center at the Isar, Munich, Munich, Germany, ³Bern University Hospital, Bern, Switzerland, ⁴Medtronic, Inc., Santa Rosa, CA, ⁵Harvard Clinical Research Institute, Boston, MA, ⁶NewYork-Presbyterian Hospital /Columbia University Medical Center, New York, NY

Background: Dual antiplatelet therapy (DAPT) is utilized for varying durations following drug-eluting stent (DES) implantation in patients with stable coronary artery disease, largely based on concerns of stent thrombosis (ST). A prior study of 5371 patients undergoing Resolute™ zotarolimus-eluting stent (R-ZES) implantation found that the greatest risk of ST occurred in the first month after the procedure if DAPT was interrupted. We sought to extend this analysis.

Methods: A patient-level analysis of all available Resolute™ zotarolimus-eluting stent (R-ZES) studies (n=8) was conducted. Rates of ARC definite/probable ST at one year were examined as a function of whether DAPT was interrupted prior to ST for more than 1 day within the first month or between 1 and 12 months after stent placement.

Results: There were a total of 7131 patients eligible for the DAPT analysis; 1315 patients (221 (17%) had the DAPT interruption in the first month or between 1 and 12 months after stent placement.

Conclusions: Restenosis lesions with SF had significantly high incidence of restenosis after repeat DES implantation.

TCT-472
Difference In Outcomes After Repeat Percutaneous Coronary Intervention For Sirolimus-eluting Stent Restenosis Lesions With or Without Stent Fracture.
Yasunari Sakamoto¹, Toshiya Muramatu², Reiko Tsukahara³, Yoshiaki Ito⁴, Tsuyoshi Sakai⁴, Hiroshi Ishimori⁴, Keisuke Hirato⁴, Masatugu Nakano⁴, Masahiro Yamawaki⁵, Motoharu Arai⁵, Tamon Kato⁶, Norihiro Kubayashi⁶, Hideyuki Takimura⁶, Shinsuke Mori⁶, Masakazu Tsutsumi⁶, Takuro Tokuda⁶, Hiroya Takagi⁶, Takahiro Tokuda⁶
¹Saiseikai Yokohama City Eastern Hospital, Yokohama, Japan

Background: Presence of stent fracture (SF) after sirolimus-eluting stent (SES) implantation has been reported to be associated with an increased risk of in-stent restenosis and target lesion revascularization (TLR). Incidence of SF and the relevance to cardiovascular events are previously reported. But little is known about the outcomes after repeat percutaneous coronary intervention (PCI) for SES restenosis lesion with SF. So this study compared the outcomes after repeat PCI for SES restenosis lesion with or without SF.

Methods: From April 2007 to September 2011, total 2020 lesions implanted SES during PCI at our hospital. Total 148 lesions, 7.3% had restenosis (defined as % diameter stenosis >50%) in follow up angiogram. Of the restenosis lesion, 107 lesions went to TLR those consisted of 75 lesions with repeat DES implantation and 32 lesions with balloon angioplasty alone. SF was defined as complete or partial separation of the stent as assessed by plain fluoroscopy and detected in 61 lesions of SES restenosis lesions. Thirty-three SES restenosis lesions with SF (SF group) and 42 SES restenosis lesions without SF (non SF group) were retrospectively evaluated restenosis rate during follow up after repeated implantation of DES.

Results: Baseline characteristics were similar. One-year cumulative incidence of restenosis after repeat DES implantation for SF group and non SF group which was calculated by Kaplan-Meier method were 68% and 36% (Log-rank test P<0.032), respectively (figure).

Conclusions: Restenosis lesions with SF had significantly high incidence of restenosis after repeat DES implantation.