INCIDENCE AND PREDICTORS OF STENT EDGE MEDIAL DISRUPTION: AN IN VIVO OPTICAL COHERENCE TOMOGRAPHY STUDY

Poster Contributions
Poster Hall B1
Sunday, March 15, 2015, 3:45 p.m.-4:30 p.m.

Session Title: Pharmacotherapy and Complex Coronary Interventions
Abstract Category: 34. TCT®ACC-i2: Coronary Intervention: Devices
Presentation Number: 2103-311

Authors: Tsunenari Soeda, Seung-Jung Park, Yangsoo Jang, Stephen Lee, Kyoichi Mizuno, Tomonori Itoh, Jack Tan Wei Chieh, Hang Lee, Haibo Jia, Bo Yu, Shiro Uemura, Ik-Kyung Jang, Massachusetts General Hospital, Boston, MA, USA

Background: Coronary medial disruption is a predictor for restenosis after stenting. The relationship between stent edge medial disruption (MD) and stent-lumen ratio (S/L ratio) has not been investigated.

Aims: 1) To evaluate the incidence of MD among different plaque types using intravascular optical coherence tomography (OCT), and 2) to study the relationship between MD and S/L ratio.

Methods and Results: A total of 1,162 stent edges (581 stents) with post procedural OCT images were included. Presence of MD and underlying plaque morphology were evaluated at stent edge. S/L ratio was defined as the ratio of stent diameter to reference lumen diameter. The overall incidence of MD was 5.2% (47 stent edges). MD was not observed when the stent landed on normal region. Lipid and calcified region had significantly higher incidence of MD (A). MD, especially in fibrous region, had significantly higher S/L ratio, compared to non-MD group (B). ROC curve showed 1.11 of S/L ratio was the best cut-off to predict MD.

Conclusion: MD is rare in the current interventional practice. MD was more frequent, when a stent landed on lipid or calcified region and when S/L ratio was greater than 1.11.