



DIFFERENCES IN CHRONIC ANGIOSCOPIC FINDINGS WITH DIFFERENT STENT TYPES IN PATIENTS WITH AND WITHOUT DIABETES MELLITUS: SUB-ANALYSIS OF A REPORT FROM JAPANESE MULTICENTER REGISTRY

Poster Contributions
Poster Hall, Hall C
Saturday, March 18, 2017, 9:45 a.m.-10:30 a.m.

Session Title: Interventional Cardiology: Stent Failure Analysis by Intravascular Imaging
Abstract Category: 23. Interventional Cardiology: IVUS and Intravascular Physiology
Presentation Number: 1193-135

Authors: *Tetsuya Sato, Kazuoki Dai, Yasuharu Nakama, Kouki Watanabe, Hideo Kawakami, Hiroshi Matsuoka, Masaharu Ishihara, Japanese Red Cross Okayama Hospital, Okayama, Japan, Hyogo College of Medicine, Nishinomiya, Japan*

Background: Little is known about the direct actual effect of diabetes mellitus (DM) on mid and long term lesion characteristics in patients treated with different types of stents. Therefore, we clarified the differences between patients with and without DM with sub-analysis of MICASA (a multicenter registry of coronary angiography conducted in 4 Japanese institutions) data.

Methods: A total of 261 stents were observed by coronary angiography 5 to 24 months after PCI. There were 15 bare metal stents (BMS), 87 1st-generation drug-eluting stents (1st DES) (64 SES and 23 PES) and 159 2nd-generation DES (2nd DES) (73 EES, 56 ZES and 30 BES). Neointimal coverage over stent was classified into 4 grades: from 0 (no coverage) to 3 (complete coverage). Maximum and minimum neointimal coverage grade (Max, Min, respectively) were assessed for each stented segment. Heterogeneity index was calculated as Max minus Min. Plaque color at stent segment was classified into 4 grades: from 0 (white) to 3 (bright yellow). Furthermore, existence of thrombi was investigated.

Results: Although there were no significant differences in each finding between groups with (n=99, 61) and without (n=162, 98) DM in all stents and in 2nd DES, respectively, heterogeneity index had a higher tendency with DM than without DM in BMS (2.00 ± 0.89 vs 1.00 ± 0.87 , $P=0.050$), furthermore, Min was higher and plaque was less yellow with DM than without DM in 1st DES, respectively (0.69 ± 0.59 vs 0.36 ± 0.52 , $P=0.009$; 1.19 ± 0.90 vs 1.73 ± 0.85 , $P=0.006$). Multivariate regression analysis revealed that DM was a significant prognostic factor of less yellow plaque ($P=0.022$, OR:0.697) in all stents and, furthermore, higher Min ($P=0.077$, OR: 2.173) and less yellow plaque ($P=0.047$, OR: 0.560) in 1st DES.

Conclusions: DM influenced chronic coronary characteristics mostly in the lesion treated with 1st generation DES.