TEMPORAL CHANGE AND MORPHOLOGY OF PERI-STENT CONTRAST STAINING IN LESIONS AFTER EVEROLIMUS-ELUTING STENT IMPLANTATION COMPARED WITH SIROLIMUS-ELUTING STENT IMPLANTATION

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Background: We previously reported that progressive peri-stent contrast staining (PSS) after sirolimus-eluting stent (SES) implantation was associated with very late stent thrombosis, and also that the segmental irregular type of PSS morphology might be a predictor of progressive PSS. Still, little is known about the differences in PSS characteristics among various stents.

Methods: Between August 2004 and March 2011, we performed stent implantation with SES in 5374 lesions and that with everolimus-eluting stent (EES) in 1907 lesions, and found PSS in 141 SES lesions (2.62%) and 49 EES lesions (2.57%). The temporal change of PSS between 8 and 20 months after procedure was confirmed with coronary angiography in 99 SES lesions and 38 EES lesions, which were classified into 3 groups: progressive, unchanged, and regressive PSS, and also into 4 morphological types according to the width and shape of PSS. We examined the differences in the temporal change and morphology of PSS between SES and EES lesions.

Results: The patients were 103 men and 34 women and the mean age was 67.3±11.4 years. The results are shown in the figure. Progressive PSS was more frequently observed in SES lesions than in EES lesions (41.4% vs. 5.2%, p<0.0001). The irregular-segmental type was more frequently observed in SES lesions (43.4% vs. 15.7%, p=0.0027), while the mono-focal type tended to be more frequently observed in EES lesions (42.1% vs. 24.3%, p=0.0579).

Conclusions: PSS characteristics might be different between EES and SES lesions.