STENT FRACTURE AND ANGIOGRAPHIC PERI-STENT ABNORMAL FINDING AFTER SIROLIMUS-ELUTING STENT IMPLANTATION

i2 Poster Contributions
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Background: Stent fracture (SF) has been reported to be related to restenosis and stent thrombosis after drug eluting stent (DES) implantation. In addition, angiographic abnormal findings around the peri-stent area were observed after DES implantation. However, the prevalence and clinical impact of these findings at lesion with SF remain unclear. Thus, we evaluate the their prevalence and clinical implications.

Methods: Between November 2002 and December 2006, 2291 patients with 3621 lesions were treated with sirolimus-eluting stent (SES). Of these, 2000 patients with 3109 lesions who were followed by angiography constituted the study population. SF was defined as complete separation of stent segments at any view of angiogram. Peri-stent abnormal findings (PSA) were classified into coronary aneurysm and persistent contrast staining (PSS). PSS was defined as contrast media pooling at the outer region of stent strut except for coronary aneurysm. Various types of PSS were shown in the Figure.

Results: The prevalence of SF and SF with PSA were 5.6% (173 lesions) and 1.2% (38 lesions) respectively. In 33 serial follow-up lesions, PSA progressed and regressed in 42% (14 lesions) and 27% (9 lesions) respectively. Of 14 progressed lesions, 2 very late stent thromboses occurred during the follow-up period.

Conclusions: PSA was observed at one fifth of stent fracture lesions after SES implantation. Although the exact mechanism of SF with PSA remains unclear, SF with PSA may be related to cardiac events.