CONCLUSIONS PRASFIT Elective OCT sub-study revealed the plaque morphology and acute SM area were the predictors for late phase SM, and late phase SM was associated with the presence of IS-Th at 8-mo, which could be the substrate for late stent thrombosis.

CATEGORIES IMAGING: Intravascular

KEYWORDS Malapposition, OCT, Plaque morphology

TCT-45
Optical Coherence Tomography Assessment of Incidence, Morphological Characteristics, and Spontaneous Healing Course of Edge Dissections Following Percutaneous Coronary Intervention with Stent Implantation in Patients with Non-ST segment Elevation Myocardial Infarction

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BACKGROUND Stenting-induced edge dissections (ED) can be assessed in detail by OCT. This study sought to investigate the incidence, morphological characteristics, and spontaneous healing course of optical coherence tomography (OCT) identified EDs following drug-eluting stent (DES) implantation in a Non-ST segment Elevation Myocardial Infarction (NSTEMI) patient-population.

METHODS Acute vessel wall injury at the 5-mm stent adjacent distal and proximal reference segments was assessed by post-procedure OCT and intravascular ultrasound (IVUS) in n=97 NSTEMI-patients (n=97 lesions). Six months OCT follow-up was available in 82 patients (including 35 untreated post-procedure EDs).

RESULTS The overall incidence of post-procedure OCT-detected ED was 38 per 97 patients (39.2%), and 47 per 182 stent edges (25.8%). None of the EDs were angiographically visualizable, while 10 (21.3%) were visible on concomitant IVUS-analysis. Morphologically, there was a significant difference in plaque type present at ED-edges vs. non-ED-edges when assessed with OCT; (1) lipid-rich and calcified plaques: 80.9% vs. 57.0%, (2) fibrous plaque: 17.0% vs. 26.7%, and (3) normal coronary vessel: 2.1% vs. 16.3%, p<0.01. Plaque burden, assessed by IVUS, was substantially larger at ED-containing borders: 54.5 ± 10.0% vs. 43.7 ± 11.6%, p<0.01. Three dissections (8.6%) were incompletely healed at 6-month OCT follow-up. None of the EDs caused cardiac events during the 6-month follow-up, however, 1 ED-patient had target lesion revascularization with PCI and DES-implantation in extension of the scheduled OCT-control.

CONCLUSIONS OCT-detected EDs were frequent after stent implantation due to NSTEMI, and the majority of these EDs healed without leading to an adverse prognosis at 6 months.

CATEGORIES IMAGING: Intravascular

TCT-46
OCT-based management of late stent thrombosis: results from the SAFE registry

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BACKGROUND Late stent thrombosis is an infrequent complication of PCI, but is associated with high risk of recurrent ischemic events. OCT can help determine the mechanism of stent thrombosis and thus optimize management. We hypothesize that the use of OCT in stent thrombosis will substantially change how PCI is performed.

METHODS SAFE (Study of Late Stent Failure Evaluated by OCT) is a multicenter registry of consecutive cases of late stent thrombosis (>30 days) who underwent diagnostic OCT before intervention. Investigators agreed on a treatment approach (repeat stenting or...