COMPREHENSIVE PLAQUE DISTRIBUTION IN NATIVE CORONARY ARTERIES: A THREE-VEssel OPTICAL COHERENCE TOMOGRAPHY ANALYSIS

Poster Contributions
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Background: Previous studies assessed the geographic distribution of vulnerable plaques in the coronary arteries. We sought to evaluate comprehensive distribution of coronary plaques by 3 vessel optical coherence tomography (OCT) analysis.

Methods: A total of 789 lesions were found in 261 patients. Plaques were categorized into fibrous, fibrocalcific, and fibroatheroma plaques by OCT, and their relative distribution (proximal, mid, and distal) was assessed.

Results: As shown in the figure, in right coronary artery (RCA) and left circumflex artery (LCX), thin-cap fibroatheroma (TCFA), fibroatheroma, fibrocalcific, and fibrous plaques were evenly distributed from proximal to distal. Proportion of plaque rupture, calcification, and thrombus did not differ among proximal, middle, and distal sites. In left anterior descending artery (LAD), TCFA and fibroatheroma were primarily located in the proximal and middle segments, whereas fibrous plaques were more frequently distributed in the middle and distal segments. The majority of plaque rupture (proximal 21.4%, mid 12.4%, distal 0%, \( P=0.002 \)), calcification (proximal 71.8%, mid 51.8%, distal 25.5%, \( P<0.001 \)), and thrombus (proximal 11.7%, mid 8.0%, distal 2.1%, \( P=0.145 \)) also localized in the proximal site of LAD.

Conclusion: Three-vessel OCT imaging showed that TCFA and fibroatheroma tend to cluster within the proximal segment of LAD, whereas they are relatively evenly distributed through the length of RCA and LCX arteries.