

TCT@ACC-i2: Invasive and Interventional Cardiology

IMPACT OF MYOCARDIAL BRIDGING ON MAJOR ADVERSE CARDIAC EVENTS: VERY LONG-TERM CLINICAL OUTCOMES FOLLOWING FIRST- AND SECOND-GENERATION DRUG-ELUTING STENT IMPLANTATION

Poster Contributions

Poster Sessions, Expo North

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Background: Myocardial bridging (MB) has been shown to correlate with atherosclerotic plaque accumulation in the segment proximal to the MB. However, the clinical implications of this correlation have not been elucidated. This study aimed to assess the potential impact of MB on very long-term clinical outcomes in patients treated with drug-eluting stents (DES).

Methods: Serial (baseline and 8 months) IVUS was performed in 199 LAD lesions treated with first- or second-generation DES. At baseline, MB was defined as an echolucent band partially surrounding the artery. The patients were followed up for up to 5 years to evaluate major adverse cardiac events (MACE) defined as target lesion (TLR) or vessel revascularization (TVR), cardiac death, and myocardial infarction.

Results: Baseline IVUS identified MB in 63 cases (31.7%), 35 of which had the stent extending into the MB region. DES type did not differ between MB and non-MB groups. During follow-up (mean: 1591 days), MACE occurred in 14.6% of the enrolled patients. Event-free survival was lower in patients with MB for MACE, TVR ($p=0.044$), and death/infarction ($p=0.023$) whereas no difference was observed for TLR. Multivariate analysis identified MB as an independent predictor of MACE (OR: 4.5, 95% CI: 1.3-15.6).

Conclusion: Myocardial bridging appears to be associated with an increased risk of non-TLR clinical events. This may be related to flow disturbance resulting in accelerated atherosclerosis and/or vulnerable plaque in the non-target segment.

