

Stenting for distal unprotected left main coronary artery: to kiss or not to kiss?

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Background: Distal unprotected left main coronary artery (d-ULMCA) stenosis represents a technical challenge for percutaneous coronary intervention (PCI) with stenting. Final kissing balloon (FKB) inflation has been proposed to optimize stent apposition, improve side branch access while correcting stent deformation or distortion. However, randomized trials focusing on FKB have not confirmed its beneficial impact. In this study, we compared outcomes of FKB for PCI of d-ULMCA. **Methods and Results:** Two hundred and three patients undergoing d-ULMCA bifurcation PCI were retrospectively enrolled. Subjects receiving FKB (n=99, 49%) were compared with those not undergoing FKB (n=104, 51%) after stratification for a 1-stent (n=82, 40%) or 2-stent strategy (n=121, 60%). The primary end point was the long-term rate of major adverse cardiac events (MACE), i.e., death, myocardial infarction, or target lesion revascularization (TLR). FKB was most commonly performed in those who with true bifurcation lesion, especially in the presence of ostial lesion of left circumflex artery, no matter 1-stent or 2-stent strategy was applied. By multivariable analyses, FKB did not affect the risk of MACE. The significant predictors of long-term MACE were the presence of ostial lesion of left circumflex artery (HR=4.8, p=0.031), the use of 2-stent strategy (HR=5.9, p=0.001), heavily calcified lesion needing rotablation (HR=3.7, p=0.032), high EuroScore (HR=1.1, p=0.023), and complete revascularization of concomitant right coronary disease (HR=0.6, p=0.014). **Conclusions:** FKB is not mandatory in PCI with stenting for d-ULMCA lesions. However, FKB may be needed in reducing the risk of side-branch repeat revascularization.