



Interventional Cardiology

A META-ANALYSIS OF CONTEMPORARY LESION MODIFICATION STRATEGIES DURING PERCUTANEOUS CORONARY INTERVENTION IN 244,665 PATIENTS FROM 21 STUDIES

Poster Contributions
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Background: Outcomes with coronary lesion modification in the drug-eluting stent era have received limited study.

Methods: We examined 21 studies from 2004-2016 with outcomes of 244,665 patients after atherectomy (rotational or orbital) or cutting/scoring balloon.

Results: In observational trials, acute luminal gain was higher after lesion modification (mean difference 0.278 [0.018-0.538], $p=0.036$), with no difference in randomized controlled trials (RCTs). Restenosis was similar in observational trials, but lower in RCTs (OR 0.64 [0.45-0.90], $p=0.010$). The 90-day incidence of major adverse cardiovascular events (MACE) was higher in observational studies (OR 1.39 [1.05-1.83], $p=0.022$), but similar in RCTs. There was no difference in target lesion/vessel revascularization (TLR-TV) or myocardial infarction (MI). Death was more frequent after lesion modification in observational studies (OR 1.42 [1.04-1.95], $p=0.029$) with difference in RCTs. At 1 year, MACE after lesion modification was similar to control in observational studies, but lower after lesion modification in RCTs (OR 0.66 [0.48-0.89], $p=0.006$) (Figure 1A). TLR-TV was higher with lesion modification in observational studies, but lower in RCTs (OR 0.64 [0.46-0.88], $p=0.006$) (Figure 1B). There was no difference in other outcomes at 1 year (Figure 1C, D).

Conclusions: Observational studies suggest higher early MACE and more restenosis, but RCTs show similar short-term and improved long-term outcomes after lesion modification.

Figure 5: Clinical Outcomes within 1 year

