

Results of DKCRUSH-VI trial reported

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A new study found that fractional flow reserve (FFR)-guided provisional side branch (SB) stenting of true coronary bifurcation lesions yields similar outcomes to the current standard of care. The DKCRUSH-VI clinical trial is the first study to compare FFR-guided and angiography-guided stenting.

Findings were reported today at the 26th annual Transcatheter Cardiovascular Therapeutics (TCT) scientific symposium. Sponsored by the Cardiovascular Research Foundation (CRF), TCT is the world's premier educational meeting specializing in interventional cardiovascular medicine.

Angiography alone is most commonly used to guide the decision whether and how to treat SBs of a coronary bifurcation lesion. Previous studies have demonstrated that this approach is effective for the majority of these lesions. However, there is little data regarding outcomes after FFR-guided provisional bifurcation stenting. FFR integrates both lesion severity and the area of the myocardium supplied by the specific coronary artery, and has become the gold standard for assessing the functional significance of a coronary lesion.

The DKCRUSH-VI trial examined a total of 320 patients at eight centers with true coronary bifurcation lesions (Medina 1,1,1, or 0,1,1) undergoing stenting with a provisional SB approach. Patients were randomly assigned 1:1 to an angiography-guided and FFR-guided method. The primary endpoint was the one-year composite rate of major adverse cardiac events (MACE) including cardiac death, myocardial

infarction (MI) and ischemia-driven target vessel revascularization (TVR).

Comparing the angiography and FFR groups, treatment of the SB (balloon or stenting) was performed in 63.1 percent vs. 56.3 percent of cases, respectively ($p=0.07$). Stenting of the side branch was attempted in 38.1 percent vs. 25.9 percent, respectively ($p=0.01$). Among attempted cases, stenting was successful in 83.6 percent and 77.3 percent respectively ($p=0.01$). While fewer SB stents were used in the FFR group, the one-year composite MACE rate was 18.1 percent in both groups ($p=1.0$).

"Given the nearly identical one-year MACE rates with both approaches, either the angiography-guided or FFR-guided technique may be recommended for provisional side branch stenting of true bifurcation lesions," said lead investigator Shao-Liang Chen, MD. Dr. Chen is Director of Cardiology and Cath Lab at Nanjing First Hospital and Professor of Internal Medicine and Cardiology at Nanjing Medical University in China.

"The FFR technique may result in somewhat fewer stents being implanted and a slightly lower long-term restenosis rate, but may be technically challenging and require the upfront cost of a pressure wire in all patients."

Provided by Cardiovascular Research Foundation

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