

Drug eluting Stenting of Bifurcation lesions: A Systematic Approach towards Stenting

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Background: Recent studies show improved short- and mid-term clinical and angiographic results obtained with PCI of de novo coronary artery bifurcation lesions using drug-eluting stenting [DES] of the main vessel only. A systematic coronary stenting approach for bifurcation lesion using DES is therefore needed. A strategy of using two DES may be preferred if the side branch is of adequate size and heavily diseased, while in other cases a 'simplified' approach of stenting the main vessel only, with optional ("provisional") stenting of the side branch may be more appropriate.

Objective: The strategy of systematic coronary stenting in bifurcation lesions was evaluated in a large single-center observational study during a two-year inclusion period. We also aimed to evaluate the long-term outcomes of a modified "mini-crush" technique for treating bifurcation lesions.

Methods & Results: The study included 308 patients with a mean age of 64±12 years, 77% male, and 77% with acute coronary syndromes. The LAD/diagonal bifurcation was involved in 62% of cases. Anti GP 2b/3a drugs were used in 65% of cases. In 56% of cases sirolimus-eluting stents [Cypher] were used. Initial two stents strategy was used in 101 pts [33%], while in 207 pts the strategy was stenting of the main branch with provisional stenting of the side branch, of whom 9 crossed to side branch stenting also due to procedural indications [dissection or unsatisfactory angiographic results].

	Six months [n=308]	One year [n=308]	Two years [n=255]
Death	1.3%	3.2%	5.6%
MI	3.9%	4.2%	5.9%
Definite Stent thrombosis	1%	1%	1.2%
TVR	5.2%	7.5%	13.1%
CABG	2.9%	3.2%	4.7%
MACE	9.1%	13.6%	22.6%

Conclusions: Our results would indicate that a systematic approach towards PCI in bifurcation lesions with careful attention to procedural technique and using DES is associated with favorable long-term clinical results.