

Planned simple one stent strategy for bifurcation lesions: Why do we cross to two stents?

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Background: A simplified approach, e.g. stenting of the main branch with provisional stenting of the side branch, is currently implemented in the majority of bifurcation PCI cases.

Objective: To investigate the causes for crossing to two stents strategy during PCI of bifurcation lesions in our "real world" practice.

Methods & Results: The study included 416 patients with bifurcation lesions who were planned for single stent strategy. In 61 pts [14.7%] the plan was crossed to stenting the side branch as well. We analyzed the causes for this change.

| | One stent [n=356] | Crossed to 2 stents [n=61] | P-value |
|-------------------|-------------------|----------------------------|---------|
| Age [year] | 63±12 | 62±13 | 0.4 |
| Male | 78% | 74% | 0.5 |
| ACS / AMI | 78% | 90% | 0.01 |
| DM | 32% | 31% | 0.9 |
| Renal failure | 11% | 7% | 0.3 |
| LAD/DIAG | 56% | 57% | 0.4 |
| True bifurcation | 66% | 74% | 0.4 |
| Y angle | 71% | 72% | 0.8 |
| SB RVD <2.5mm | 57% | 48% | 0.2 |
| SB - %DS | 63±29 | 70±21 | 0.1 |
| SB-Dilatation | 45% | 81% | 0.001 |
| One month results | | | |
| Death | 0.6% | 1.6% | 0.4 |
| MI | 1.7% | 6.6% | 0.02 |
| Stent thrombosis | 1.7% | 6.6% | 0.02 |
| TVR | 0.7% | 6.6% | 0.02 |
| MACE | 2.8% | 6.6% | 0.1 |

Conclusions: Our data indicate that ACS/AMI presentation, dilatation of the side branch and greater diameter stenosis of the SB are altogether factors associated with increased risk of needing two stents in bifurcation stenting. Avoiding dilatation of the side branch is recommended when stenting of the main branch alone is planned.