Bifurcation Culprit Lesions in ST-segment Elevation Myocardial Infarction: Procedural Success and 5-year Outcome Compared With Nonbifurcation Lesions

Selection of (Bifurcation) Cases and Controls

Figure 1 of the supplementary material. Flow diagram showing the selection of bifurcation cases from initial database interrogation.

PCI, percutaneous coronary intervention.
### Table 1 of the supplementary material

Quality Control of the Adjudication of Nonbifurcation Cases (Controls) in our Database

<table>
<thead>
<tr>
<th>Controls reviewed</th>
<th>True controls</th>
<th>False controls</th>
<th>Prevalence of ‘false controls’</th>
<th>95%CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>153</td>
<td>152 (99.35%)</td>
<td>1 (0.65%)</td>
<td>0.0065 (SE 0.01)</td>
<td>-0.0061 to -0.0190</td>
</tr>
</tbody>
</table>

It was estimated that a sample of 103 out of the 2472 controls would be enough to estimate a prevalence of incorrect adjudication of controls, with 95%CI and 90% power. Fifty more patients were reviewed up to a total of 153 control patients out of 2198 nonmatched controls. 95%CI, 95% confidence interval; SE, standard error.
Primary Percutaneous Coronary Intervention and Rescue Percutaneous Coronary Intervention

Table 2 of the supplementary material

Clinical and Anatomic Characteristics, Before and After Propensity Matching

<table>
<thead>
<tr>
<th>Variable</th>
<th>Primary PCI (n = 456)</th>
<th>Rescue PCI (n = 92)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BIF group (n = 226)</td>
<td>MC group (n = 230)</td>
<td>P</td>
</tr>
<tr>
<td></td>
<td>BIF group (n = 48)</td>
<td>MC group (n = 44)</td>
<td>P</td>
</tr>
<tr>
<td><strong>Coronary anatomy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of diseased vessels$^a$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0$^b$</td>
<td>7 (3)</td>
<td>6 (3)</td>
<td>.86</td>
</tr>
<tr>
<td>1</td>
<td>129 (56)</td>
<td>122 (49)</td>
<td>25 (52)</td>
</tr>
<tr>
<td>2</td>
<td>64 (28)</td>
<td>71 (31)</td>
<td>15 (31)</td>
</tr>
<tr>
<td>3</td>
<td>30 (13)</td>
<td>27 (12)</td>
<td>6 (12)</td>
</tr>
<tr>
<td>Mean number of severely diseased vessels</td>
<td>1.34 ± 0.7</td>
<td>1.24 ± 0.6</td>
<td>.28</td>
</tr>
<tr>
<td>Dominance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left</td>
<td>14 (6)</td>
<td>16 (7)</td>
<td>6 (13)</td>
</tr>
<tr>
<td>Right</td>
<td>187 (83)</td>
<td>182 (79)</td>
<td>36 (75)</td>
</tr>
<tr>
<td>Balanced</td>
<td>25 (11)</td>
<td>32 (14)</td>
<td>6 (13)</td>
</tr>
<tr>
<td>Culprit vessel$^b$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAD</td>
<td>128 (57)</td>
<td>119 (52)</td>
<td>.15</td>
</tr>
<tr>
<td>LCX</td>
<td>29 (13)</td>
<td>48 (21)</td>
<td>10 (21)</td>
</tr>
<tr>
<td>RCA</td>
<td>45 (20)</td>
<td>41 (18)</td>
<td>5 (10)</td>
</tr>
</tbody>
</table>
BIF, bifurcation; BMI, body mass index; CAD, coronary artery disease; LAD, left anterior descending artery; LCx, left circumflex; MC, matched control; PCI, percutaneous coronary intervention; RCA, right coronary artery.

The data are expressed as mean ± standard deviation or No. (%).

*aIndicates the variables included in the propensity score.

*bSecondary vessel disease only.
Table 3 of the supplementary material

Procedural Characteristics, Before and After Propensity-matched Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Primary PCI (n=456)</th>
<th>Rescue PCI (n=92)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BIF group (n = 226)</td>
<td>MC group (n = 230)</td>
</tr>
<tr>
<td>Symptoms to PCI, min</td>
<td>263 ± 235</td>
<td>276 ± 226</td>
</tr>
<tr>
<td>Radial access</td>
<td>81 (36)</td>
<td>70 (30)</td>
</tr>
<tr>
<td>Contrast, mL</td>
<td>250 ± 89</td>
<td>233 ± 83</td>
</tr>
<tr>
<td>Procedural time, min</td>
<td>68 ± 29</td>
<td>63 ± 29</td>
</tr>
<tr>
<td>Fluoroscopy time, min</td>
<td>19 ± 13</td>
<td>14 ± 8</td>
</tr>
<tr>
<td>Number of treated lesions(^b)</td>
<td>1.20 ± 0.5</td>
<td>1.18 ± 0.5</td>
</tr>
<tr>
<td>Any aspiration thrombectomy(^b)</td>
<td>108 (48)</td>
<td>118 (52)</td>
</tr>
<tr>
<td>Any balloon dilatation(^b)</td>
<td>169 (75)</td>
<td>138 (60)</td>
</tr>
<tr>
<td>Number of different balloons(^b)</td>
<td>1.63 ± 1.4</td>
<td>1.12 ± 1.1</td>
</tr>
<tr>
<td>Any stent implantation(^b)</td>
<td>204 (90)</td>
<td>203 (88)</td>
</tr>
<tr>
<td>Number of implanted stents(^b)</td>
<td>1.23 ± 0.7</td>
<td>1.12 ± 0.7</td>
</tr>
<tr>
<td>Direct stenting(^c)</td>
<td>76 (34)</td>
<td>107 (47)</td>
</tr>
</tbody>
</table>

BIF, bifurcation; MC, matched control; PCI, percutaneous coronary intervention.

The data are expressed as mean ± standard deviation or No. (%).

\(^a\)Indicates the variables included in the propensity score.

\(^b\)Per patient.

\(^c\)Per patient with at least 1 stent implanted.
Table 4 of the supplementary material

Events at 5 Years of Follow-up, and HR From Cox Regression Analysis (Crude and Adjusted to Rescue Percutaneous Coronary Intervention, Drug-eluting Stent, Aspiration Thrombectomy and Use of IIb/IIIa Inhibitors)

<table>
<thead>
<tr>
<th>Event</th>
<th>BIF (n = 274)</th>
<th>MC (n = 274)</th>
<th>P</th>
<th>HR (95%CI)</th>
<th>P adj</th>
<th>HRadj (95%CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death</td>
<td>33 (12)</td>
<td>35 (13)</td>
<td>.95</td>
<td>0.98 (0.61-1.59)</td>
<td>.71</td>
<td>1.10 (0.68-1.77)</td>
</tr>
<tr>
<td>Cardiac death</td>
<td>26 (10)</td>
<td>23 (8)</td>
<td>.59</td>
<td>1.17 (0.67-2.05)</td>
<td>.37</td>
<td>1.30 (0.74-2.28)</td>
</tr>
<tr>
<td>Combined event (death, CABG, AMI or TVR)</td>
<td>61 (22)</td>
<td>56 (21)</td>
<td>.43</td>
<td>1.16 (0.80-1.66)</td>
<td>.31</td>
<td>1.21 (0.84-1.74)</td>
</tr>
<tr>
<td>Recurrent MI</td>
<td>14 (5)</td>
<td>11 (4)</td>
<td>.49</td>
<td>1.32 (0.60-2.91)</td>
<td>.51</td>
<td>1.30 (0.59-2.87)</td>
</tr>
<tr>
<td>CABG</td>
<td>8 (2.9)</td>
<td>3 (1.1)</td>
<td>.12</td>
<td>2.69 (0.72-10.16)</td>
<td>.10</td>
<td>3.03 (0.80-11.52)</td>
</tr>
<tr>
<td>TVR</td>
<td>23 (8)</td>
<td>14 (5)</td>
<td>.11</td>
<td>1.70 (0.87-3.30)</td>
<td>.10</td>
<td>1.74 (0.89-3.39)</td>
</tr>
</tbody>
</table>

95%CI, 95% confidence interval; AMI, acute myocardial infarction; BIF, bifurcation; CABG, coronary artery bypass graft; HR, hazard ratio; MC, matched control; MI, myocardial infarction; TVR, target vessel revascularization.
**Figure 2 of the supplementary material**

Survival free from all cause death (A) and the composite event of death, recurrent MI, CABG or TVR (B), stratified by rescue or primary PCI.

---

**A**

Log Rank test, $p=0.98$

Breslow Test, $p=0.89$

**B**

Log Rank test, $p=0.42$

Breslow Test, $p=0.45$