

Retrograde Chronic Total Occlusion Percutaneous Coronary  
Intervention Through Ipsilateral Collateral Channels

Supplementary material

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**Table 3.** Procedural data.

| Variable  | n=126                |
|---|----------------------|
| Vascular access   |                      |
| Femoral and femoral   | 61 (48%)             |
| Femoral and radial  | 47 (37%)             |
| Radial and radial   | 1 (1%)               |
| Single femoral  | 2 (2%)               |
| Single radial   | 15 (12%)             |
| One guiding / ping-pong technique   | 101 (80%) / 25 (20%) |
| Size (Fr) of the guiding catheter used for the initial approach               |                      |
| 6   | 13 (10%)             |
| 7   | 68 (54%)             |
| 7.5   | 2 (2%)               |
| 8   | 43 (34%)             |
| Size (Fr) of the second catheter*   |                      |
| 5   | 2 (3%)               |
| 6   | 31 (47%)             |
| 7   | 28 (42%)             |
| 8   | 5 (8%)               |
| Guidewire used to cross the collateral  |                      |
| Sion / Sion Blue / Sion Black   | 114 (90%)            |
| Fielder XT / Fielder XT-A / Fielder XT-R                                      | 11 (9%)              |
| Suoh  | 1 (1%)               |
| Microcatheter used to cross the collateral                                    |                      |
| Corsair   | 81 (64%)             |
| Finecross   | 28 (22%)             |
| Turnpike / Turnpike LP  | 14 (11%)             |
| Others  | 3 (2%)               |
| Tip injection performed   | 68 (54%)             |
| Mother-and-child catheter   | 10 (8%)              |
| Retrograde guidewire advanced to distal cap through an ipsilateral collateral | 102 (81%)            |
| Intravascular imaging   | 34 (27%)             |
| Externalization technique   |                      |

|                                      |           |
|--------------------------------------|-----------|
| Conventional (e.g., RG3)             | 73 (80%)  |
| Tip-in                               | 8 (9%)    |
| Rendez-vous                          | 6 (7%)    |
| Snaring                              | 4 (4%)    |
| Final crossing technique             |           |
| Retrograde true-to-true              | 46 (36%)  |
| Reverse CART                         | 40 (32%)  |
| Kissing wires                        | 12 (9%)   |
| Antegrade true-to-true**             | 6 (5%)    |
| Parallel wires**                     | 6 (5%)    |
| IVUS-guided antegrade re-entry**     | 1 (1%)    |
| Failure                              | 15 (12%)  |
| Technical success                    | 110 (87%) |
| Procedural success                   | 103 (82%) |
| Total stent length (mm)              | 71±29     |
| Contrast volume (ml)                 | 365±158   |
| Radiation dose (Gy·cm <sup>2</sup> ) | 202±133   |
| Fluoroscopy time (min)               | 76±36     |
| Total procedure time (min)           | 158±76    |

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\* This refers to the diagnostic or guiding catheter used for contralateral injection (when the latter was performed), or to the second guiding catheter used for the ping-pong technique. \*\* after retrograde failure. **Reasons for retrograde failure and use of bailout antegrade techniques include: failure to wire the collateral (n=11), failure to advance the microcatheter over the guidewire through the collateral (n=2).** Abbreviations: CART, controlled antegrade and retrograde subintimal tracking; CTO, chronic total occlusion; IVUS, intravascular ultrasound.