

Periprocedural Myocardial Injury in Patients Undergoing Percutaneous Coronary Intervention: Comparison between De novo Stenosis and In-stent Restenosis

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**Background:** Periprocedural myocardial injury (PMI) occurs commonly after percutaneous coronary intervention (PCI) for de novo stenosis. However, little is known about its incidence in in-stent restenosis. We compared the incidence of PMI between de novo stenosis and in-stent restenosis.

**Methods:** This study included 137 patients with stable angina who underwent angiographically successful PCI. Troponin I was measured 16 to 24 hours after PCI. PMI was assessed according to the 3 cut-off values of troponin I: 0.15 ng/ml, 0.45 ng/ml and 0.75 ng/ml.

**Results:** One hundred four patients underwent stent deployment for de novo stenosis and 33 patients underwent balloon angioplasty for in-stent restenosis. There was no significant difference in coronary risk factors between the 2 groups. During PCI, maximal balloon size ( $3.05 \pm 0.55$  mm vs  $3.05 \pm 0.43$  mm,  $p=ns$ ) or maximal balloon pressure ( $18.4 \pm 5.1$  atm vs  $17.3 \pm 5.3$  atm,  $p=ns$ ) was similar between the 2 groups. There was no significant difference in PMI defined as troponin I  $> 0.15$  ng/ml between de novo stenosis and in-stent restenosis (54.8% vs 45.5%,  $p=ns$ ). However, PMI defined as troponin I  $> 0.45$  ng/ml (32.7% vs 15.2%,  $p=0.05$ ) or troponin I  $> 0.75$  ng/ml (26.0% vs 9.0%,  $p=0.04$ ) was less frequent in in-stent restenosis than de novo stenosis.

**Conclusion:** Our data suggested that minor PMI in in-stent restenosis occurred as commonly as de novo stenosis, but major PMI in in-stent restenosis occurred less frequently than de novo stenosis.