

Clinical and Angiographic Comparison of Primary Stenting and Balloon Angioplasty in Acute Myocardial Infarction

The Primary Stenting in Acute Myocardial Infarction (PRISAM) Study

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Objective To define the indication of primary stenting. **Background** Primary Coronary stenting for the patients of acute myocardial infarction have been reported to be superior to balloon angioplasty, however, it is costly and may have other disadvantages. Limiting stent implantation is favorable. **Methods and Results** To define the indication of primary stent implantation, patients were randomized to primary stenting (104 patients) and balloon angioplasty (POBA) (116 patients). Follow-up angiograms were scheduled at 1, 3, and 6 months after angioplasty. Subacute thrombosis occurred in 2 patients of stent group and 1 of POBA. In stent group, one patient had reinfarction and another patient died before 1 month follow-up, however, nobody of POBA group. Angiographically, primary stenting demonstrated larger initial luminal gain and larger late loss, and late restenosis and TLR rate were smaller than POBA, especially when the reference vessel diameter under 3.5mm. However, when the reference vessel diameter was over 3.5 mm, there was statistically no significant difference in the TLR rate between stenting and POBA. In POBA group, when the residual %DS was over 35 %, late restenosis was strongly predictable regardless of reference vessel diameter. **Conclusions** Primary stenting for the patients of AMI is indicative when the reference vessel diameter is under 3.5 mm or the residual %DS is over 35 %. However, there still remains the room of improvement in anti-coagulant treatment after stenting.