Routine stenting improved outcomes and had similar costs to that of balloon angioplasty with provisional stenting


**C O M M E N T A R Y**

Although >50% of all percutaneous coronary interventions involve stenting (≥300 000 patients/year in North America), few studies have addressed this key issue. The OPUS-1 investigators make an important contribution by comparing provisional stenting with routine stenting with balloon angioplasty when the residual stenosis was >30% or when dissection or threatened closure occurred.

Several limitations of the study highlight the paucity of evidence to support routine stenting, which is becoming routine practice. First, the primary end point occurred in only 51 patients and was driven by the need for target-vessel revascularization using a repeated percutaneous intervention, an outcome measure that may be influenced by perceptions in an unblinded study (1). Second, the anticipated 25% event rate and 20% relative risk reduction (RRR) with routine stenting required a sample size 5 times greater than that obtained. The fact that a significant difference was achieved with an event rate of only 15% relates to the dramatic 59% RRR with routine stenting. Third, despite the decrease in revascularization, patient-reported quality of life, functional status, and cost at 6 months were similar in the 2 groups. Fourth, it may be difficult to interpret the results of this study, where only 13% of the patients received abciximab. In current-day practice, strong data support routine use of glycoprotein IIb/IIIa inhibition during percutaneous intervention. Although more data are desirable to increase confidence in the benefits of routine stenting, such confidence will not be obtained from OPUS-1 because it was discontinued after a low recruitment rate and lack of funding. At present, it seems reasonable to conclude that routine stenting improves clinical outcomes at a 6-month cost similar to that of balloon angioplasty with provisional stenting (Table). The mean per-patient hospital costs (U.S. $10 206 vs $10 490) and quality of life did not differ.

**C O N C L U S I O N**

Routine stent implantation improved clinical outcomes and had a cost similar to that of balloon angioplasty with provisional stent implantation in patients with coronary stenosis.

Sources of funding: In part, Johnson and Johnson Interventional Systems; Guidant Corporation; MITI Research Foundation; Department of Veterans Affairs.

For correspondence: Dr. W.D. Weaver, Division of Cardiovascular Medicine, Henry Ford Health System, Heart and Vascular Institute, 2799 West Grand Boulevard, Detroit, MI 48202, USA. FAX 313-916-1249.

*See Glossary.

**R o u t i n e s t e n t i n g v s o p t i m a l b a l l o n a n g i o p l a s t y w i t h p r o v i s i o n a l s t e n t i n g i n c o r o n a r y s t e n o s i s †**

<table>
<thead>
<tr>
<th></th>
<th>Routine stent</th>
<th>Provisional stent</th>
<th>RRR (95% CI)</th>
<th>NNT (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite end point‡</td>
<td>6.1%</td>
<td>14.9%</td>
<td>59% (27 to 77)</td>
<td>11 (7 to 30)</td>
</tr>
<tr>
<td>Target-vessel revascularization</td>
<td>3.9%</td>
<td>10.1%</td>
<td>61% (20 to 81)</td>
<td>16 (9 to 62)</td>
</tr>
<tr>
<td>Revascularization or surgery</td>
<td>5.2%</td>
<td>12.9%</td>
<td>59% (24 to 78)</td>
<td>13 (8 to 39)</td>
</tr>
</tbody>
</table>

†Other abbreviations defined in Glossary; RRR, NNT, and CI calculated from data in article.
‡Death, myocardial infarction, cardiac surgery, or target-vessel revascularization.

**R e f e r e n c e**