**TCT-480**

**Delayed Coronary In-stent Restenosis and Disease Progression in Patients with Single Vessel Coronary Artery Disease**

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**Background:** The impact of delayed clinical in-stent restenosis on the late re-interventions (RI) rate is currently unknown. To address this issue, we analyzed the long-term clinical outcome in patients undergoing stent implantation for single de novo lesions who were event-free after one year of follow-up, with an especial emphasis on the rate of delayed restenosis and disease progression.

**Methods:** Retrospective analysis in patients who underwent single-vessel stenting from January 2004 to December 2006 (N=1385). In order to control for confounders, we excluded patients with multivessel disease and patients who had RI during their first year of follow-up (N=1108). From November 2012 to March 2013, we contacted all patients included in the study (n=277) and collected the following events: cardiac death, RI, target lesion RI (TLR) and RI to other coronary segments due to disease progression.

Very late TLR was defined as TLR events occurring after 3 years of follow-up, while isolated TLR was defined as TLR events occurring without RI due to concomitant disease progression.

**Results:** Mean age was 60.3±10.1 years, 20.6% were females, 16.2% diabetics and 72% had an acute coronary syndrome. 21.5% received a drug-eluting stent and 78.5% had an acute coronary syndrome. 21.5% received a drug-eluting stent and 78.5% had a positive ischemic test at follow-up. 37.9% required RI (Table). Cardiac death occurred in 2.8% of patients.

**Conclusions:** Disease progression in patients with single vessel obstructive coronary artery disease is an infrequent phenomenon but constitutes the dominant cause for late RI. 1) Delayed clinical restenosis is rare. It’s very late manifestation, typically due to in-stent neointimal hyperplasia, appears to have a very low clinical impact at least until the seventh year of follow-up.

<table>
<thead>
<tr>
<th>Disease progression</th>
<th>N</th>
<th>% Total</th>
<th>% RI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease progression</td>
<td>37</td>
<td>13.3</td>
<td>84</td>
</tr>
<tr>
<td>TLR</td>
<td>16</td>
<td>5.8</td>
<td>36.3</td>
</tr>
<tr>
<td>Very late TLR</td>
<td>7</td>
<td>2.5</td>
<td>15.9</td>
</tr>
<tr>
<td>Isolated TLR</td>
<td>7</td>
<td>2.5</td>
<td>15.9</td>
</tr>
<tr>
<td>Very late, isolated TLR</td>
<td>3</td>
<td>1.1</td>
<td>6.8</td>
</tr>
</tbody>
</table>

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**TCT-481**

**Treatment of “resistant” in-stent restenosis in the drug-eluting era: comparison of repeat stent versus balloon only strategy**

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**Background:** In the drug-eluting stent era, in-stent restenosis (ISR) followed by ISR recurrence, represents a rare yet challenging clinical problem. The definition and angiographic patterns of this phenomenon have not yet been reported.

**Methods:** We defined “resistant” DES ISR (R-ISR) as the second occurrence of ISR after initial successful treatment with DES. We identified 213 lesions in 201 patients treated with DES who presented with R-ISR between 2003 and 2011 at our institution. We reviewed all angiograms to assess any patterns borne from either the first and second ISR episode as described by the Mehran classification.

**Results:** Patients with “resistant” ISR were more frequently male (72%) with a mean age of 65 years. They presented with a very high frequency of diabetes (56%), overweight (70%), and chronic kidney disease (35%). Most lesions were bifurcation (55%) with moderate to severe calciﬁcation (58%). R-ISR presented after 34 months from the first procedure, with a focal pattern (<10 mm in length) in 78%, and diffuse pattern (>10 mm in length) in 22% of the patients. The rates of all-cause mortality, MI, or target vessel failure (TVF) at 1-year were 4%, 3%, and 18%, respectively. Patients with paclitaxel-eluting stent (PES) R-ISR showed a higher rate of ischemic events compared with other type of stents at 1-year follow-up (Table 1).

**Conclusions:** Patients with “resistant” DES ISR comprise a very high-risk population with suboptimal outcomes that are characterized by a high rate of ischemic adverse events. R-ISR after PES appears to result in worse outcomes compared with other types of stents.

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**TCT-482**

**“Resistant” In-Stent Restenosis in the Drug-Eluting Stent Era: An Angiographic Description and Outcomes**

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**Conclusions:** Patients with “resistant” DES ISR comprise a very high-risk population with suboptimal outcomes that are characterized by a high rate of ischemic adverse events. R-ISR after PES appears to result in worse outcomes compared with other DES.

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JACC Vol 62/18/Suppl B | October 27–November 1, 2013 | TCT Abstracts/POSTER/In-stent Restenosis and Stent Thrombosis