metabolism in pts with acute MI who underwent primary angioplasty with DP. Methods: Consecutive pts (n=61, mean age=63) with primary angioplasty (DP: n=15, non-DP: n=46), 24 h after acute MI onset at rest myocardial TI-201 and I-123 BMIPP (free fatty acid analogue) SPECT imaging 9 days from onset of MI. Images were scored using a 15-segment model and a 0-4 scale, and then defect score of I-123 BMIPP TI-201 and mismatch score between I-123 BMIPP and TI-201 were calculated. Results: There was no significant difference in BMIPP defect score (area at risk) between DP and non-DP group. However, TI-201 defect score was significantly lower in pts with DP and mismatch score was significantly higher in pts with DP as shown in a table. These suggest that myocardial perfusion was more improved in pts with DP and myocardium can be more salvaged in pts with DP compared with pts without DP. Conclusion: Primary angioplasty with DP is more effective for myocardial reperfusion in pts with acute MI.

Effects of thrombectomy plus distal protection

<table>
<thead>
<tr>
<th>Thrombectomy plus distal protection</th>
<th>Balloon and/or stent use only</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMIPP defect score</td>
<td>17.6</td>
<td>16.0</td>
</tr>
<tr>
<td>TI defect score</td>
<td>4.3</td>
<td>11.5</td>
</tr>
<tr>
<td>Mismatch score between BMIPP/TI</td>
<td>13.3</td>
<td>4.5</td>
</tr>
</tbody>
</table>

**1094-157**
High-Dose Dobutamine Stress TI-201/I123-BMIPP Dual SPECT Reliably Identifies Myocardial Contractile Dysfunction Caused by Inducible Demand Ischemia

**Methods:**
To test this hypothesis, halothane-201 Tl(II)/I-123-beta-methyliodophenylpentadecanoic acid (BMIPP) dual SPECT (DDS) and two-dimensional echocardiography (DSE) were performed simultaneously using a high-dose dobutamine test to prove inducible demand ischemia. DI was evaluated semiquantitatively at rest, low-dose (15µg/kg/min), and high-dose (40 µg/kg/min) dobutamine infusions. Stress-BMIPP SS was significantly greater than stress-Tl SS (200±88.4 vs 176.4±88.2, p=0.039). At a high-dose test, stress-BMIPP SS correlated more clearly with WMA (r=0.04x-2.33, n=0.08, p=0.0036) than did stress-Tl SS (r=0.03x-0.24, n=0.45, p=0.014). At a low-dose test, however, rest-TI SS and rest-BMIPP SS correlated significantly but equally with WMA: y=0.03x-1.33, r=0.55, n=0.0096; and y=0.03x-1.11, r=0.53, p=0.0134, respectively. Thus, high-dose dobutamine-induced impairment of myocardial fatty acid uptake can identify not only reversible ischemia identified by standard perfusion imaging but also transient contractile dysfunction that is underestimated by stress perfusion imaging. Stress-induced transient impairment of contractile function and fatty acid metabolism may reflect imbalance between increased demands and coronary flow reserve rather than relative abnormality of tracer distribution in myocardium.

**1094-158**
Altered Myocardial Perfusion With Fatty Meal Ingestion in Normal Volunteers

**Methods:**
Thirty healthy volunteers with no cardiac risk factors were evaluated with rest and stress PET Rb-82 myocardial perfusion dynamic imaging 3 to 4 hours following ingestion of a high fat meal. After randomization charting cardiac Rb-82 PET imaging was evaluated semiquantitatively at rest, low-dose (15µg/kg/min), and high-dose (40 µg/kg/min) dobutamine infusions. Stress-Rb-82 PET SS was significantly greater than stress-Tl SS (200±88.4 vs 176.4±88.2, p=0.039). At a high-dose test, stress-Rb-82 PET SS correlated more clearly with WMA (r=0.04x-2.33, n=0.08, p=0.0036) than did stress-Tl SS (r=0.03x-0.24, n=0.45, p=0.014). At a low-dose test, however, rest-TI SS and rest-BMIPP SS correlated significantly but equally with WMA: y=0.03x-1.33, r=0.55, n=0.0096; and y=0.03x-1.11, r=0.53, p=0.0134, respectively. Thus, high-dose dobutamine-induced impairment of myocardial fatty acid uptake can identify not only reversible ischemia identified by standard perfusion imaging but also transient contractile dysfunction that is underestimated by stress perfusion imaging. Stress-induced transient impairment of contractile function and fatty acid metabolism may reflect imbalance between increased demands and coronary flow reserve rather than relative abnormality of tracer distribution in myocardium.

**1094-159**
Prognostic Significance of Dobutamine-Induced ST-Segment Depression in Patients With Normal Rubidium-82 Positron Emission Tomography Perfusion Images

**Background:** The presence of dipyridamole induced ST-segment depression increases the specificity of single photon emission computed tomography (SPECT) imaging. Recently it has been demonstrated that patients, with vasodilator induced ST-segment depression and a normal technetium-99m (Tc-99m) SPECT perfusion image, have a high cardiac event rate. Positron emission tomography (PET) myocardial perfusion imaging is considered to have greater accuracy than SPECT. We examined the prognostic significance of ST-segment depression with dipyridamole stress in patients with a normal rubidium-82 (Rb-82) PET scan.

**Methods:** We performed a retrospective chart review all patients (2000) who had dipyridamole stress Rb-82 PET at the University of Ottawa Heart Institute between 1998-2003. Exclusion criteria included left bundle branch block and paced rhythms. Results: 345 (17.1%) patients had ischemic changes with dipyridamole stress. Of these, 80 (4.0%) patients had abnormal dipyridamole ECGs and normal Rb-82 PET perfusion scans. Follow-up data was available for 74 patients (mean age 59.0 ± 10.8 years, 86 (86.8%) women) and were compared to 246 (mean age 61.6 ± 12.1, 163 (66%) women) patients with normal dipyridamole ECGs and Rb-82 PET perfusion scans. During follow up 23 ± 11 months, there were no significant differences in cardiac death (0% vs 0%), non-fatal MI (1.4% vs 0%) or revascularization (4.1% vs 0.8%). However, patients with dipyridamole induced ST-segment depression had a higher combined cardiac event rate of: cardiac death, non-fatal MI and revascularization (5.4% vs 0.8%, p=0.02).

**Conclusion:** Patients with dipyridamole induced ST-segment depression and a normal Rb-82 PET perfusion scan, have a low event rate. This is lower than similar studies performed using Tc-99m SPECT. This suggests that the prognostic for a patient with a normal Rb-82 PET scan is good regardless of ECG changes.