in males was significantly higher in manual laborers (HR 2.8, 95% CI 1.2–6.3; p < 0.01) than
in managers. In females risk of cardiovascular death was significantly higher in managers (HR 4.3, 95% CI 1.1–17.2; p < 0.05), pensioners (HR 5.1, 95% CI 1.4–19.0; p < 0.05) and manual
occupational group (HR 13.2, 95% CI 3.1–56.3; p = 0.001) compared to high-skilled job group.
Relative to marital status HR was higher in single – 2.3 (95% CI 1.3–4.2; p = 0.001), widowed
- 4.9 (95% CI 2.0–12.0; p = 0.001) and divorced men - 2.6 (95% CI 1.6–4.3; p = 0.001) in comparison
to married men. In females no association between marital status and cardiovascular
death was observed. Conclusion: The highest risk of cardiovascular death was indicated
in low social class groups (subjects with primary education and manual occupational status)
and in single, widowed and divorced men as well.

Table 3. ABI and Systolic Pressure in Older Population ≥40 Years

<table>
<thead>
<tr>
<th>Systolic pressure Mean±S.D.</th>
<th>Age Mean±S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABI normal (≥0.90) N=248</td>
<td>144.4±18.903</td>
</tr>
<tr>
<td>ABI abnormal (≥0.94) N=482</td>
<td>155.1±22.074</td>
</tr>
<tr>
<td>P-value</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Table 4. ABI Values According to Blood Pressure in Older Population ≥40 Years

<table>
<thead>
<tr>
<th>ABI</th>
<th>Normal pressure (&lt;140 mmHg) N=173</th>
<th>High pressure (≥140 mmHg) N=557</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean±S.D.</td>
<td>0.8607±0.28261</td>
<td>0.7580±0.28237</td>
</tr>
<tr>
<td>P-value</td>
<td>NS</td>
<td>NS</td>
</tr>
</tbody>
</table>

Blood Pressure and Drinking Behaviors among Russian Men Aged 30–59 Years

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Alexey Grakov2, Keith Tomlin3, Martin Meckel4, David Leon4
1London School of Hygiene and Tropical Medicine (London, United Kingdom); 2Moscow
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The extent to which alcohol consumption confers protection against cardiovascular disease
remains controversial. However, there is now good evidence that alcohol consumption is
associated with increased blood pressure, although most studies of this association have been
conducted in populations with moderate levels of consumption. We have conducted a longitudinal
study of 1300 men aged 30–59 years sampled at random who were living in a
typical Russian city west of the Urals to determine the health effects of the distinctive,
habitual patterns of alcohol consumption found in this population. Based on data collected
from interviews with the men and proxy informants, and a physical examination, we have analysed
the associations of drinking pattern, type of drink (including non-beverage alcohols such as
medicinal tinctures). A very high prevalence of raised blood pressure was found, with 6 out 10
men being classified as hypertensive, with 10% of men having severe hypertension (blood
pressures greater than 180/110 mm Hg). Blood pressure was positively related to average
cigarette yield consumed, and with prevalence rates of risk behaviours such as consumption
of non-beverage alcohols and frequent hangovers. Compared to men who did not drink
non-beverage alcohols, those who did had an odds ratio of hypertension of 2.45 (95% CI 1.22,
4.97) adjusted for age, body mass index and education. The equivalent effect of frequent
hangovers (more than once per month) was 1.95 (95% CI 1.28, 1.6). We estimate that 10%
of hypertension can be attributed to hazardous alcohol consumption, the prevalence of which
was 14% in this population.

Table 1. The Hypertensive Prevalence by Classification

<table>
<thead>
<tr>
<th>IDH</th>
<th>SDH</th>
<th>ISH</th>
<th>Controlled</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevalence (%)</td>
<td>3.15</td>
<td>13.19</td>
<td>12.06</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Table 2. The Awareness, Treatment and Control Rate of Hypertensions

<table>
<thead>
<tr>
<th>Total</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness, %</td>
<td>27.5</td>
<td>25.3</td>
</tr>
<tr>
<td>Awareness &amp; Treatment, %</td>
<td>25.1</td>
<td>22.7</td>
</tr>
<tr>
<td>Treatment, %</td>
<td>6.3</td>
<td>5.7</td>
</tr>
<tr>
<td>Treatment &amp; control, %</td>
<td>38.2</td>
<td>24.0</td>
</tr>
<tr>
<td>Control, %</td>
<td>4.7</td>
<td>4.2</td>
</tr>
</tbody>
</table>

Are There Etiologic and Outcome Differences among Very Young Asian
Women with Coronary Artery Disease Following Percutaneous
Coronary Intervention?

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Zee Pin Ding
National Heart Centre (Singapore, Singapore)

Background and Aim: In Singapore, one-quarter of deaths among women is related to
cardiovascular disease and women account for 41% of all cardiovascular-related deaths.
Previous reports have suggested that while acute myocardial infarction (AMI) in women occurs
more commonly at an older age, it is not solely a disease of elderly women. It is not known
if younger women with coronary artery disease (CAD) have unique risk factor profiles or
outcome differences compared to older women with CAD. The purpose of this study was therefore
to examine the etiology of CAD among younger women below 40 years of age, and
to examine whether outcome differences exist when compared to women above 40 years old.
Methods: We prospectively collected data on 2137 consecutive female patients with CAD who underwent
percutaneous coronary intervention (PCI) between 2002 and 2007. Baseline clinical
characteristics and patient follow up data were obtained from medical records or telephone
follow-up. Primary outcomes were major adverse cardiovascular events (MACE) of myocardial
infarction (MI), repeat revascularization and all-cause death at six months, one year and two
years. Results: There were more women (70%), compared to males (30%), Indians (13%)
and other races (4%) (p < 0.001), aged 40 years and below. Compared to older women, a family history of premature
coronary artery disease (CAD) and a personal history of prior smoking were associated with CAD among the younger women (OR 4.38 95% CI 1.83–9.81 = 0.002 (7% vs. 25%) and OR 2.63 95% CI 1.17–5.92 = 0.024 (11% vs. 25%)
respectively. A proportion of young women had systemic lupus erythematosus (6%), end-stage
renal failure (6%) or a history of thrombophilia (3%). Compared to the older women, a significant
proportion of younger women presented for the first time with ST-elevation myocardial
infarction (STEMI) requiring acute PCI (OR 3.09 95% CI 1.37–6.97 = 0.011 (9% vs. 25%)
respectively. MACE event rates at six months, one year and two years were 1%, 2% and 1% respectively.
There was no difference in overall outcome between the groups (9% vs. 7%, p = 0.09).
Conclusion: In this multi-ethnic Asian population, smoking and family history of premature
CAD is associated with premature CAD among young women in whom a significant proportion
present for the first time with STEMI. Young women did not appear to have worse short-term
prognosis compared to older women. Further studies are warranted to investigate the impact of
non-traditional risk factors like lupus and hypercoagulable states on CAD in young women.

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