Chlamydia (Chlamydia) pneumoniae Specific Antibodies in Thai Patients with Myocardial Infarction

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SUMMARY: To investigate the correlation between Chlamydia pneumoniae infection and acute myocardial infarction (AMI), a total of 101 serum specimens collected from patients with AMI admitted to the coronary care unit, Bhumibol Adulyadej Hospital, and serum specimens collected from healthy blood donors (control group) were examined by using the micro-immunofluorescence test. C. pneumoniae antibody-positive cases were found in 52 (52%) patients, consisting of 30 males and 22 females, though no significant difference of prevalence rate was observed when compared with the rate in the control group. However, the level of IgG titers in patients was higher than that in the controls, and this finding may support an association between C. pneumoniae infection and AMI. Among patients with AMI, several cases were suspected to have current infections because of a fourfold or higher titer increase in IgG or titers in IgM antibody of 1:32 or 1:64. There is no significant correlation between serologic test results and diabetes mellitus, hypertension, hyper cholesterol, a smoking habit, or the location of myocardial infarction among patients with AMI.
The prevalence of *C. pneumoniae* antibody by gender and age in patients with acute myocardial infarction

<table>
<thead>
<tr>
<th>Age</th>
<th>Male</th>
<th>Female</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. tested</td>
<td>IgG titer (%)</td>
<td>No. tested</td>
<td>IgG titer (%)</td>
<td>No. tested</td>
</tr>
<tr>
<td>31-40</td>
<td>4</td>
<td>2(50)</td>
<td>3</td>
<td>2(67)*</td>
</tr>
<tr>
<td>41-50</td>
<td>16</td>
<td>5(31)*</td>
<td>4</td>
<td>1(25)</td>
</tr>
<tr>
<td>51-60</td>
<td>12</td>
<td>4(33)**</td>
<td>5</td>
<td>2(40)</td>
</tr>
<tr>
<td>61-70</td>
<td>23</td>
<td>13(57)*</td>
<td>19</td>
<td>8(42)***</td>
</tr>
<tr>
<td>71+</td>
<td>10</td>
<td>6(60)*</td>
<td>4</td>
<td>1(20)</td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
<td>30(46)</td>
<td>35</td>
<td>22(61)</td>
</tr>
</tbody>
</table>

*: Includes one patient with IgM 1:32.
**: Includes two patients with IgM 1:32.
***: Includes two patients with IgM 1:64.
†: Includes one patient with a four- or eightfold rise in IgG titer.
*: Includes two patients with a four- or 16-fold rise in IgG titer.

The level of seropositivity in the controls was almost the same as in the patients. However, the level of IgG titers in patients was higher than that in the control, and this finding may support an association between *C. pneumoniae* infection and AMI. To confirm this fact, further studies are needed. Furthermore, some of the patients with AMI had detectable IgM antibody to *C. pneumoniae*, 1:32 to 1:64, and as well some patients showed a fourfold rise in IgG titer. Although the pretreatment of serum specimens with anti-human IgG to eliminate the rheumatoid factor was not performed, current *C. pneumoniae* infection should occur among the patients. However, the influence of current *C. pneumoniae* infection on AMI is not clear and therefore further investigation will be required. The risk factor for AMI was usually independent but sometimes synergistic with two factors such as age and smoking. Previous findings (8,9) indicating that an association between *C. pneumoniae* infection and AMI was limited to smokers raised the possibility that current or past smokers may be more likely to develop myocardial infarction with *C. pneumoniae*. In the present study, however, such a tendency was not observed.

REFERENCES


