Clinical utility of anti-CCP antibodies in the differential diagnosis of elderly-onset rheumatoid arthritis and polymyalgia rheumatica

M. Lopez-Hoyos, C. Ruiz de Alegria, R. Blanco, J. Crespo, M. Peña, V. Rodriguez-Valverde and V. M. Martinez-Taboada

Background. In a significant number of patients the differential diagnosis between elderly-onset rheumatoid arthritis (EORA) and polymyalgia rheumatica (PMR) is very difficult because of the lack of specific serum markers. Anti-cyclic citrullinated peptide antibodies (anti-CCP Abs) have recently been shown to be highly specific for rheumatoid arthritis (RA). This is the first study addressing the utility of these antibodies in the differential diagnosis between EORA and PMR.

Methods. Serum samples from 57 EORA patients and 49 PMR patients were studied for the presence of anti-CCP Abs and rheumatoid factor (RF). As controls, samples from 41 RA patients (age at onset < 60 yr) and 24 aged healthy subjects were analysed.

Results. Sixty-five per cent of EORA patients had anti-CCP Abs, whereas none of the PMR patients or the aged healthy subjects was positive for those antibodies. Ten of the EORA patients started with polymyalgic symptoms and two of them were positive for anti-CCP Abs. Interestingly, there was a significant correlation between anti-CCP Abs and RF in EORA but not in young RA patients.

Conclusions. The presence of anti-CCP Abs in a patient with clinical symptoms of PMR must be interpreted as highly suggestive of EORA.

KEY WORDS: Polymyalgia rheumatica, Rheumatoid arthritis, Elderly, Anti-CCP antibodies.
Table 1. Demographic and serological data of patients included in the study

<table>
<thead>
<tr>
<th></th>
<th>EORA</th>
<th>PMR</th>
<th>Classic RA</th>
<th>Healthy subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>57</td>
<td>49</td>
<td>41</td>
<td>24</td>
</tr>
<tr>
<td>Male/female</td>
<td>25/33</td>
<td>16/27</td>
<td>12/29</td>
<td>10/14</td>
</tr>
<tr>
<td>Age (yr): mean ± s.d.</td>
<td>69.4 ± 7.1</td>
<td>71.4 ± 8</td>
<td>45.9 ± 10.2</td>
<td>73 ± 8</td>
</tr>
<tr>
<td>Positive for anti-CCP Abs (%)</td>
<td>64.7 β 0</td>
<td>92.7 β 0</td>
<td>93.5 β 0</td>
<td>0</td>
</tr>
<tr>
<td>Anti-CCP Abs (units): mean ± s.e.</td>
<td>912 ± 109</td>
<td>935 ± 93</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Positive for RF (%)</td>
<td>66.7 β 0</td>
<td>87.8 β 0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>RFa (IU/ml): mean ± s.e.</td>
<td>423 ± 112</td>
<td>35.3 ± 2.4</td>
<td>639 ± 235c</td>
<td></td>
</tr>
</tbody>
</table>

*Mean ± s.d. was calculated only for positive sera.

³P < 0.001 vs PMR and HS.

- Anti-CCP antibodies are useful in the differential diagnosis of EORA and PMR.

The authors have declared no conflicts of interest.

References

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