The association between fibromyalgia and carpal tunnel syndrome in the general population

Fibromyalgia and carpal tunnel syndrome are common diseases in adults: women. Their prevalences in the whole population are 2% and 9.2%, respectively. Recently, a study performed in northern Spain has suggested that the two conditions are often associated, with patients presenting fibromyalgia showing evidence of carpal tunnel syndrome. This 16% prevalence for the association is higher than that observed for carpal tunnel syndrome alone and suggests that common underlying mechanisms are at work. However, the study was done on patients referred to the clinic for fibromyalgia and no data are known about the occurrence of the association in the general population. During a survey on the prevalence of peripheral pain in an Italian population sample, we came across several patients with fibromyalgia or carpal tunnel syndrome and have studied the occurrence of the association between the two conditions.

A postal questionnaire was sent to 4456 subjects living in Chiavari, northern Italy, to investigate the presence of articular signs and symptoms associated with fibromyalgia that is widespread and the presence of the syndrome in at least 11 of 18 sites (tender points). The diagnosis of carpal tunnel syndrome was made on clinical grounds. It included (a) history of numbness, paraesthesia, and/or pain in the fingers innervated by the median nerve, and (b) positive Tinel sign or positive Phalen sign. Invasive tests, such as nerve conduction studies, were not performed in view of the epidemiological nature of the research.

After two mailings, 2440 out of 4456 subjects (54.8%) returned the questionnaire. Of these, 182 (7.5%) had joint pain and swelling in at least two joints. This group of patients was offered a clinical examination; 93 (51.1%) agreed to be visited. Fibromyalgia was present in 21 (22.6%) of these patients and carpal tunnel syndrome in 26 (28%). Both conditions occurred simultaneously in nine patients (9.7%) (table). The odds ratio for patients with any one of the conditions of showing the other one was 2.4 (95% confidence interval 0.9 to 6.8). These fibromyalgia-carpal tunnel syndrome patients were the most severe, with patients with carpal tunnel syndrome were more severe, more prevalent and prevalent in men. Their number of tender points was obviously higher in patients with fibromyalgia than in those with carpal tunnel syndrome alone (13.2 ± 3.8; P < 0.001). Self-reported joint swelling and early morning stiffness were more severe in the three groups of patients.

Our data show that respondents who reported a history of joint pain and swelling of peripheral joints were often affected by fibromyalgia or carpal tunnel syndrome. This study does not disclose the absolute prevalence of fibromyalgia and carpal tunnel syndrome because the questionnaire was intended for screening patients with possible rheumatologic conditions. There is no assurance that those with fibromyalgia or carpal tunnel syndrome. However, in a pilot study, most of the patients with these conditions attending a rheumatologic clinic complained self-reported joint swelling and early morning stiffness. We believe that patients with fibromyalgia reported articular involvement of the carpal tunnel syndrome and that this subgroup is more likely to respond to questionnaires. A further limitation of this study was that the same observer performed the Tinel and Phalen tests and pressed tender points. Therefore, information bias cannot be excluded. Both biases would increase the strength of this association. Nevertheless we feel that the magnitude of the association between fibromyalgia and carpal tunnel syndrome is the general population. This study should prompt further investigation on possible similarities in the aetiological mechanisms at work in these conditions.

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Correction

In the paper by Torre et al in the August issue ("Antibodies to ribosomal P proteins . . .", p 562), the authors' names were printed in the wrong order. The order should have been; J C Torre, L Mozo, A Suárez, E Ramos, C Gutiérrez.

Demographic and clinical characteristics of the patients, expressed as means and 95% confidence intervals (CI)

<table>
<thead>
<tr>
<th>Fibromyalgia</th>
<th>Carpal tunnel syndrome</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>Men/women</td>
<td>11/11</td>
<td>4/13</td>
</tr>
<tr>
<td>Mean age (years) (SD)</td>
<td>58.7 (15.5)</td>
<td>51.8 (14.6)</td>
</tr>
<tr>
<td>Mean number of tender points</td>
<td>3.8 (2.6-6.5)</td>
<td>3.8 (2.6-6.5)</td>
</tr>
<tr>
<td>Mean duration of morning stiffness (min)</td>
<td>65.7 (23.2-108.2)</td>
<td>44.5 (25.7-63.3)</td>
</tr>
<tr>
<td>Mean number of joints swollen</td>
<td>5.8 (3.5-8.1)</td>
<td>3.8 (2.9-4.7)</td>
</tr>
</tbody>
</table>

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