Enthesopathy index in ankyllosing spondylitis

Sir. We read with interest the report by Mander et al on the use of an enthesis index in ankyllosing spondylitis.1 We have developed a similar enthesis index (EI) based on tenderness over areas of tendon, ligament, or joint capsule insertion. The areas palpated are scored on a similar four point scale (0–3). The areas palpated are the symphysis pubis, vertebral processes at C1/C2, C7/T1, L12/L1, L5/S1 plus both greater trochanters, pelvic adductor origin, anterior superior border of the iliac crests, ischial tuberosities, sternoclavicular joints, sternocostal joints plus the insertions of the Achilles tendon and plantar fascia. This can give a potential score of 66. We examined this index in 52 patients with ankyllosing spondylitis (AS). The index was scored by a single observer (EJB), and 50% had a positive score with mean of 5 (SE 0.84; range 1–16). On comparison of AS patients with a positive score and those with a negative score (Mann-Whitney U test or Student’s t test, according to distribution) it was apparent that a positive enthesis score was associated with more severe disease (Table 1). In those 26 patients with a positive EI a relation with other variables of disease activity was sought (Spearman rank correlation). Similar findings were found to those of Mander et al,1 with a significant correlation between EI and pain (visual analogue scale (VAS) 10 cm horizontal scale, r=0.7, p<0.01) and severity of morning stiffness (VAS 10 cm horizontal scale, r=0.7, p<0.01). No apparent relation was observed between EI and C reactive protein (CRP), orosomucoid, erythrocyte sedimentation rate (ESR), globulins, duration of morning stiffness (MS), forced vital capacity (FVC), and measurements of spinal movement (Schober’s test, finger/ floor distance, occipital/wall distance).

Although both Mander et al and ourselves have independently developed a similar EI and found similar results, it is apparent that only 50% of patients with AS have a positive EI score and it therefore has no diagnostic role. Because the EI relates directly to subjective measures only, it is important to determine what the indexes are measuring. We agree with Mander et al that an EI provides a useful clinical measure for AS, suitable for the assessment of various therapeutic procedures, but its relation with the natural history of the disease needs to be established.

Table 1  Comparison of AS patients with a positive or a negative enthesis index†

<table>
<thead>
<tr>
<th></th>
<th>Negative EI (n=20)</th>
<th>Positive EI (n=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M:F</td>
<td>25:1</td>
<td>22:4</td>
</tr>
<tr>
<td>Mean age</td>
<td>37:8 (2:06)</td>
<td>38:7 (1:9)</td>
</tr>
<tr>
<td>History of disease (years)</td>
<td>11:1 (1:9)</td>
<td>12:2 (1:7)</td>
</tr>
<tr>
<td>CRP (mg/l)</td>
<td>16:9 (2:9)</td>
<td>30:2 (4:1)***</td>
</tr>
<tr>
<td>ESR (mm/1st h)</td>
<td>17 (2:7)</td>
<td>32 (4:4)***</td>
</tr>
<tr>
<td>Orosomucoid (g/l)</td>
<td>0:89 (0:04)</td>
<td>1:06 (0:04)***</td>
</tr>
<tr>
<td>Globulins (g/l)</td>
<td>30:4 (0:97)</td>
<td>34:3 (1:1)**</td>
</tr>
<tr>
<td>MS (min)</td>
<td>37 (12:7)</td>
<td>78:9 (28:9)</td>
</tr>
<tr>
<td>VAS MS (mm)</td>
<td>20:2 (4:5)</td>
<td>22:8 (5:4)</td>
</tr>
<tr>
<td>VAS pain (mm)</td>
<td>20:4 (5:1)</td>
<td>32:03 (6:7)</td>
</tr>
<tr>
<td>FVC (ml)</td>
<td>3377 (133)</td>
<td>2952 (134)*</td>
</tr>
<tr>
<td>Schober (cm)</td>
<td>5:2 (0:43)</td>
<td>4:47 (0:89)*</td>
</tr>
<tr>
<td>Finger/floor (inches)</td>
<td>5:3 (1:05)</td>
<td>7:4 (0:93)*</td>
</tr>
<tr>
<td>Occipital/wall (inches)</td>
<td>2:26 (0:5)</td>
<td>3:08 (0:4)</td>
</tr>
</tbody>
</table>

†p<0.05; **p<0.01; ***p<0.005.
††Values are mean (SE).

Atlandoaxial subluxation and spinal cord compression in psoriatic arthropathy

Sir. The high incidence of atlantoaxial subluxation in rheumatoid arthritis has been well described. In psoriatic arthropathy the incidence of C1–2 instability is uncertain. An extensive search of the literature has disclosed only two fully recorded cases, neither of which had features of spinal cord compression. We therefore wish to report a patient with classical psoriatic arthropathy who developed severe spinal cord compression after a minor head injury.

A 53 year old man with psoriatic arthropathy was admitted after minor trauma to the skull. There was no loss of consciousness, but he was aware of the loss of function of the left arm and leg. On examination he was found to be hyper-reflexogenic with bilateral clonus. He exhibited the clinical features of a Brown-Séquard syndrome with a motor defect to C5 on the left and a sensory level to T5 on the right.

His psoriasis was characterised by the presence of extensive psoriatic skin lesions and nail changes, together with marked psoriatic arthropathy, including arthritis mutilans of the hands. There was no radiological evidence of ankyllosing spondylitis, but paravertebral calcification consistent with psoriatic spondylitis was noted. Rheumatoid factor was negative.

Atlandoaxial subluxation with a separation of 6 mm had been noted radiologically five years previously. On admission, flexion/extension views showed this to have increased to 9 mm (Fig. 1). An emergency myelogram showed severe spinal cord compression by the posterior arch of the atlas as it subluxed forwards on the axis to a maximum of 14 mm.

Reference

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HLA-B27 in Turkish patients with rheumatoid arthritis

Sir, Isomaki et al initially reported an increased prevalence of HLA-B27 in rheumatoid arthritis (RA) in Finland. Later, two studies from Turkey pointed out that this was also true for Turkish patients, but with a lower prevalence of B27 both among the patients and the healthy population.  

In the study from our laboratory, of 50 consecutive, seropositive (by latex agglutination) patients with RA, the prevalence of HLA-B27 was 7/50 (14%), whereas the prevalence of the same allele was 8/268 (3%) among healthy controls ($\chi^2 = 9.06, p<0.01$). The prevalence of the only other allele investigated in this study, HLA-B5, was 33% among the patients and 33% among controls.

Recently we had the opportunity to reassess our findings. Thirty two Turkish patients with definite or classical RA were HLA typed in Leiden, Holland as part of a study with Dr J D Perry of London, to compare the severity of disease in English and Turkish patients.

The prevalence of HLA-B27 was 6/32 (19%) among patients and 3/50 (6%) among controls, confirming our earlier observation. This approached the conventional significance level if it is accepted that the corrected p value is not used if a significant association has previously been shown (RR=3.22, $\chi^2=3.06, p=0.076$). The prevalence of DR4 was 14/32 (44%) among patients, whereas it was 11/50 (22%) among controls (RR=2.69, $\chi^2=4.31, p=0.035$).

The Ural-Altaic hypothesis claims that there are linguistic ties between the Turks and the Finns. The association of RA with HLA-B27 may be another link supporting this hypothesis.

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References

The patient was initially treated by skull traction, with some reduction of the subluxation. Two weeks later he underwent atlantoaxial fusion with interlaminar wiring. Clinical improvement was gradual, but by three months there was sound fusion and a full neurological recovery except for minor ankle clonus.

The exact pathology of atlantoaxial subluxation in psoriatic arthropathy is uncertain, but it is likely that an inflammatory arthritis with soft tissue involvement and synovial proliferation in the synovial joints around the odontoid peg results in degeneration of the adjacent transverse ligament. It is not certain whether pannus plays any part in the compression, as occurs in rheumatoid arthritis.

In conclusion, this report confirms an association, albeit uncommon, of atlantoaxial subluxation with psoriatic arthropathy, and emphasises the potentially dangerous nature of this complication.

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Fig. 1 Atlantoaxial subluxation with a separation of 9 mm.
Atlandoaxial subluxation and spinal cord compression in psoriatic arthropathy.
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