

Enthesopathy index in ankylosing spondylitis

SIR, We read with interest the report by Mander *et al* on the use of an enthesis index in ankylosing spondylitis.¹ We have developed a similar enthesopathy 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 ankylosing 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 enthesopathy 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.

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Reference

- Mander M, Simpson J M, McLellan A, Walker D, Goodacre J A, Carson Dick W. Studies with an enthesis index as a method of clinical assessment in ankylosing spondylitis. *Ann Rheum Dis* 1987; **46**: 197-202.

Atlantoaxial 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 ankylosing spondylitis, but paravertebral calcification consistent with psoriatic spondylitis was noted. Rheumatoid factor was negative.

Atlantoaxial 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.

Table 1 Comparison of AS patients with a positive or a negative enthesopathy index[†]

	Negative EI (n=26)	Positive EI (n=26)
M:F	25:1	22:4
Mean age	37.8 (2.06)	38.7 (1.9)
History of disease (years)	11.1 (1.9)	12.2 (1.7)
CRP (mg/l)	16.9 (2.9)	30.2 (4.1)***
ESR (mm/1st h)	17 (2.7)	32 (4.4)***
Orosomucoid (g/l)	0.89 (0.04)	1.06 (0.04)***
Globulins (g/l)	30.4 (0.97)	34.3 (1.1)**
MS (min)	37 (12.7)	78.9 (28.9)
VAS MS (mm)	20.2 (4.5)	22.8 (5.4)
VAS pain (mm)	20.4 (5.1)	32.03 (6.7)
FVC (ml)	3377 (133)	2952 (134)*
Schober (cm)	5.2 (0.43)	4.47 (0.89)*
Finger/floor (inches)	5.3 (1.05)	7.4 (0.93)*
Occipital/wall (inches)	2.26 (0.5)	3.08 (0.4)

* $p<0.05$; ** $p<0.01$; *** $p<0.005$.

[†]Values are mean (SE).