



**Figure 1** Contrast enhanced computed tomographic scans (A) demonstrating a soft tissue mass in the upper mediastinum (\*); (B) showing almost complete occlusion of the SVC (arrow); and (C) thrombosis within the left internal jugular vein (arrow). In (C) The right internal jugular vein cannot be seen.

obstruction.<sup>7</sup> In one of the eight patients, thrombosis of the iliac vein was found in a patient with lumbar vertebral osteitis and a large tissue mass surrounding the vein.<sup>8</sup> The pathological mechanisms of venous thrombosis are still not clearly understood, but it is suggested that it is caused by vein compression by hyperostosis, or sheathing of the veins by an inflammatory and fibrotic tissue mass.

We have observed a new case of SVC obstruction in SAPHO syndrome, which is of particular interest, as multiple thrombi were observed, not only in the SVC and both subclavian veins but also in the internal jugular vein, which is not directly adjacent to the affected bones and the mediastinal mass. In our case the congestive venous flow may reflect the thrombosis in the internal jugular vein. Van Holsbeeck *et al* reported a case of a patient with SAPHO syndrome with bilateral subclavian vein obstruction who had a high level of lupus anticoagulant.<sup>6</sup> Although our patient does not have any antiphospholipid antibodies, such factors may be associated with venous thrombosis in this syndrome.

SAPHO syndrome has some features of the spondyloarthropathies. Whether this syndrome is a unique subset of the spondyloarthropathies or is a distinct clinical entity is not well established. Nevertheless, the concept of SAPHO syndrome is useful in defining a subgroup of patients with unique clinical features. Venous thrombosis may lead to serious complications in patients with this syndrome. Our patient further emphasises the importance of recognising this complication in SAPHO syndrome.

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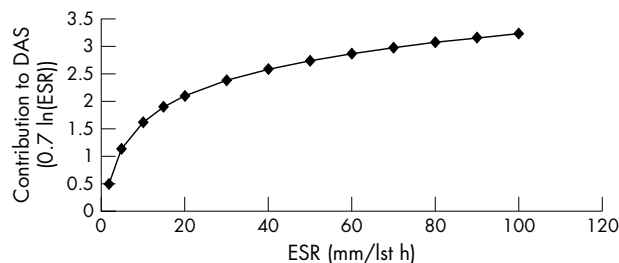
## A potential pitfall in the use of the Disease Activity Score (DAS28) as the main response criterion in treatment guidelines for patients with rheumatoid arthritis

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The Disease Activity Score<sup>1</sup> is widely used to quantify disease activity and gauge response to treatment. A rather complex calculation conceals the relative contribution of each measure to the composite score. The 28 joint version (DAS28) is used in the British Society for Rheumatology guidelines to determine response to anti-tumour

necrosis factor  $\alpha$  (anti-TNF $\alpha$ ) treatment.<sup>2</sup> A reduction in DAS28 of  $\geq 1.2$  is considered significant improvement, as is a reduction in DAS28 score to  $< 3.2$ . These figures are important, as under current guidelines clinicians are advised to discontinue anti-TNF treatment if either of these criteria is not achieved at 3 months.



**Figure 1** Contribution of ESR values to the DAS28 score.

In the course of reviewing decisions on whether or not to continue anti-TNF therapy, we identified several patients in whom the change in DAS28 score did not correlate with clinical findings. It was also noted that the clinicians relied heavily on the change in DAS28 score to determine if the treatment should be continued. In some cases, a relatively insignificant change in erythrocyte sedimentation rate (ESR) seemed to be responsible for a disproportionately great change in the DAS28 score.

To give an example, a 53 year old patient was treated with infliximab. At baseline his patient global assessment was 24, he had 10 swollen and five tender joints, and his ESR was 13 mm/1st h, resulting in a DAS28 score of 5.25. At the 3 month review the patient global assessment was 25; there were eight swollen and two tender joints, and the ESR was 4 mm/h. The second DAS28 score was 3.8, an impressive improvement of 1.45. Thus, even though there had been little or no discernible improvement, the DAS28 response exceeded the cut off point of 1.2 stipulated in the BSR guidelines. In this case, the guidelines advise continuation of treatment.

Figure 1 shows the contribution of the ESR to the DAS28 score. As a result of the log transformation of ESR values used to calculate the DAS28 score, changes in ESR below 20 mm/1st h have an inordinately large effect on the change in DAS28 score. Patients with a low initial ESR are thus more

likely to show greater improvements in the DAS28 score than those with a high initial ESR. The contribution of an ESR change of 17 to 2 mm/h to the change in DAS28 score is 1.5, whereas a change in ESR from 90 to 60 mm/1st h would have contributed just 0.27.

The DAS28 score continues to be a useful tool in clinical practice, particularly when auditing response to treatment in groups of patients. We would, however, caution against the use of the DAS28 score as the main response criterion in an individual patient, where the score seems to conflict with the assessments of the patient and clinician. In these cases misinterpretation may be avoided by careful evaluation of the individual components of the DAS28 score. It may be necessary to modify the guidelines to take into account situations where the change in DAS28 score is not representative of the clinical situation.

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- 2 BSR. Guidelines for prescribing TNF- $\alpha$  blockers in adults with rheumatoid arthritis. Report of a working party of the British Society for Rheumatology. London: BSR, 2001.

## No improvement in a pilot study of tai chi exercise in rheumatoid arthritis

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Tai chi, originally a Chinese martial arts, practises physical and mental integration with large, slow, and gracious movements. Tai chi has been shown to improve balance and prevent falls,<sup>1</sup> increase flexibility,<sup>2</sup> improve physical function,<sup>3-4</sup> and has recently been applied in osteoarthritis.<sup>5-6</sup> Little is known about possible beneficial effects of tai chi in rheumatoid arthritis (RA). We therefore performed an 8 week pilot study to explore the efficacy of a tai chi instruction programme on disease related measures in patients with RA.

#### PATIENTS AND METHODS

Fifteen women with RA aged 40-70 years (mean (SD) age 57.0 (8.6) years, mean (SD) disease duration 12.3 (5.7) years) with at least moderate disability (modified Health Assessment Questionnaire (MHAQ)  $\geq 1.5$ ) 1 year

before the study were randomly selected from the Oslo RA register and included.

Before, after 4 weeks of intervention, and within 1 week after completion of the 8 week intervention, patients were examined by blinded assessors. Self reported health status included the HAQ, Short Form-36 (SF-36), physical scales from the Arthritis Impact Measurement Scales (AIMS-2), pain, global assessment of disease activity, fatigue (100 mm visual analogue scale), and self efficacy.

At the final examination patients stated preferences for tai chi compared with previous conventional exercise, considering the usefulness of the method and the enjoyment experienced (100 mm Likert scales (50 = equality, 100 favours tai chi)). Physical performance tests measured muscle function in the shoulders and arms (high scores = good function),<sup>7</sup> the index of muscle function in the lower extremities (low scores = good function),<sup>8</sup> grip strength