Letters

Table 1 Comparison of characteristic findings in pansclerotic morphea, diffuse scleroderma, scleromyxoedema and scleroedema

	Pansclerotic morphea	Diffuse scleroderma	Sclero-myxoedema	Scleroedema
Face	+/-	++	++	+/-
Ears	-	+	++	-
Neck	+	++	++	++
Chest	Tank top	Diffuse	+	-
Areolae	-	-	-	-
Central back	++	-	+	++
Arms	+	++	+	+/-
Legs	+	++	+	+/-
Feet	+	++	-	+/-
Hands	+/-	++	+	-
Fingers	-	++	-	-
Nailfold capillaries	Normal	Abnormal	Normal	Normal
Autoantibodies	Uncommon	Present	Uncommon	Absent
Monoclonal gammopathy	Absent	Uncommon	Present	Uncommon

-, not typically involved; +/-, rarely involved; +, often involved; ++, characteristically involved.

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High prevalence of vertebral deformities in elderly patients with early rheumatoid arthritis

Generalised osteoporosis and local bone loss is a well-known complication of rheumatoid arthritis (RA). Vertebral fractures are the most common type of osteoporotic fracture and are associated with increased mortality and morbidity.¹ The presence of vertebral fractures increases the risk of new vertebral and non-vertebral fractures.² The prevalence of vertebral deformities in the Dutch population aged over 55 years in women and men is 15% and 12%, respectively.³ For patients with established RA (mean duration 16.6 years), an odds ratio for vertebral deformities of 2.0 was found,⁴ leading to an expected prevalence of vertebral deformities in elderly RA patients of 30% and 24% for women and men, respectively. As data on vertebral deformities in early RA are scarce, we measured the prevalence of this condition in a cross-sectional study.

Consecutive patients aged over 60 years who fulfilled the 1987 American College of Rheumatology criteria for RA at the first visit to our early arthritis clinic and completed a minimum of 2 years follow-up were included. The cumulative disease activity per patient during follow-up was calculated as the average disease activity score in 28 joints. Bone mineral density (BMD) was measured of the total hip and vertebrae L2–L4. Radiographs of the spine (T5–L4) were performed and scored according to a standardised semiquantitative method.⁵ Grades 0 to 3 represent a reduction in anterior, middle and/or posterior

vertebral heights of less than 20%, 20–25%, 25–40% and over 40%, respectively.

Ninety-eight patients (69% women) were included. The mean age at study inclusion was 68.7 years and the mean duration of follow-up was 6.1 years. Sixty per cent were anti-cyclic citrullinated peptide antibody positive. Vitamin D levels of less than 20 nmol/l were not found. In 28 patients (29%) at least one vertebral deformity was found (table 1).

The group of patients with versus the group without vertebral deformities had similar mean cumulative disease activity scores in 28 joints (3.59 vs 3.57) and health assessment questionnaire scores (0.63 vs 0.50, both NS). However, they were older on average ($p = 0.001$), and had lower mean BMD of the hip ($p = 0.017$) compared with those without vertebral deformities, even a trend remained after correction for age,

Table 1 Number of vertebral deformities (N = 98)

Vertebral deformities	N (%)
No deformity	70
One deformity	21 (21.5)
Grade I	16
Grade II	4
Grade III	1
Two deformities	7 (7.1)
Grade I	2
Grade I + II	2
Grade II	1
Grade II + III	1
Grade III + III	1

gender and rheumatoid factor status ($p = 0.07$). The mean BMD of the spine did not differ between the groups. The mean Z-scores were lower in those with a vertebral deformity; the difference was statistically significant at the hips. The use of corticosteroids, disease-modifying antirheumatic drugs, anti-tumour necrosis factor or bisphosphonates did not differ between the groups. Of 28 patients with vertebral deformities, only eight (29%) used bisphosphonates.

Almost 30% of these elderly patients with relatively early RA had vertebral deformities, which is in line with the pre-estimated percentage for patients over 60 years of age with established RA. This figure is higher than was found in the healthy population⁶ and is in line with previous studies in longstanding RA of more than 15 years' duration.^{7,8} The presently found association between vertebral deformities and low Z-scores and BMD of the hip is also in accordance with previous data.^{7,9} Only a minority of patients received bisphosphonate treatment, although bisphosphonates can reduce vertebral fractures by almost 50%.¹⁰

In conclusion, these results support the need for alertness for vertebral deformities even in early RA.

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Opposite relationships between circulating Dkk-1 and cartilage breakdown in patients with rheumatoid arthritis and knee osteoarthritis

Recent animal and clinical studies have suggested that Dkk-1, a secreted inhibitor of the canonical Wnt signalling pathway, could play an important role in mediating the alterations of joint tissue turnover associated with rheumatoid arthritis (RA) and osteoarthritis. Diarra *et al*¹ showed that blockage of Dkk-1 abolished bone erosion in an inflammatory mouse model and that circulating Dkk-1 was increased in patients with active RA. More recently, we reported that increased Dkk-1 was associated with a higher risk of radiological bone erosion in patients with early RA receiving anti-tumour necrosis factor therapy.² On the other hand, elevated circulating levels of Dkk-1 were reported to be moderately associated with reduced radiological progression of hip osteoarthritis in one study of elderly women.³ The

relationship between Dkk-1 and cartilage turnover in patients with RA and osteoarthritis is, however, unknown.

In this study we compared circulating Dkk-1 measured by ELISA (Biomedica, Vienna, Austria)² in 55 patients with active RA (65% women; mean age 55.4 years (SD 14.1), median disease duration 11 years), 85 subjects with knee osteoarthritis (74% women; mean age 62.8 years (SD 7.7), radiological Kellgren–Lawrence score II–III, median disease duration 3.45 years) and 93 healthy sex and age-matched controls and investigated its association with biochemical markers of cartilage degradation. All patients met the American College of Rheumatology criteria.

Circulating Dkk-1 levels were on average 479% higher ($p < 0.001$) in patients with RA, but 37% ($p < 0.0001$) lower in subjects with knee osteoarthritis (table 1) compared with healthy controls (3724 pg/ml; SD 1179). In patients with RA, Dkk-1 levels were associated with pain ($r = 0.40$, $p < 0.001$) and disease activity scores in 28 joints ($r = 0.25$, $p = 0.06$), but not with C-reactive protein levels ($p = 0.58$) as previously reported.² Dkk-1 were also positively associated with serum levels of the type II collagen degradation markers Helix-II ($r = 0.49$, $p < 0.001$) and C2C ($r = 0.60$, $p < 0.001$).⁴ The 33 (60%) RA patients with Dkk-1 levels above the 95th percentile of healthy controls had 38% ($p < 0.05$) higher Helix-II levels than the 21

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