414 Correspondence

by virtue of its insolubility, extended side-chain, or fluorine atom, also carries the 'best' side-effects.

H. A. BIRD
Rheumatism Research Unit,
University of Leeds.

References

- 1 Bird H A, Ring E F J, Bacon P A. A thermographic and clinical comparison of three intra-articular steroid preparations in rheumatoid arthritis. *Ann Rheum Dis* 1979; **38**: 36-9.
- 2 Bird H A, Ring E F J, Daniel R, Bacon P A. Comparison of intra-articular methotrexate with intra-articular triamcinolone hexacetonide by thermography. *Curr Med Res Opin* 1977; **5**: 141-6.
- 3 Hollander J L. Intrasynovial corticosteroid therapy in arthritis. *Md State Med J* 1970; **19**: 62-9.

Visual analogue pain scales

Sir,

We read with interest the paper by Jane Scott and E. C. Huskisson.¹ As a result of their study the authors concluded that either the horizontal or the vertical visual analogue scale (VAS) is satisfactory in the measurement of pain. Unfortunately they did not give any details about the patients used for their study, mentioning only that they suffered from painful conditions.

In our experience the vertical VAS can be misinterpreted by patients suffering from spinal diseases. Recently we studied the vertical and horizontal VAS in 200 consecutive, unselected cases of degenerative spinal diseases. None of them had seen any type of scales before. A standard explanation of the method was given to all of the patients by the same observer. One hundred patients were asked to complete the horizontal VAS and the other 100 patients the vertical one. In addition a simple descriptive pain scale² was also used for comparison. It was found that in 6 cases using the vertical VAS there was a clear contradiction between the results of the vertical pain scale and the simple descriptive one. As it turned out, these patients considered the vertical VAS to be a representation of the spinal column, the upper end representing the cervical part and the lower one the lumbosacral region. They labelled the spinal level of their pain on the vertical line, misunderstanding the aim of the method. Therefore we would advise against the use of the vertical VAS in cases with painful spinal conditions.

GYÖRGY GENTI, GEZA BALINT, AND EVA BORBAS
Országos Rheuma és Fizioterápiás Intézet,
Budapest, Hungary.

References

- 1 Scott J, Huskisson E C. Vertical and horizontal visual analogue scales. *Ann Rheum Dis* 1979; **38**: 560.
- 2 Keele K D. The painful chart. *Lancet* 1948; **ii**: 6-8.

Systemic lupus erythematosus and pulmonary manifestation

Sir,

Grennan *et al.*¹ reported in this journal a high frequency

of clinical evidence and abnormalities of lung function in patients with systemic lupus erythematosus (SLE) suggestive of pulmonary involvement. Fourteen out of 22 SLE patients had respiratory symptoms, but in only 4 patients were abnormalities of chest radiographs observed. Fourteen patients revealed reduced transfer factor, 5 of them in association with restrictive defects.

We have investigated 31 patients with SLE in regard to pulmonary involvement² and found our results to be different from those in the above mentioned study. We observed respiratory symptoms only in 10 patients (32%), whereas chest radiographs showed abnormalities in 21 patients (68%) (Table 1). We found concomitant obliteration of costophrenic angle and diaphragmatic elevation or segmental atelectasis and diaphragmatic elevation in 6 cases each.

Lung function analysis included spirometry, plethysmography, measurement of diffusing capacity and of compliance (for details in methods see Schernthaner *et al.*³ The results are shown in Table 2. Eight patients (26%) had normal results of lung function analysis. Seventeen patients showed restrictive ventilatory defects, 18 patients had a diminished lung compliance, and 12 patients had reduced diffusion capacity. In 9 of these patients restriction was observed in association with loss of compliance and reduced transfer factor, and in 5 patients restriction occurred together with decreased compliance. Restrictive defects alone were observed in 2 patients, disturbance of compliance alone in 4 patients, and reduced transfer factor in 2 patients. Restriction and loss of compliance showed the highest frequencies. Grennan *et al.*¹ observed restrictive defects in a similar percentage but lung compliance was not performed. In contrast to the results of Grennan *et al.*¹ we observed a lower incidence of reduced diffusing capacity despite the lack of correction for alteration in haemoglobin concentration. The reason for this difference is not clear. However, our results of transfer factor are in good agreement, with other reports.^{4,5}

Like Grennan *et al.*¹ we could not observe a low incidence of lupus nephritis in patients with pulmonary involvement as mentioned by Holgate *et al.*⁶ In our study patients with restriction, loss of compliance, and/or

Table 1 Radiological features of 31 SLE patients

	Number of cases
Normal chest radiograph	10
Obliteration of costophrenic angle	11
Pleural effusion	7
Segmental atelectasis	9
Diaphragmatic elevation	13
Reticulo-nodular shadowing	5

Table 2 Lung function analysis in 31 SLE patients

Abnormal	Vital capacity (% predicted value) <90	Specific compliance (ml/cmH ₂ O/l) <0.055	Specific diffusion capacity (ml/min/Torr/l) <4.5
MV±SD*	84.8±23.1	0.053±0.012	4.85±1.48
%**	54.8	58.0	38.7

*Mean value ± standard deviation.

**Percentage of patients with abnormal lung function parameter.