Table 1 Side effects in rheumatoid arthritis patients treated with D-penicillamine

Side effect	Males	Females	Anti-Ro positive	Anti-Ro negative
Proteinuria (>1.5 g/24 h)	4	5	3	6
Thrombocytopenia (<100 000)	1	1	0	2
Rash	1	1	1	1
No side effects	1	3	1	3

(27%) were anti-Ro positive, compared with 67% who developed side effects in the group of Moutsopoulos.¹

It is difficult to make comparisons between these different groups of rheumatoid patients. All our patients were Caucasians attending a District Rheumatology Clinic. We were looking for a cheap marker that might predict rheumatoid patients likely to develop drug side effects. We estimate anti-Ro antibodies may be 10 times cheaper than HLA-DR typing tests. Unfortunately anti-Ro antibodies did not separate those who developed major side effects, and only a large prospective study will determine whether it has any clinical relevance.

We thank the Regional Immunology Service, St Mary's Hospital, Manchester for the anti-Ro antibody test.

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Reference

- 1 Moutsopoulos H M, Skopouli F N, Sarras A K, *et al*. Anti-Ro (SSA) positive rheumatoid arthritis (RA): a clinicoserological group of patients with high incidence of D-penicillamine side effects. *Ann Rheum Dis* 1985; **44**: 215-9.

SIR, We read with interest the above letter. The discrepancy between our findings and those of Drs Stewart and Ridley may be attributed to the different ethnic background of the two groups tested.

In fact, Greek patients with rheumatoid arthritis (RA) are not associated with any of the HLA-A, -B, and -DR antigens tested.¹

We agree that a multicentre study is necessary to solve the question of whether anti-Ro antibodies in RA patients can serve as a marker for patients who are likely to develop D-penicillamine side effects.

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Reference

- 1 Papastriades C A, Kappou I D, Skopouli F N, Barla M N, Fostiropoulos G A, Moutsopoulos H M. Lack of HLA-antigen association in Greek rheumatoid arthritis patients. *Rheumatol Int* (in press).

Hypothalamic-pituitary-adrenal axis suppression after repeated intra-articular steroid injections

SIR, We read with interest the report of O'Sullivan *et al*. relating a case of Cushing's syndrome and hypothalamic-pituitary-adrenal (HPA) axis suppression caused by frequent large doses of intra-articular steroids. Such therapy is certainly unusual, although a survey of 25 rheumatology consultants appointed between 1979 and 1981 carried out by ourselves found that one of the 20 consultants replying had inherited patients receiving regular intra-articular corticosteroids (unpublished data). As we had inherited such a group of patients we undertook to test the HPA axis in eight patients with rheumatoid arthritis who had received regular intra-articular injections of methyl prednisolone acetate (160 mg a visit) for periods ranging from one to 11 years at intervals of five to six weeks. Two of the eight patients showed suppression of HPA axis function when tested both by short Synacthen and insulin stress tests five to six weeks after the last injection.² Although none of our patients had clinical evidence of Cushing's syndrome, our study did show sustained HPA axis suppression after intra-articular injection, as confirmed in the recent study of a single patient by O'Sullivan *et al*.¹

Although such suppression is unlikely to have major clinical implications in the majority of patients receiving intra-articular steroids, those rare individuals receiving regular intra-articular steroids should carry steroid warning cards advising precautions, similar to those taken in patients receiving oral corticosteroids, during intercurrent illness. There may also be a risk of an inadequate adrenal response in those patients who develop a serious intercurrent illness soon after a single injection of intra-articular steroid.³

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References

- 1 O'Sullivan M M, Rumfield W R, Jones M K, Williams B D. Cushing's syndrome with suppression of the hypothalamic-pituitary-adrenal axis after intra-articular steroid injections. *Ann Rheum Dis* 1985; **44**: 561-3.
- 2 Reid D M, Patel S, Reid I W, Eastmond C J, Rennie J A. Hypothalamic-pituitary-adrenal (HPA) axis function in patients receiving long-term intra-articular corticosteroids. *Clin Rheumatol* 1983; **2**: 159-61.
- 3 Armstrong R D, English J, Gibson J, Chakrabarty J, Marks V. Serum methyl prednisolone levels following intra-articular injection of methyl prednisolone acetate. *Ann Rheum Dis* 1981; **40**: 571-4.