Correspondence

Dapsone in rheumatoid arthritis

Sir, We read with interest the paper by Swinson *et al.*¹ on a double-blind trial of dapsone against placebo in the treatment of rheumatoid arthritis. We recently undertook a similar double-blind study using dapsone in an identical dose regimen to that already described (50 mg daily for one week and thereafter 100 mg daily) in 14 white patients with seropositive rheumatoid arthritis and comparing it against placebo (vitamin C) in 14 matched controls.

While we observed a similar trend towards improvement in both clinical and serological parameters in the dapsone-treated group, the incidence of anaemia secondary to haemolysis in our dapsone-treated patients was greater than that previously recorded.² Four of the 14 patients receiving dapsone had falls in haemoglobin of greater than 3 g/dl, and a further 3 patients had falls of between 1 and 3 g/dl. In all cases the fall in haemoglobin occurred within 6 weeks of commencing the therapy. Only one patient in the placebo group had a fall in haemoglobin of greater than 1 g/dl.

It has been demonstrated that the haemolytic activity of dapsone is dependent upon its being metabolised to an acetylated form.³ Therefore, in an attempt to elucidate further why some of our patients should develop severe haemolysis, we assessed the acetylator status (using isoniazid) in 13 of the patients receiving dapsone, 3 of whom had had falls in haemoglobin of greater than 3 g/dl and 3 of whom had had falls between 1 and 3 g/dl. The acetylator studies were performed in the University Department of Pharmacology, Newcastle upon Tyne. Eight of the patients were fast acetylators, but we failed to observe any association between the acetylator status and the severity of haemolysis.

This pilot study, therefore, while supporting the view that dapsone is an effective therapy in rheumatoid arthritis, also reveals a higher incidence of significant haemolysis than has previously been described. It does not appear that the identification of the acetylator status of rheumatoid patients is of any benefit in identifying patients who may develop significant haemolysis.

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References

- 1 Swinson D R, Zlosnick J, Jackson L. Double-blind trial of dapsone against placebo in the treatment of rheumatoid arthritis. *Ann Rheum Dis* 1981; **40**: 235-9.
- 2 McConkey E, Davies P, Crockson A P, Butler M,

Constable T J. Dapsone in rheumatoid arthritis. *Rheumatol Rehabil* 1976; **15**: 230-4.

- 3 Ellard C A, Gammon P T, Gavin J A, Tan R S H. Dapsone acetylation in dermatitis herpetiformis. *Br J Dermatol* 1974; **90**: 441-4.

Pulsed methylprednisolone

Sir, The use of intravenous methylprednisolone pulse therapy has previously been shown to be effective in the treatment of lupus nephritis.¹⁻⁴ However, recently Eyanson *et al.*⁵ first reported the beneficial effect of this therapy in 2 patients with severe nonrenal complications of systemic lupus erythematosus. We would like to describe a further case with life-threatening nonrenal lupus erythematosus which had failed to respond to high-dose oral corticosteroid therapy but showed dramatic clinical improvement with intravenous methylprednisolone given in pulses.

A 25-year-old female was admitted to hospital in March 1981 with arthralgias, alopecia, malaise, fever, confusion, severe headache, facial erythema, Raynaud's phenomenon, hepatosplenomegaly, oral candidiasis, and infected oral ulcers with abscess formation. The haemoglobin level was 10 g/dl, white blood count was $0.6 \times 10^9/l$ and platelet count was $50 \times 10^9/l$. The serum aspartate transaminase level was 1600 IU/l and the serum alanine transaminase level was 1800 IU/l. Urine analysis revealed no abnormality. Blood urea nitrogen was 18 mg/dl (3.0 mmol/l) and serum creatinine was 0.6 mg/dl (53 μ mol/l). The erythrocyte sedimentation rate was 80 mm/h. The antinuclear antibody titre was 1/160. Anti-DNA antibodies (single-stranded DNA) was 3 units (radioimmunoassay: normal up to 14 units). The serum C3 level was 69 mg/dl (0.69 g/l) by radial immunodiffusion (normal range 80-120 mg/dl = 0.8-1.2 g/l). Bone marrow aspiration failed to show any myeloproliferative or lymphoproliferative disorder. The skin and muscle biopsy from the right calf showed minimal vasculitis.

With the diagnosis of systemic lupus erythematosus, oral candidiasis, and possible anaerobic bacterial deep neck infection (which was thought to originate from the infected ulcers), oral 2 mg/kg prednisolone oral nystatins, and intravenous penicillin were started. Subsequently, after microbiological confirmation of susceptible micro-organism from the oral ulcers, intravenous gentamycin was added to the therapy.

After 10 days of antimicrobial therapy the deep neck infection and oral candida infection were controlled. Nevertheless, despite 2 weeks of high-dose oral prednisolone therapy she developed persistent tachycardia with a protodiastolic gallop rhythm and progressive pleural and pericardial effusion in addition to the