Correspondence

Desensitisation to allopurinol

SIR, Allopurinol is a highly effective, yet unique drug for the treatment of chronic gout. Mild allergic reactions are common, however, and in 5% of patients severe cutaneous reactions limit its use.¹ To date there are only three reports of desensitisation to allopurinol: two in patients with renal failure and one in a patient with severe chronic tophaceous gout.²⁻⁴ We now report a case of successful desensitisation to allopurinol in a patient with chronic polyarticular gout and a history of cutaneous allopurinol hypersensitivity. The implications for wider use are discussed.

Case report

A 53 year old man with a 24 year history of acute chronic polyarticular gout had failed to respond to aspirin, non-steroidal anti-inflammatory drugs, sulphinyprazone, and probenecid. Allopurinol had been taken three years previously but had produced a generalised rash with periorbital and oropharyngeal oedema. At the clinic he was taking azapropazone 600 mg twice daily.

On examination he was overweight, normotensive (130/85 mmHg), with a polyarthritis involving the proximal interphalangeal and metacarpophalangeal joints, wrists, and ankles. There were bilateral olecranon bursae with nodules and a left knee effusion which produced urate crystals on aspiration. Investigations showed normal full blood count, erythrocyte sedimentation rate 34 mm/1st h, latex test negative, antinuclear antibody test negative, urea 8.4 mmol/l, creatinine 117 µmol/l, uric acid 0.66 mmol/l. Liver function tests, cholesterol, and triglycerides were normal. Radiographic examination showed changes in the feet consistent with chronic gout. He was treated with colchicine and symptoms resolved. Hyperuricaemia persisted and probenecid was started, but recurrent flares occurred as colchicine was withdrawn. Allopurinol was reintroduced using the desensitisation regimen of Fam *et al*²: 50 mg allopurinol powder (Zyloric Calmic) was dissolved in 500 ml distilled water. The dosage schedule is shown in the table. This allowed for an exponential

increase in the dosage and it was important to use the preparation to which the patient became sensitive as the reaction may be due to excipients (bulking agents, lubricants, etc). Other drug therapy remained unchanged, and no adverse reactions occurred during the eight week course. The patient now takes 300 mg of allopurinol daily, azapropazone 600 mg twice daily, and probenecid has been stopped. He has experienced no more attacks of gout, but his serum urate has fallen to 0.45 mmol/l.

Introduction of allopurinol revolutionised the treatment of gout, not only the more severe forms such as chronic tophaceous gout, but also recurrent acute gout. The high prevalence of allergic reactions, however, ranging from mild urticaria to toxic epidermal necrolysis, limits its use in many patients. It has been suggested that mild cutaneous reactions may be managed by the use of antihistamine drugs until they settle—almost a desensitising regimen in itself. Five per cent of reactions are of such severity, however, that this treatment is not appropriate, as in our patient with a previous history of oropharyngeal oedema. Desensitisation regimens have been introduced recently for a number of drugs, for instance sulphasalazine, in both rheumatoid arthritis and ulcerative colitis.⁵ These regimens are simple and effective, and this is certainly the case with the allopurinol regimen that we used in our patient.

Since there are no available alternatives to allopurinol with its unique mode of action, we suggest that desensitisation should be more widely used for less severe cases of gout where allopurinol cutaneous hypersensitivity has caused the drug to be stopped.

Depts of Rheumatology and
Pharmacy,
Selly Oak Hospital,
Birmingham, B29 6JD

S M KELSEY
G R STRUTHERS
T BESWICK
D R BLACK

*Correspondence to Dr G R Struthers.

References

- 1 Kelley W M, Holmes E W. Anti-hyperuricaemic drugs. In: Kelley W M, Harris E D, Ruddy S, Sledge CB, eds. *Textbook of rheumatology*. 2nd ed. Eastbourne: Holt-Saunders, 1985: 861-7.
- 2 Fam A G, Paton T W, Chaiton A. Reinstitution of allopurinol therapy for gouty arthritis after cutaneous reactions. *Can Med Assoc J* 1980; **123**: 128-9.
- 3 Meyrier A. Desensitisation in a patient with chronic renal disease and severe allergy to allopurinol. *Br Med J* 1976; **ii**: 458.
- 4 Webster E, Panush R S. Allopurinol hypersensitivity in patient with severe chronic tophaceous gout. *Arthritis Rheum* 1985; **28**: 707-9.
- 5 Bax D E, Amos R S. Sulphasalazine in rheumatoid arthritis: desensitising the patient with a skin rash. *Ann Rheum Dis* 1986; **45**: 139-40.

Table Dosage schedule

Day	Dosage (ml)	Day	Dosage
1-5	0.5	22-24	100 ml
6-9	1	25-27	250 ml
10-12	2	28-30	Half 100 mg tablet
13-15	5	31-33	100 mg tablet
16-18	10	34 onwards	300 mg tablet
19-21	50		