of henna and p-phenylenediamine and its derivatives. Arch Dermatol 2000;136:1515-7.

Vandana Mehta Rai, S. D. Shenoi
Department of Skin & STD, Kasturba Medical College, Manipal – 576104, Karnataka, India.

Address for correspondence: Vandana Mehta Rai, Department of Skin and STD, Kasturba Medical College, Manipal – 576 104, Karnataka, India.
E-mail: vandanamht@yahoo.com

Parthenium dermatitis treated with azathioprine weekly pulse doses

Sir,

We first reported the effectiveness of Azathioprine in the management of chronic actinic dermatitis induced by parthenium[1] and hence found the article titled parthenium dermatitis treated with azathioprine weekly pulse doses[2] very stimulating. As discussed in Wolverton's, Comprehensive Dermatologic Drug Therapy,[3] there are 3 pathways by which azathioprine's first metabolite (6MP) is metabolized. 1) It is anabolised to its active form, a purine analog, by the enzyme hypoxanthine-guanine phosphorvibosyl transferase (HGPRT), (2) Catabolised by thiopurine methyl transferase (TMPT) and by xanthium oxidase (XO) to inactive metabolites. The purine analog following anabolic pathway interferes with DNA & RNA synthesis. Both catabolic pathways lead to inactive metabolites. Reduced activity of either catabolic pathway have potentially dramatic effects clinically.[4] A large majority of patients (89%) show high levels of TPMT, intermediate levels of TPMT activity is seen in 11% and 1 in 300 patient have very low levels.[5] Patients with low TPMT have markedly increased levels of 6-thioguanine metabolites which increases the risk of pancytopenia.[3]On the other hand those with high levels of TPMT may catabolically inactivate more drug and low dose may not be effective.[5,6]

The recommendation of the authors[2] of using 300 mg weekly pulse needs to interpreted based on the of above facts. Although it is known that aggressive dosing with azathioprine may lead to more rapid clinical effect and this fact has been convincingly proved by the authors[2] what if a patient has low or very low TPMT. The authors recommend a test dose with 50 mg for 48 hours and then administering 300 mg of the drug. Since 11% of patients have only partial deficiency the tolerance of 50 mg does not mean that the patient can tolerate 300 mg. The story could have been different if the authors had studied at least 300 patients since very low levels are seen in 1 in 300 patients.[3] However the study can still be of practical use and I humbly suggest the following approach. The dose of azathioprine can be gradually built up to 150 mg or 200 mg daily over a period of 1 to 2 months and once the patient is able to tolerate this dose 300 mg may be safely administered at weekly intervals. Once TMPT assessment becomes routine, we can follow the authors' recommendation.

REFERENCES

1. Srinivas CR, Balachandran C, Shenoi SD, Acharya S. Azathioprine in the treatment of parthenium dermatitis. Br J Dermatol 1991;124:394-5.
2. Verma KK, Bansal A, Sethuraman G. Parthenium dermatitis treated with azathioprine weekly pulse doses. Indian J Dermatol Venereol Leprol 2006;72:24-7.
3. Badalamenti S, Kerdel AF. Azathioprine. *In*: Comprehensive Dermatologic Drug Therapy. Wolverton SE, editor. W. B. Saunders Co: Philadelphia; 2001. p. 165-79.
4. Korman NJ. Update on the use of azathioprine in the management of pemphigus and bullous pemphigoid. Med Surg Dermatol 1996;3:209-13.
5. Snow JL, Gibson LE. The role of genetic variation in thiopurine methyltransferase activity and the efficacy and/or side effects of azathioprine therapy in dermatologic patients. Arch Dermatol 1995;131:193-7.
6. Snow JL, Gibson LE. A pharmacogenetic basis for the safe and effective use of azathioprine and other thiopurine drugs in dermatologic patients. J Am Acad Dermatol 1995;32:114-6.

C. R. Srinivas
Department of Dermatology, PSG Hospitals, Peelamedu, Coimbatore – 641 004.Tamil Nadu, India.

Address for correspondence: C. R. Srinivas, Department of Dermatology, PSG Hospitals, Peelamedu, Coimbatore – 641 004, Tamil Nadu, India.
E-mail: srini_cr_1955@yahoo.com