

A case of treatment resistant acute generalized pustular psoriasis responding to hydroxyurea

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Introduction

The 'old favourites' for treatment of acute generalized pustular psoriasis (AGPP) include methotrexate, oral retinoids and cyclosporine. Glucocorticoids are also effective. Hydroxyurea though effective in plaque psoriasis, is known to be less effective for AGPP. Here we report a case of treatment resistant acute generalized pustular psoriasis (AGPP) responding to hydroxyurea.

Case history

Mr. Sumith, a 28-year old male has had psoriasis since the age of 20 years. He experienced 3 episodes of severe life threatening AGPP during the course of the disease. He needed treatment with methotrexate, cyclosporine, acitretin, infliximab, dapson and oral steroids in various combinations to control those episodes. Due to these drugs he has developed hyperlipidaemia, hypertension and gynecomastia. He was recently admitted with generalized pustules, while on methotrexate 7.5 mg weekly, cyclosporine 50 mg daily and oral prednisolone 5 mg daily. Initially, doses of these drugs were increased to methotrexate 15 mg weekly, cyclosporine 200 mg daily and prednisolone 20 mg daily. He continued to develop new lesions, inspite of increasing the doses. After about 4 weeks hydroxyurea was started at a dose of 500 mg twice daily. There was a dramatic response within 6 days. Old lesions healed and new ones did not develop. After that we were able to withdraw oral steroids and reduce the doses of methotrexate and cyclosporine. He remains well and we are still reducing other systemic drugs.

Discussion

Hydroxyurea is a cytotoxic agent. It is also known as hydroxycarbamide. In psoriasis, it is thought to act by reducing the replication of DNA within the basal cell of the epidermis. A response is noted in about half of treated patients, sometimes in those resistant to other therapies such as methotrexate, acitretin or phototherapy. Hydroxyurea can be cautiously

combined with other antipsoriatic drugs. Care should be taken if combined with methotrexate as both drugs may cause additive bone marrow toxicity. It has been found to result in improvement in 50% cases of refractory psoriasis at a dose of 1g twice daily. Although a good to excellent response has been reported in 63% of patients with plaque psoriasis, it is not a common drug used in pustular psoriasis. However, in our patient it was shown to be effective.

It is relatively inexpensive and has few contraindications and is a relatively less toxic drug used, not only for plaque psoriasis, but also for erythrodermic and pustular psoriasis. The most severe side effect of this drug, myelosuppression, is relatively uncommon at the doses required to treat psoriasis (1-1.5 g) and is also reversible.

Hence hydroxyurea can be tried in treatment resistant AGPP even though there are only a few reported cases.

References

1. Kumar B, Saraswat A, Kaur I. Rediscovering hydroxyurea; its role in recalcitrant psoriasis. *Int J Dermatol* 2001; **40**: 530-4.
2. Yarbro JW. Hydroxyurea in the treatment of refractory psoriasis. *Lancet* 1969; **2**: 846-7.
3. Rosten M. Hydroxyurea: a new antimetabolite in the treatment of psoriasis. *Br J Dermatol* 1971; **85**: 177-81.
4. Moschella SL, Greenwald MA. Psoriasis with hydroxyurea: an 18-month study of 60 patients. *Arch Dermatol* 1973; **107**: 363-8.
5. Layton AM, Sheehan-Dare RA, Goodfield MJD, Cotterill JA. Hydroxyurea in the management of therapy resistant psoriasis. *Br J Dermatol* 1989; **121**: 647-53.
6. Hunter GA, Simmons IJ, Thomas BM. A clinical trial of hydroxyurea for psoriasis. *Aust J Dermatol* 1972; **13**: 93-9.
7. Lindgren S, Groth O. Generalised pustular psoriasis. *Acta Derma Venereol* 1976; **56**: 139-47.
8. Stein KM, Shelly WB, Winberg RA. Hydroxyurea in the treatment of pustular psoriasis. *Br J Dermatol* 1971; **85**: 81-5.