

COMMENTARY

Commentary to a Paper by Flosadóttir & Bjarnason on Full Dapsone Dose Made Possible by Control of Anaemia with Darbepoetin-alpha

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Dapsone has been used to treat neutrophilic skin diseases, particularly dermatitis herpetiformis, for approximately 60 years, and to treat linear immunoglobulin A (IgA) dermatosis for the last 30 years. The main haematological problems following dapsone use are haemolytic anaemia, agranulocytosis and methaemoglobinaemia.

In the previous issue of this journal, Flosadóttir & Bjarnason (1) reported the successful treatment of dapsone-induced anaemia with darbepoetin-alpha. In linear IgA-dermatosis, a gluten-sensitive enteropathy is rare (i.e. a gluten-free diet is not indicated), a spontaneous cure may take years (unless there is an obvious provoking factor, e.g. vancomycin, which can be discontinued), and the itchy inflammatory lesions have to be controlled on a long-term basis. The onset of moderate-severe anaemia following the start of dapsone treatment is therefore a clinical problem, particularly in elderly patients in whom a reduction in oxygen delivery to an already ischaemic heart and brain can be critical.

The present patient had a moderate haemolytic anaemia, which started a few days after the onset of only 25 mg dapsone daily and with a further reduction in the haemoglobin level when the dose was increased to 50 mg/day. Provided there is no glucose-6-phosphate dehydrogenase (G6PD) deficiency, the anaemia is dose-related and there is an individual sensitivity to the toxic metabolite, a hydroxylamine (2).

When an in-depth work-up reveals no other obvious cause than dapsone, the traditional systemic alternatives have been a combination of low-dose dapsone and prednisolone, which maintains an acceptable haemoglobin concentration and clinical efficacy, or to try

another anti-inflammatory agent, such as erythromycin or colchicine.

However, the authors chose erythropoietin, which was used successfully for 3 years: the dapsone dose could be increased to 150–200 mg/day, which controlled the symptoms and raised the haemoglobin level to 130 g/l.

Erythropoietin has been used in hundreds of thousands of patients to stimulate erythropoiesis as an alternative to blood transfusions. Recently this class of drugs has, however, been a source of controversy and confusion: randomized studies have found an increase in venous thromboembolic events and a decrease in overall survival (in patients with cancer) (2). It is obvious that erythropoietin is not just an erythrocyte production factor.

The report suggests a new concept in the management of dapsone-related anaemia. Further studies are, of course, required to evaluate its place in therapy. The complexity of the clinical problem also underlines the importance of co-operation with haematologists.

REFERENCES

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3. Arbuckle RB, Griffith NL, Iacovelli LM, Johnson PE, Jorgenson JA, et al. Continued challenges with the use of erythropoiesis-stimulating agents in patients with cancer: perspectives and issues on policy-guided health care. Pharmacotherapy 2008; 28: 1S–15S.

Note: This commentary was discussed with the authors during the review process.