Commentary: Topical haemoglobin in patients with diabetic foot wounds

Mike Green
Diabetes Specialist Podiatrist, Birmingham Community Healthcare NHS Trust

Being fortunate enough to have used topical haemoglobin (Granulox, infirst Healthcare), I was interested to read these consensus recommendations, first published in *Wounds UK* (2015), and to share my thoughts. The NHS is changing, with the saying 'more for less' now the catchphrase in vogue. In wound care this translates into healing more wounds with less money.

The newly released NICE guidance 'NG19 Diabetic foot problems: prevention and management' (published August, 2015) reports that the cost of treating a diabetic foot ulcer in hospital is £6,249, compared with £3,221 in the community. Many of these ulcers do not heal and require minor amputation, costing £8,450 per amputation, or £13,499 per major amputation. The recent 135 shoes campaign, aimed at raising public and government awareness on the number of diabetes-related amputations (which is now 135 per week), states that 80% are preventable (#135shoes).

The consensus recommendations reprinted here, direct healthcare professionals working in wound care down a different pathway to address the multitude of problems that will delay or prevent wounds from healing. Many publications have talked about reducing bacterial burden, offloading and reducing slough and exudate levels. These are all important factors that need addressing, but often we forget about tissue oxygen levels. The consensus emphasises that oxygen is vital for wound healing, but patients with diabetes often have poorly-perfused limbs due to peripheral arterial disease. This means that many ulcers have an insufficient supply of oxygen to support biological processes necessary for wound healing.

A two-layer oxygen-donating dressing has been available since 2007. In my clinical experience, I have witnessed the layers being put on back to front and its use requires a certain level of training. Granulox on the other hand is an easy-to-use spray that can be left in place for up to three days.

The recommendation to start Granulox within 2–4 weeks of a non-healing wound presenting makes clinical sense. All too often we look at new products and think: "I've thrown the kitchen sink at it so let's try this". Evidence for the use of Granulox is building in the treatment of wounds that show signs of hypoxia (Chadwick, 2014). In a recent case study evaluation in 20 patients, aside from the clinical benefits, Bateman (2015) reported that 75% of patients were able to apply Granulox independently. Having patients self-manage will help to release nursing time and reduce overall costs. However, it is important to screen patients to ensure they are willing to be involved in their care and are able to understand their condition and be aware of the clinical signs and symptoms of wound infection.

With this being a product using haemoglobin derived from red blood cells, additional consent is required and the extra paperwork may deter already very busy clinicians from using Granulox, who instead will choose a dressing. However, this may be the easy option. In an economic climate that is looking at every pound per unit cost, this product should hopefully prove value for money. Currently, the unit cost of £125 (plus VAT) may appear expensive for a can, but, can equate to approximately £4 per spray when used on a DFU, which is more than comparable to many leading dressings.

I look forward with interest to using Granulox in the future and hope that we can find answers to some of the gaps in our understanding on its clinical- and cost-effectiveness, including its role in the management of infected wounds. This consensus is a good document to read for those who have never used Granulox, and provides practical tips on how to use it in a range wound types, including diabetic foot wounds. There is also a treatment pathway to help practitioners decide when to use Granulox. ■

Bateman SD (2015) Topical haemoglobin spray for diabetic foot ulceration. *Br J Nurs* **24**: 20

Chadwick P (2014) Pilot study: haemoglobin spray in the treatment of chronic diabetic foot ulcers. *Wounds UK* **10**: 76–80

Chadwick P, McCardle J, Mohamud L (2015) Appropriate use of topical haemoglobin in chronic wound management: consensus recommendations. *Wounds UK* **11**: 30–5

National Institute for Health and Care Excellence (2015) *Diabetic Foot Problems: Prevention and Management.* NG19. Available from https://www.nice.org.uk/guidance/ng19 (accessed 14.09.2015)