LETTER TO THE EDITOR

Reply to cytotoxicity of silver dressings – time to think and react by Nagoba et al.

Dear Editors,

The recent letter to the journal entitled ‘Cytotoxicity of silver dressings – time to think and react’ by Nagoba et al. provides a stimulus to react and provide evidence that supports the safety of silver. It is acknowledged that laboratory and some animal data exist that show silver and indeed other antibacterial agents to have a deleterious effect on various cells that facilitate wound closure, and these have been adequately quoted in the letter. However, evidence also exists that demonstrates even the most potent modern-day forms of silver, in terms of speed of bacterial kill, do not have a deleterious effect on similar cell types (1,2), and there is no evidence of haematological or biochemical indicators of toxicity associated with silver absorption (3). The consistency in outcomes seen in laboratory is not reflected in the clinical use of modern-day silver dressings, where little or no evidence is seen to show silver delays wound healing in practice (4). This poses conflicting evidence from the laboratory and preclinical studies to the wealth of positive experiences seen and reported with the use of silver.

Consensus statements on antibacterials used in wound healing put forward the view that silver has a place in the armamentarium of compounds available to combat not just infection but as a topical option in combating the threat of antibacterial resistance development associated with the management of at-risk wounds. They also provide a framework for use of silver, which ensures choosing appropriate concentrations for appropriate time periods and use on appropriate wounds. Regular surveillance of progress at two weekly intervals will aid decision making of when to stop use and revert to non-medicated dressings (5).

On the basis of published evidence obtained from clinical practice, it is simply untrue that current silver-containing dressings are unsafe and will impair wound healing. Rapid speed of bacterial kill in wounds that have delayed healing, and then the cessation of antibacterial therapy will create a biological and cellular environment necessary to increase the trajectory of wound closure. Evidence shows that in chronic wounds high levels of silver can rapidly reduce the signs and symptoms of infection and result in faster healing when compared with lower silver release systems (6).

With bacterial resistance development in the UK being recently quoted as on the same national threat level as terrorism, we need to keep all antibacterial options open. Potency and safety will always be key considerations and higher silver-releasing dressings have recently been demonstrated to provide fast and effective kill in the laboratory of a series of NDM-1 strains that are resistant to most antibiotics (7). At the same time cytotoxicity seen in the laboratory has not been reflected in clinical practice. It is concluded that silver should remain an integral component of topical antibacterial options available in managing at-risk or infected wounds.

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References