



Wounds International's clinical innovations section presents recent developments in wound care. This issue, we focus on innovations in wound infection.

Developments in wound management down under



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Wound Infection. Those two words have been the source of much debate in recent years. Like many other countries, Australia has been swept up in the tide of products and strategies to minimise the burden of this ever-present scourge. The more cynical side of me sometimes wonders how any wound in the past ever healed without the vast armamentarium of resources available to manage modern wound infection! The past couple of years have been particularly interesting, as the phenomenon of silver has been tempered somewhat and management of wound infection has become more broadly focused.

PATIENT-RELATED ISSUES

In many areas of Australia, prevention and treatment of wound infection has become increasingly holistic. In the surgical area, risk minimisation strategies are being implemented to identify and manage patients at risk of wound infection. Negative pressure wound therapy (NPWT) is being used post-operatively by some clinicians on high-risk surgical incisions – although this is still relatively isolated.

There is an increasing focus on identifying and managing wound pathology. Australia has recently published evidence-based guidelines for venous leg ulcer management (Australian Wound Management Association, 2011) and diabetic foot ulcers (National Health and Medical Research Council [NHMRC], 2011), both of which were endorsed by Australia's leading research body, the NHMRC. As wound pathologies are diagnosed more often and managed by appropriately skilled clinicians, the detrimental consequences of wound infection are reduced.

CLINICIAN-RELATED ISSUES

There has been significant growth in the number of wound management nurses in recent years. In Australia, "nurse practitioner" is a legally protected title that can only be used by registered nurses who have been endorsed by our authorised regulatory body (the Nursing and Midwifery Board of Australia) as meeting the required professional

and educational standards. Wound management nurse practitioners have considerable local influence in areas of practice, policy, and standards. In the management of wound infection, wound management nurse practitioners work within the multidisciplinary team to ensure wound infection risk is minimised, and when infection occurs, that appropriate, evidence-based strategies are implemented to optimise outcomes.

WOUND MANAGEMENT: DEBRIDEMENT

The role of wound debridement in managing wound infection has led to significant changes in practice. When I began my career in wound management, debridement meant applying wet gauze, waiting for it to dry out, and literally ripping it off. Today, I consider this to be a form of legalised torture!

While it saddens me to acknowledge that there are some clinicians who still use this as their primary method of wound debridement, I am pleased to report that the vast majority have adopted alternative methods. Autolytic and sharp debridement remain the mainstay of wound debridement in Australia. However, sharp debridement is under-utilised, as many clinicians remain fearful of it and view it as a high-risk intervention.

Performing sharp debridement is not specifically regulated under the Health Practitioner Regulation National Law Act in Australia, but the clinician must possess the requisite skills to perform it. Serial sharp debridement is often difficult to achieve, particularly in out-patient settings. Sometimes, it is challenging to even get the average clinician to perform adequate wound cleansing and use mechanical debridement – such as scraping off loose nonviable tissue and debris.

The use of hydrosurgery and/or ultrasonic wound debridement has been incorporated into several specialist wound clinics. While these techniques are providing excellent outcomes, the considerable costs associated with them is limiting their availability and use. I am not aware of any community-based services offering these techniques and as a community-based practitioner myself, I am envious of my colleagues who have access to these resources.

Another wound debridement strategy enjoying increased resurgence is the use of maggots. Australia has one controlled maggot farm, located in Westmead Hospital, New South Wales. From here, medical-grade maggots are supplied to all Australian states and territories, and other countries in the Pacific (Geary et al, 2009).

Unfortunately, in many instances, maggot debridement therapy is only used as a last resort and not until all other options have been exhausted. Despite this, several wound care clinics are reporting success in reducing amputation rates through the use of maggot debridement therapy (Geary et al, 2009).

WOUND MANAGEMENT: DRESSINGS AND THERAPIES

It was not long ago that almost every patient had a silver-containing dressing applied to their wound, irrespective of wound pathology or clinical appearance. Similarly, some clinics embraced cadexomer iodine with similar fervour. Any foot wound was plastered with cadexomer iodine, whether there was an adequate amount of exudate to activate the product or not.

Use of these products was often continued for extended periods and clinicians were fearful of ceasing their use in case infection developed. The market became flooded with silver wound care products and many service providers became concerned by the costs. However, in some areas of Australia, where community patients have to pay for their own wound care products, usage of silver-containing products in out-patient settings was very limited.

I am pleased to report that use of antimicrobial products has become less a standard treatment and more a specialised strategy, reserved for wounds at very high risk of infection or exhibiting clinical signs of infection. However, products containing silver are still widely used in Australia. Many healthcare providers have introduced criteria for their use, restricting their use to locally authorised clinicians who regularly review their ongoing use. This has helped promote a more judicious use of silver-containing dressings in many areas.

Generally, Australia has not felt the same pressure that the NHS in the UK experienced following the release of the VULCAN Trial (Michaels et al, 2009) and has not had to broadly defend the continued use of, and access to, silver-containing dressings (Leaper and Drake, 2011). Despite this, there is still work to be done in some areas to establish more comprehensive patient and wound assessment, rather than treating all chronic wounds with silver-containing dressings. As most readers would acknowledge, silver-containing dressings are an adjunct to wound management, not the answer.

The range of antimicrobial products used to manage wound infection has also broadened, with honey and polyhexamethylene biguanide (PHMB) being increasingly used to manage wound infection. Products containing PHMB have become incorporated into the routine management of chronic wounds in a range of settings for its ability to assist in the disruption of wound biofilms. The integration of honey into different delivery systems, and the availability of several honey wound management products as registered medical devices in Australia (Molan, 2011), has resulted in increased use in clinical practice (Freeman et al, 2010).

CONCLUSION

Developments in recent years have seen an increasing range of strategies to both reduce the risk of infection and better manage infection if it develops in wounds. Clinicians have never had a wider range of products and strategies available to them. Australia, like most countries, faces increasing stress on health budgets, so the challenge for the future is to ensure that wound care can be both cost-effective and improve patient outcomes. ■

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