In conclusion, one of the most gratifying aspects of surgical practice, for the surgeon and patient alike, is the relief of pain. The challenge for surgeons is providing care for patients with chronic pain, and those at high risk of developing chronic pain, and performing pain-relieving procedures with limited evidence. The best way forward will be through improving pain education of surgeons, performing studies to establish the efficacy of the pain-relieving procedures we perform and maintaining transparency in our dealings with industry. If we do not accept this responsibility, others will make these decisions for us. Surgeons should be leaders in this process.

References

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doi: 10.1111/ans.12382

Introduction of new techniques in burn care in Australia and New Zealand: a survey

Burn injuries remain a common problem; an estimated 1% of the general population suffers a burn injury each year despite injury prevention programmes.1 Although only a proportion of these patients will require admission or referral to a specialized Burns Unit (BU), facilitating improved patient care outcomes has important resource implications.1,2 Overseas data would suggest considerable differences between BUs, especially in relation to three particular areas of burn wound management: the assessment of burn wound depth, use of burn wound dressings and surgical debridement techniques.3

Prediction of burn wound outcome has traditionally been by clinical examination. The use of laser Doppler imaging (LDI), which measures the change in the frequency of a reflected laser beam as a result of movement of erythrocytes in the burn wound, has been reported to enhance clinical assessment of burn depth, especially in children.3 Similar advances have also occurred in the areas of burn wound dressings and debridement. In Australasia, Silvazine (Smith & Nephew, Mount Waverley, Victoria, Australia), a hydrophilic cream containing 1% silver sulfadiazine and 0.2% chlorhexidine, has previously been regarded as a default burn dressing as it is widely available, easily applied and antibacterial. Evidence of its potential cytotoxic effects, subsequent pseudo-eschar formation confounding clinical assessment of burn depth and the need for daily dressing changes have all contributed to the development of alternatives, including nanocrystalline silver-based dressings such as Acticoat (Smith & Nephew) and Aqualcel Ag (ConvaTec, Monash, Victoria, Australia).4 Hydrotherapy, the use of a high-pressure water jet to debride necrotic or contaminated tissue, has also been increasingly adopted by burns surgeons as a result of its speed, ease of use and precision.5

We conducted a standardized telephone survey of senior staff members (nurse unit manager or medical head) of the 17 BUs in Australia and New Zealand to evaluate current approaches to the prediction of burn wound healing; dressings used in the management of partial and full thickness burn wounds within the first 72 h and primary surgical techniques used in the debridement of burn wounds. All interviews were conducted by the same author (LKPK), with a follow-up interview to clarify responses following review by the senior authors. A 100% response rate was achieved.

Laser Doppler imaging

While LDI was used in nine tertiary referral centres in Australia, the impact on clinical practice in terms of clinical decision making varied, with indeterminate burns the most frequent clinical scenario in which LDI was valued. None of New Zealand centres implemented the use of LDI for assessment of burns, despite some expressing interest in this technology.

Three hospitals in NSW surveyed used LDI to assess the depth of the burn and all considered that it influenced the timing of surgery. The paediatric and one of the adult BUs were the only two centres at which a formal report was issued. In contrast, South Australia (SA), Western Australia (WA), Queensland (Qld) and Victoria (Vic.) stated varied opinions on LDI, with most centres using LDI in selected cases only. Movement of the LDI scanner and the difficulty in children remaining stationary during scanning were considered obstacles to greater use of LDI in clinical practice. Tasmania (Tas.) and the Northern Territory (NT) did not use LDI in assessment of burn wounds, largely due to funding and training issues.

Overall, 80% (4 out of 5) of paediatric hospitals surveyed utilized LDI as a clinical tool compared to just 30% (4 out of 14) of adult hospitals. Several paediatric centres considered that LDI influenced both the timing and the planning of surgery as a result of greater accuracy in the paediatric population, reducing both inpatient and ambulatory care costs as a result despite the high initial cost of the device.
burn wound dressings

As might be expected, all centres used a range of dressings depending on the clinical situation and preferences of the treating team. Acticoat 3 (Smith & Nephew), a nanocrystalline silver-based dressing, was the most frequently used burn wound dressing in the first 72 h post-injury. Biobrane, a silicone film, Nylon fabric biosynthetic dressing (Smith & Nephew) and Bactigras (Smith & Nephew) were also commonly used. Some of these variations would be explained by the differences in clinical estimation of likely burn wound outcome, extent and distribution of the burns, and the time of presentation post-injury.

In NSW, Vic. and WA, Acticoat 3 was the most frequently used for both partial thickness and full thickness burns followed by Bactigras. Acticoat 7 was generally reserved for use in an ambulatory care setting in which wounds were reviewed on a weekly basis, or in paediatric inpatient setting where more frequent dressing changes would cause additional distress and discomfort. Several centres did not use Acticoat 7, citing high cost as a factor. Intrasite Gel (Smith & Nephew), hydrocolloid dressings and silicone-based dressings such as Mepilex (Molnlycke Health Care, Frenchs Forrest, NSW, Australia) were also used in some centres to complement the antibacterial properties of the silver-based dressings and to minimize pain during dressing changes.

While silver-based dressings were used widely, variations to this were seen in those states and territories with a typically warmer climate. Hydrocolloid dressings such as Comfeel (Coloplast, Mount Waverley, Victoria, Australia) were the most frequently used at the NT, where most burn wounds were assessed 2 weeks post-injury. In contrast, Silvazine (Smith & Nephew) was the preferred option at the adult BU in Qld.

Hydrosurgery and burn wound debridement

Conventional use of a scalpel, Goulian blade, Watson-Humby knife and in some centres dermabrasion were the primary methods of burn wound debridement in the majority of BUs.

Hydrosurgery, in the form of Versajet (Smith & Nephew), was routinely used for debridement in larger centres in NSW and Qld, primarily for smaller, special areas such as face and hands. One adult BU in NSW used hydrosurgery in their outpatient clinic, with appropriate anaesthetic support, thereby reducing the need for operating theatre time. While cost was one limiting factor, a few centres commented upon the learning curve associated with the use of this technique. The use of Versajet was more prevalent in paediatric hospitals (80%, or 4 out of 5, versus 58%, or 8 out of 14, of adult centres).

Overall, it was found that traditional techniques were the preferred method of debridement in most centres, although all centres acknowledged that this reflected the treating surgeon’s preference.

Within the limitations of this study and the possibility of bias on the part of the interviewer and the senior staff member interviewed, the current practice in burns management surveyed in this study varied between BUs in Australia and New Zealand. The difference in the use of LDI, burns dressings and method of debridement likely reflects variations in patient population, especially between adult and paediatric centres, in addition to climate, funding and resources available. This survey suggests that, despite the high level of cooperation between centres and ANZBA members as a whole, there remain considerable variations in practice, perhaps reflecting the paucity of evidence from clinical trials for many aspects of basic burns care.6 There would seem scope for greater collaboration, with the potential for enhanced outcomes and reduced costs resulting from common protocols.

Acknowledgements

The authors would like to thank their colleagues and fellow ANZBA members for taking the time to respond to the survey.

References


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doi: 10.1111/ans.12253

Consenting to a good death? Introducing the level 2 consent form

Clinical scenario

At 1830 h, on a busy Friday night in a public, tertiary hospital emergency department (ED), the senior physician received an unusual call. It was from a distressed young doctor from a small rural hospital in the neighbouring state. He asked permission to transfer a patient for admission. The weather was too bad for the helicopter to fly, and the closest tertiary hospital had no beds. The patient was 89 years old and was haemorrhaging from her liver. Before the senior