

## Wound digest

This digest summarises recent key papers published in the areas of pressure ulcers, skin integrity, venous leg ulcers and diabetic foot ulcers.

### SELECTED PAPERS OF INTEREST

1. Dressing comparison for paediatric burn wounds
2. Venous leg ulcer treatment guidelines and the need for a consensus document
3. Pressure-relieving support surfaces: a review of the evidence
4. National diabetic foot care strategy in Scotland
5. Developing and validating a risk score for amputation

To compile the digest a Medline search was performed for the three months ending in October 2011 using the search terms 'pressure ulcers', 'skin integrity', 'leg ulcers' and 'diabetic foot ulcers'. Papers have been chosen on the basis of their potential interest to practitioners involved in day-to-day wound care. The papers were rated according to readability, applicability to daily practice, and novelty factor.

### Skin integrity

#### 1 Dressing comparison for paediatric burn wounds

Readability	✓	✓	✓		
Relevance to daily practice	✓	✓			
Novelty factor	✓				

- This single-blind randomised controlled pilot study compared the performance of a silicone net dressing (Mepitel®, Mölnlycke Health Care) with a monofilament polyamide woven dressing (SurfaSoft®, Inn Med).
- The study group was recruited from paediatric patients (aged one–15 years) who required acute or reconstructive procedures for burn wounds and who were being treated with the epithelial cell suspension ReCell® (Avita Medical).
- All donor sites were treated with ReCell and covered with either Mepitel (n=5 — although eight people were initially recruited) or SurfaSoft (n=7). Measurements of the rate of epithelialisation and epidermal maturation, pain levels, and ease of dressing removal were recorded every two days until the wound healed.
- Results showed that there was no difference in the rate of epidermal maturation between the two groups. Less pain and force to remove the dressing was shown in the Mepitel group when compared with SurfaSoft. The rate of epithelialisation was found to be an unreliable measure.

- The authors concluded that further research was necessary and that study design could be informed by the results of this pilot study.

*Campanella SD, Rapley P, Ramelet AS. A randomised controlled pilot study comparing Mepitel® and SurfaSoft® on paediatric donor sites treated with ReCell®. Burns 2011; 37: 1334–42.*

### Leg ulcers

#### 2 Venous leg ulcer treatment guidelines and the need for a consensus document

Readability	✓	✓			
Relevance to daily practice	✓	✓	✓		
Novelty factor	✓				

- This article was based on an analysis of 14 treatment guidelines for venous leg ulcers from a range of countries found using a thorough Internet search.
- The authors collected information from the recommendations under the following headings: diagnosis, treatment, compression, adjunctive measures and prevention. They also discussed areas of both concordance and disagreement.
- Ankle/brachial index and venous duplex were recommended in 100% and 64%, respectively, of the guidelines. All guidelines recommended wound

dressings and high compression. Debridement was suggested in 86%. For adjunctive measures, 80% advocated pentoxifylline and approximately 50% physiotherapy for improving ankle joint mobility. The majority emphasised the preventive value of compression stockings and surgical reduction of superficial venous hypertension.

- Treatment guidelines improve the consistency and quality of care, as well as reducing costs. The authors emphasise the need to produce a consensus document as this would give the guidelines greater influence.

*O'Donnell Jr TF, M Balk E. The need for an Intersociety Consensus Guideline for venous ulcer. J Vasc Surg 2011; December (Suppl): 835–90.*

## Pressure ulcers

### 3 Pressure-relieving support surfaces: a review of the evidence

Readability	✓	✓	✓		
Relevance to daily practice	✓	✓	✓		
Novelty factor	✓	✓	✓		

- This was a systematic review of articles that assessed the effects of pressure-relieving support surfaces in the treatment of pressure ulcers.
- The review included 18 randomised controlled trials of support surfaces for pressure ulcer treatment, involving 1309 participants.
- Of three trials comparing air-fluidised devices with conventional therapy, two reported significant reductions in pressure ulcer size but the lack of reported variance data meant that the results could not be replicated and verified.
- Three of the trials reported significant reductions in pressure ulcer size in low air loss devices compared with foam alternatives but the reviewers found no significant differences.
- No conclusive evidence about the superiority of any support surface for the treatment of existing pressure ulcers was found.
- The trials were found to have poor quality study conduct and design.
- Further study is required before firm conclusions about the most effective support surfaces to treat pressure ulcers can be drawn. At present the evidence base is inadequate.

*McInnes E, Dumville JC, Jammali-Blasi A, Bell-Syer SEM. Support surfaces for treating pressure ulcers (Review). The Cochrane Library 2011; Issue 12*

## Diabetic foot ulcers

### 4 National diabetic foot care strategy in Scotland

Readability	✓	✓	✓	✓	
Relevance to daily practice	✓	✓	✓	✓	
Novelty factor	✓	✓	✓		

- A national strategy for diabetes foot care across Scotland has been developed by the Scottish Diabetes Foot Action Group (SDFAG).
- The national plan comprises patient information leaflets, education material and a consensus document for antibiotic use in the diabetic foot.
- Data collected indicate that 58% of Health Boards have consultants with dedicated foot clinics, and 42% had integrated orthotic involvement.
- SDFAG is working with Foot in Diabetes UK to identify key podiatry skills by developing core competencies and a competency framework for the diabetes podiatrist and diabetes orthotist.
- This national strategy aims to improve the quality of care for people with diabetes foot problems.

*Leese GP, Stang D, Pearson DW, et al. A national approach to diabetes foot risk stratification and foot care. Scott Med J 2011; 56: 151–55.*

### 5 Developing and validating a risk score for amputation

Readability	✓	✓	✓		
Relevance to daily practice	✓	✓	✓		
Novelty factor	✓	✓	✓	✓	

- The authors sought to develop and validate a risk score to identify people hospitalised for diabetic foot infection who were at the highest risk of lower extremity amputation (LEA).
- A large clinical database was used to identify 3018 people hospitalised at 97 US hospitals between 2003 and 2007, 21.4% of whom underwent LEA.
- Risk factors most highly associated with LEA were: surgical site infection, previous LEA, vasculopathy, and white blood cell count  $>11000/\text{mm}^3$  ( $P<0.0001$ ).
- The risk score stratified people into five groups, which showed a graded relation to LEA risk ( $P<0.0001$ ).
- The authors concluded that this risk score appears to accurately stratify the risk of LEA in people hospitalised for diabetic foot infection.

*Lipsky BA, Weigelt JA, Sun X, et al. Developing and validating a risk score for lower-extremity amputation in patients hospitalised for a diabetic foot infection. Diabetes Care 2011; 34: 1695–700.*