COMING EVENTS

Friday 20 February
Kellerberrin Country Wound Care Study Day

Wednesday 10 March from 5pm
Clinical Update: Case studies and discussion on hypergranulation
Facilitated by Beth Sperring
Mary Lockett Lecture Theatre, FJ Clarke Lecture Theatre Complex
P Block, Sir Charles Gairdner Hospital, Via Monash and Caladenia Avenues, Nedlands

17-20 March 2004
AWMA 2004
5th National Conference Celebrating 10 years – reflection and evolution
West Point Convention Centre, Hobart, Tasmania

8-13 July 2004
2nd World Union of Wound Healing Societies’ Meeting
Paris, France
www.mfgroupe.com

7-10 September 2004
Australian and New Zealand Burn Association
National Annual Conference
Adelaide Convention Centre, South Australia
Email enquiries: anzba@sapmea.asn.au
Editorial

Anita Hedzik & Pam Morey

Happy New Year to all our W AWCA members. Just for a change we thought we would surprise you with another newsletter delivered on schedule! Christmas and New Year were upon us before we had a chance to compile this, the fourth Newsletter for 2003 (December newsletter). W AWCA would be delighted to have the Newsletter Editor position filled and be swamped in submissions to the newsletter to make timely delivery easier. We hope this edition provides interesting reading, albeit late. Once again, we are grateful to Smith and Nephew for their continued sponsorship.

As the position of Newsletter Editor remains officially vacant, this responsibility will be shared among other W AWCA committee members for other issues in 2004. The next issues are scheduled for April, June, September and December. Once again, members are encouraged to share wound care tales, hints and strategies via the newsletter – articles can be sent via the addresses listed within the newsletter to any of the committee members.

The 5th Australian Wound Management Conference, Wrest Point Casino, Hobart, is due to be held on 17-20 March 2004 and it is not too late for members to attend this wonderful event. Also coming up in the W AWCA calendar, is a country Study day in Kellerberrin on Friday 20 February and our usual schedule of Clinical Updates.

Also in planning stages is a State Study Day on Saturday 16 October, so watch this space for more details in future newsletters. Members are reminded that funding is available from WAWCA via the Winnie Felle Education and Research Trust Fund. For more information or application forms, contact any of the committee members or write to the WAWCA Secretary as listed in this newsletter.

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Anita Hedzik

What’s happening in leg ulcer research?

Dr Genevieve Sadler

Why is this leg ulcer not healing... and what is the best way to treat it?

Anyone who has ever managed a patient with a chronic leg ulcer will have pondered over these questions. The Fremantle Hospital Leg Ulcer Clinic has been trying to find some answers for the last 15 years. The clinic, which was founded by Professor Michael Stacey, operates in close conjunction with the UWA School of Surgery and Pathology. Approximately 30 research projects have been conducted involving more than 500 patients with leg ulcers. The findings have improved our understanding of leg ulcers... and produced more questions!

On the 22 October, the clinic held an information day to share the current knowledge about leg ulcers with the patients who had participated in the research projects. There was a fantastic attendance, providing an opportunity to extend a sincere thankyou to these patients.

The presenting researchers – Hilary Wallace, Cheryl Pech, Genevieve Sadler and Naomi Trengove.
Five members of the research team discussed the findings of just some of the projects. The main research areas are described below.

**The epidemiology of leg ulcers**

Epidemiology aids in understanding the impact of a health problem, thus guiding further research. In 1989, the research group found that the prevalence of leg ulcers in Perth was 0.1%. This is likely to increase as the population ages. Early research also confirmed another problem with leg ulcers – they are very slow to heal. Only 67% of all ulcers healed after 6 months of the best available treatment in the clinic. Another interesting finding was that 4.5% of ulcers referred to the clinic were subsequently diagnosed as skin malignancies.

**Laboratory work**

A lot of the research conducted at Fremantle Hospital has been based within the Medical Sciences Laboratory. This work aims to develop a better understanding of the cellular and biochemical abnormalities within the leg ulcers. Wound fluid samples and ulcer biopsies are analysed. Non-healing ulcers are often compared to healing ulcers or acute wounds. Current theories suggest that a chronic leg ulcer is a hyper-inflammatory, proteolytic state.

**Clinical trials**

The Fremantle Ulcer Clinic has been involved in clinical trials of many different treatments for leg ulcers. Early research demonstrated the dramatic effect of compression bandages on the healing rate of venous leg ulcers. Over 3 months, 75% of patients treated with compression healed compared to only 20% of patients treated with a loose stockingette. Of course, compression stockings are also important in reducing the rate of recurrence of venous ulcers. More recent studies have investigated the role of different dressings including Bioband and Acticoat, although no particular product has been found to accelerate healing. There has also been international interest in developing topical growth factor preparations to stimulate wound healing. Unfortunately, two randomised controlled trials performed at Fremantle have not shown any benefit of applying growth factors to leg ulcers.

Honey has been applied to wounds for centuries and has received recent attention in the media. It is thought to have antibacterial and anti-inflammatory properties. In a study in the Fremantle clinic earlier this year, a medicated honey was applied to 10 patients’ leg ulcers for 2 weeks. Samples from the ulcers are now being analysed and the results are eagerly awaited.

Oral doxycycline is another treatment currently being investigated. It is thought to inhibit the proteases responsible for tissue breakdown within the ulcer. This effect occurs independently from the anti-bacterial effects of doxycycline. Recruitment of patients is continuing. The results of this study will be discussed at the Australian Wound Management Association Conference in Hobart in March 2004.

Genetic epidemiology is an area of increasing interest. Like many diseases, leg ulceration is probably due to a combination of genetic and environmental factors. A current study in the Fremantle laboratory is comparing the DNA of people with venous ulcers to those without any ulcers. It appears that at least one gene abnormality is associated with a tendency to leg ulcers. This may soon be investigated further with a larger international study.

**The future**

The puzzle of leg ulceration is yet to be solved and many more projects are planned. Of course, this work is not possible without the participation of patients with leg ulcers. Any patients who are keen to participate in clinical trials are welcome in the Fremantle Ulcer Clinic. Exciting new treatments will undoubtedly be developed in the near future.
West Australian Wound Care Association & Infection Control Association of Western Australia
3rd Joint Conference:
Back to the Future – How Far Have we Come?

Conference Report

Alison Thrum (on behalf of the Conference Working Party)

The third joint conference of ICAWA & WAWCA was held on Monday 15 and Tuesday 16 September 2003 at Burswood International Resort Casino.

Delegates
- Total registered: 205
- Monday only: 158
- Tuesday only: 183
- ICAWA Members: 44
- WAWCA Members: 51
- ICAWA/WAWCA Members: 2
- Non-members: 110

Conference evaluations
A total of 79 conference evaluation forms were completed by delegates (for both days). On a scale of 1-5 (1=poor, 5=excellent) the following items were evaluated.

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<td>0</td>
<td>5</td>
<td>19</td>
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Overall satisfaction with the conference?
- Excellent: 49
- Good: 22
- Satisfactory: 8
- Poor: 0

Satisfaction with the balance of wound care/infection control
- Yes: 70
- No: 2
- Not stated: 7

Sessions identified by delegates as most beneficial
- Ross River Virus & other mosquito borne infections – Dr Michael Lindsay
- Tips, tricks & strategies in wound care – Jan Rice
- Getting it right: telehealth in remote regions of Australia – Isabelle Ellis
- Alfred/Medseed Wound Imaging System – Nick Santamaria
- Wound care past – Keryln Carville
- Wound care present/future – Jan Rice
- MRSA in the UK – Dr Mark Farrington
- Infection control surveillance – Dr Anne Eastaway
- Infection control in the Northern Hemisphere – Dr Judith Richards & Ms Lynn Parker
- Hand hygiene workshop
- Development of a protocol for UTI investigation and management – Dr David Henley & Mary King
- Assessing peripheral intravenous phlebitis: a nursing audit and clinical indicator – Associate Professor Gavin Leslie
- Severe Acute Respiratory Syndrome – Professor Aileen Plant
- Living with VRE – Dr David McGechie
- Skin tears: prevalence and treatment – Pam Morey
- A review of the Royal Perth Hospital Bali experience: an infection control perspective – Dr Chris Heath & Terri Orrell
- Dressings of the 21st century – Pam Morey
- Key indicators in infection control – Dr Judith Richards
- Implementing AWMA Guidelines: pressure ulcers – Nelly Newell
- Case study assessment – Jan Rice
- Tuberculosis – Dr Susan Hudson

Comments, suggestions or topics for future conferences
Positive
- A very high standard this year.
- Catering excellent.
- Most speakers very interesting.
- A job well done, one and all!
Thanks for two enjoyable days.

Fabulous as usual, thankyou once again.

A great job, well done.

Conference bag very functional.

Well done to organisers.

Great two days.

Most enjoyable and informative two days – thankyou.

Fruit platters at breaks was a great idea.

Addition of abstract book in programme was a great idea. Perhaps included websites next year.

Prefer a one-day infection control conference or a biennial conference.

Break needed for afternoon session on day two.

Keep up the good work.

Good value for money.

Enjoyed the mosquito lecture.

Positive or suggestions for improvement

Some topics have been covered last year – it was a bit same old, same old.

List of those attending to help with networking.

Some of the presentations directed at academic population of nursing rather than the ‘bed-side’ workforce.

Need more practical information that statistical data.

Chairs uncomfortable and venue cold.

Larger plate for sandwiches at lunchtime.

Would have liked more wound care.

Joint conference, but one day infection control and one day wound care.

Keep to one day infection control only.

Topics for future conferences

More workshops and case studies.

Infection control and wound care in the field (i.e. armed forces).

Emergency management of traumatic wounds e.g. MV A, gunshot.

Tuberculosis – Perth Chest Clinic.

Unusual leg ulcers, vasculitis and pain management issues.

Zoonoses with a vet as a speaker.

Comparison of infection control in Australia, UK and USA.

Comments on recent press articles e.g. new ways to treat bacteria.

Opportunity for poster presentations.

Questions immediately after each speaker.

Surveillance, case studies, results, methods from within a WA health care facility.

Clinical case studies with dressing modalities.

External issues that impact on infection control e.g. geography, travelling, community care.

Venue and facilities

Overall, the comments regarding the venue were very positive. Due to comments regarding the temperature of the venue last year, delegates were advised to wear layered clothing for the 2003 conference. One delegate mentioned that the venue was too cold on the 2003 evaluation.

Topics

The topics presented provided a wide variety of interest, with the majority of delegates indicating that the balance between infection control and wound care was equal. As with the 2002 conference evaluations, several delegates indicated that they would have liked to have attended both the wound care and infection control concurrent sessions.

Speakers

Delegate evaluation regarding speakers was very positive, especially Jan Rice and several of the Hospital Infection Society speakers. Positive comments were also made regarding invited local speakers, especially: Dr Michael Lindsay, Professor Aileen Plant, Dr David McGeachie, Isabelle Ellis, Pam Morey, Dr David Henley & Mary King.

Trade display

The trade display was well received, with the majority of delegates indicating ‘excellent’ on the conference evaluation form. The decision not to include a ‘trade passport’ for this year’s conference did not appear to have a negative impact on delegates visiting the trade display.

Catering

Overall, the comments regarding the food were positive. The buffet style of catering enables delegates to freely circulate among the trade booths and to network with colleagues. It is also a less expensive option than a sit down lunch that is served. Every effort was made to ensure that delegates with special diet preferences were catered for.

Comments/evaluation from trade delegates

Infection control and wound care are always well supported by the trade industry. The trade delegates who took part in this year’s conference were asked to provide some feedback to the conference working party. Overall, the trade were pleased with the organisation, venue, catering, exposure and attendance received. Requests have been made for delegates’ lists in the future and some time for prize giving after lunch on the second day. Some of the comments included:

- Overall an excellent and worthwhile conference.
- Another excellent conference.
- Thanks to the organising committees and to Robyn (Simcock). A great annual event.

Overall conference evaluation

Most delegates who completed an evaluation form were very happy with the overall conference or organisation, with some positive comments of appreciation. These comments are appreciated by the conference working party who volunteered to organise the conference in their own time.
Case study of a chronic venous leg ulcer

Rhonda Robinson • EN, Hawkesbury Community Health Centre, Windsor, NSW

Introduction
This case study describes the care and management of a middle-aged man with a persistent venous leg ulcer, which failed to heal after 18 months despite what was considered to be appropriate treatment. It aims to demonstrate the significance of compression therapy in the management of a chronic venous leg ulcer, thus avoiding the need for more invasive treatments to close the wound such as, in this case, split skin grafting.

Case description
The client is a 46-year-old male who presented to the local community health clinic with a leg ulcer on the medial aspect of the right lower leg. The ulcer had been unresponsive to treatment for 18 months and measured 6cm x 6.5cm. There was a large amount of haemoserous exudate with maceration to the peri-wound skin with areas of dry venous eczema throughout the general lower limb. The wound was deep red in colour and scattered with necrotic spots.

Following an accidental knock to the lower leg, the client initially managed the wound, but after the wound deteriorated, he sought assistance through his local doctor. As the wound was slow to respond to the initial dressing regime, his local doctor referred the client to a general surgeon for further assessment and management.

The surgeon applied a hydrocolloid dressing, but due to the large amount of exudate, the client was forced to change the dressing three times a day. The surgeon referred the client onto the community health clinic for management of the ulcer.

Past history
The client is married, with three children. He works night shift at the local supermarket and, due to the nature of his work, stands for long periods of time. He is a heavy smoker with a daily alcohol consumption of six beers and one main meal a day. During the course of management, the client was diagnosed with depression. He received little emotional support from his family, as he had not made them aware of his condition.

Treatment
After referral to the community health clinic, the hydrocolloid dressing was replaced with an alginate and hydrocellular foam dressing in an attempt to absorb the exudate. After seven months of wound treatment, the financial investment exceeded $1800. It was suggested to the client that, due to the lack of progress towards healing the ulcer, he either be referred back to the surgeon or onto an ulcer clinic. The client was referred to the latter where a peripheral venous Duplex scan showed an incompetent short saphenous vein, and saphenopopliteal junction. No deep vein incompetence was detected. Doppler assessment showed the posterior tibial and dorsalis pedis arteries to be normal, indicating adequate arterial blood flow.

A four-layer compression bandage system, Proforetm, was applied weekly and, after two weeks of treatment, the ulcers had reduced in size and had started to granulate. The surrounding skin became hard, dry and scaly and a zinc oxide paste bandage was applied for one application to hydrate and soften the skin. At each dressing change, a moisturising lotion was applied to the rest of the lower limb to preserve the general skin integrity.

Following 12 weeks of treatment with the four-layer compression bandage, the ulcer had healed. The client was measured for compression stockings and recommended to wear them long-term to prevent further ulcer formation.

Discussion
Chronic venous leg ulcer management is frequently
complicated by the need to manage exudate and protect the peri-ulcer skin from maceration. The excessive amount of haemoserous exudate combined with poor exudate control was resolved with an alginate, and hydrocellular foam dressing which prevented deterioration of the ulcer. As the ulcer failed to progress referral to an ulcer clinic was warranted for further vascular review. Accurate assessment and diagnosis of a venous leg ulcer at the ulcer clinic permitted the application of the four-layer compression bandage.

This client’s ulcer had been present for 18 months. In this time he had dealt with physical pain, undiagnosed depression and embarrassment due to the odour from his ulcer. Improvement in the ulcer was noted after two weeks of compression therapy and the first improvement in size in 18 months of treatment. The ulcer healed in less than three months using the four-layer compression bandage.

Compression therapy was the appropriate treatment in this case, resulting in a successful outcome and an improvement in the client’s quality of life without the need for surgery.

**Conclusion**

Compression therapy is the primary therapeutic intervention in the prevention and management of venous hypertension, venous oedema and related lower leg ulceration. Compression therapy aims to improve calf muscle pump function and venous return, reduce venous hypertension and control venous oedema to facilitate healing.

This case study highlights the need for early diagnosis and assessment of the underlying vascular status to direct ongoing intervention and treatment. Evidence based outcomes from an International Leg Ulcer Advisory Panel endorse compression as the integral factor in healing venous leg ulcers.

**TM Trademark of Smith & Nephew**
## Guidelines for comparison of leg ulcer aetiology

<table>
<thead>
<tr>
<th>Predisposing factors</th>
<th>Arterial</th>
<th>Venous</th>
<th>Neuropathic</th>
</tr>
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<tbody>
<tr>
<td>• Peripheral vascular disease</td>
<td>• History of deep vein thrombosis</td>
<td>• Diabetes</td>
<td></td>
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<tr>
<td>• Diabetes mellitus</td>
<td>• History of venous ulcers</td>
<td>• Nerve damage (e.g., spinal, paraplegia etc)</td>
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<tr>
<td>• Smoking</td>
<td>• Obesity</td>
<td>• Alcoholic neuropathy</td>
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<tr>
<td>• Arteriosclerosis</td>
<td>• Advanced age</td>
<td>• B12 and other nutritional deficiencies</td>
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<tr>
<td>• Hypertension</td>
<td>• Valve incompetence in perforating veins</td>
<td>• Hansen’s disease</td>
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<tr>
<td>• Previous lower limb fractures/trauma</td>
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### Anatomic location

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<th></th>
<th>Arterial</th>
<th>Venous</th>
<th>Neuropathic</th>
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<tbody>
<tr>
<td>• Over bony prominences of foot (e.g., lateral malleolus, phalangeal heads, lateral border of foot)</td>
<td>• Generally lower 1/3 of leg, in particular medial lower leg and ankle/malleolar regions</td>
<td>• Plantar aspect of foot</td>
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<tr>
<td>• Tips of toes or between toes</td>
<td></td>
<td>• Metatarsal heads</td>
<td></td>
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<tr>
<td>• At sites subject to trauma or rubbing footwear</td>
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<td>• Under heel (i.e., usually weight-bearing areas)</td>
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### Patient assessment

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<th>Neuropathic</th>
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<tbody>
<tr>
<td>• Thin, shiny, dry skin</td>
<td>• Firm or brawny oedema</td>
<td>• Diminished or absent sensation</td>
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<tr>
<td>• Hair loss on ankle and foot</td>
<td>• Dilated superficial vessels (varicosities)</td>
<td>• Foot deformities (e.g., claw or hammer toes, and Charcot deformity)</td>
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<tr>
<td>• Thickened toenails</td>
<td>• Dry, thin, scaly skin</td>
<td>• Palpable pulses (unless PVD also present)</td>
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<tr>
<td>• Pallor on elevation</td>
<td>• Evidence of healed ulcers</td>
<td>• Warm foot</td>
<td></td>
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<tr>
<td>• Cyanosis</td>
<td>• Peri-wound and leg hyperpigmentation (haemosiderosis)</td>
<td>• Subcutaneous fat atrophy</td>
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<tr>
<td>• Decreased temperature of foot</td>
<td>• Possible dermatitis</td>
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<td></td>
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<tr>
<td>• Absent or diminished pulses</td>
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### Wound characteristics

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<th></th>
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<th>Neuropathic</th>
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<tbody>
<tr>
<td>• Even wound margins</td>
<td>• Irregular wound margins</td>
<td>• Even wound margins</td>
<td></td>
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<tr>
<td>• Gangrene or necrosis</td>
<td>• Superficial wound</td>
<td>• Deep wound bed</td>
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<tr>
<td>• Deep, pale wound bed</td>
<td>• Ruddy, granular tissue</td>
<td>• Cellulitis or underlying osteomyelitis</td>
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<tr>
<td>• Blanched or purpuric peri-wound tissue</td>
<td>• Usually minimal to moderate pain</td>
<td>• Granular tissue present unless PVD is present</td>
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<tr>
<td>• Severe pain, may include rest pain</td>
<td>• Frequently moderate to heavy exudate</td>
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<td></td>
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<tr>
<td>• Minimal exudate</td>
<td></td>
<td>• Low to moderate drainage</td>
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Leg ulcers of mixed aetiology may also occur with a combination of venous and arterial components or a neuroischaemic combination as examples.


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This newsletter is produced with the generous support of **Smith+Nephew**