

# TASMANIAN WOUND CARE ASSOCIATION



[www.twca.com.au](http://www.twca.com.au)

January 2006

## DEEPES TISSUES

**WELCOME** one and all to the current TWCA Newsletter. Hope this publication finds you well and wound savvy. If you have any items you would like published in the newsletter, please submit to Carol on 62 228322, 0408 992 403 or e-mail [carol.baines@dhhs.tas.gov.au](mailto:carol.baines@dhhs.tas.gov.au)

### INTRODUCING THE TWCA'S NEW TREASURER



A new treasurer has recently taken over from Judy Salter who held this position admirably for several years. We are pleased to introduce Pip Rice, an RN working for the Department of Health & Human Services in the Hyperbaric Unit – Royal Hobart Hospital, since 2001.

Pip moved to Hobart in 1995 after completing her Bachelor of Nursing in Launceston. She undertook her graduate year on the Tasmanian Neurosurgical Unit then moved casually around various wards of the RHH, Calvary and Hobart Private Hospitals. Pip travelled overseas on a working holiday for 2 years before returning to Hobart and deciding the Hyperbaric Unit was the place to be. She has a keen interest in wound care and currently works part time. Whilst travelling, Pip met a

great American whom she brought back to Tasmania and later married. They have a daughter, Hayley, who is about to have her first birthday.

The committee would like to extend their thanks to Judy Salter who has given many years of hard work to this demanding, and often thankless position. We also congratulate Pip on accepting the challenge of this position and wish her the best of luck.



The TWCA recently made a donation of \$500 to the Fistula Hospital in Ethiopia. The donation was made via World Vision and fully supported by all 10 committee members.

Dr's Reginald & Catherine Hamlin founded the Fistula Hospital in 1974. The hospital provides surgical and other treatments freely for women injured during childbirth, particularly those who develop fistulae. It operates on about 1,000 patients every year and provides ongoing rehabilitative care for those affected. As well it now provides training for

post-graduate doctors specializing in Obstetrics and Gynaecology from the Ethiopian National University. Recently Julie Macrossan interviewed Dr Hamlin the transcript of this is available from the ABC website <http://www.abc.net.au/rn/talks/lm/stories/s1499650.htm> The hospital has its own website [www.fistulafoundation.org](http://www.fistulafoundation.org) if you would like more information.

WOUNDS AT WORK  
Wound Care in an Intensive Care Unit  
Occipital pressure ulcers in head injured patients.  
by Margaret Clarke



For the past 10 years I have worked as a registered nurse in an Intensive Care. This is an area of health care that has, in the past and by my observation, had little emphasis on wound care. The main objective of the nurse in intensive care is to support and maintain the vital functions of a critically ill patient, and in attempting to do so it seems that skin integrity has not been seen as being as important as other aspects of critical care.

In more recent times, however, many changes have been introduced to nursing practice in this unit to reduce the prevalence of pressure ulcers and improve the overall care of patients in Intensive Care.

These changes implemented over the past year or so have included the formal and regular assessment and

documentation of the patient's skin integrity and the level of risk they have of developing pressure ulcers using the Braden scale. However, one specific problem I had some involvement in was that of a high incidence of occipital pressure ulcers in head injured patients in the unit over a period of a few months.

This group of patients are at very high risk of developing pressure ulcers for a number of reasons specific to this diagnosis and may include:

1. They are often actively cooled using cooling blankets thus reducing blood flow to the skin,
2. Problems with osmolarity and abnormal biochemistry often results in oedematous tissue,
3. They frequently require the support of inotropic drugs which causes vasoconstriction and also reduces blood flow to peripheries,
4. Spinal precautions are in place for at least the first week or so of the patient's hospitalisation, meaning that the patient lies on their back at all times and are "log rolled" and given a quick back and bottom rub every 2 hours for pressure care,
5. "Philadelphia", or "hard" collars are kept insitu as per the protocol (usually a long period of time) for head injured patients.
6. The fact that these patients are intubated and ventilated also puts them at risk due to their inability to move or verbalise any concerns or discomfort.

All of these factors, I am sure played a part in the fact that a number of patients were being found to have developed pressure ulcers on the backs of their heads where the hard collars seemed to have been sitting against the scalp while the patient had been lying flat on their back for a number of days. Understandably these wounds were difficult to detect when the only opportunity for staff to assess the patient's back was during one of the 2 hourly log rolls. These log rolls are performed safely but usually as quickly as possible due to the fact that these patients are intubated and ventilated and tend to have unstable head pressures which can suddenly and dangerously increase with stimulation and movement.

We decided to take action. The equipment nurse in the unit was consulted regarding acquisition of aids such as gel pads to cushion the head. The issue was discussed at management level with the unit's consultants and the protocol for head injuries was reviewed. A letter was sent to the hospital's wound care consultant who kindly offered to assist in any way she could, and tools to assess and document those at risk were put in place in the unit by one of the senior nurses.

Although these patients will always be at risk for developing pressure ulcers I feel that some important changes have taken place in the unit. I am unaware that similar numbers of these ulcers have occurred and I believe that the steps which have been taken to reduce the incidence of these ulcers have resulted in an improvement in the care that these patients receive.

## CASE STUDY

### Bebe Brown - Diving and Hyperbaric Medicine Unit – Royal Hobart Hospital

Mrs H, is a 64 year old single fit and active lady who lives alone. She had a five month history of a pre-tibial ulcer related to a minor trauma. This resulted from a fall in the garden.

Past history of myocardial infarction 10 years ago

Nil current medications.

She has no known drug allergies.

Mrs H's wound was on the anterior aspect of the lower left pre tibial region. The wound on assessment consisted of an area 13 sqcms – refer Figure 1. The wound was superficial in depth, some slough present with a dark area of scab formation on the lateral side. There was no obvious odour to the wound, the skin edges were good, exudate was minimal and the surrounding skin in good condition with small areas of dryness apparent. The wound was very painful. Gram positive cocci were found on gram stain and on culture *Staphylococcus aureus* had a moderate growth. On examination of ankle brachial index (ABI) findings, Mrs H had good blood supply to the left lower limb with an ABI of 1.5.

Initially the wound was treated conservatively by her son who had some medical training. Over the next five months she continued with this conservative treatment prior to her referral by GP to the Diving and Hyperbaric Medicine Unit (HMU) at the Royal Hobart Hospital (RHH).

Mrs H's initial presentation to HMU involved a full medical assessment and examination. Included at this time was tissue oxygen tension monitoring. Transcutaneous oxygen pressure (tcpO<sub>2</sub>) is a non-invasive method and its measurements have been shown to correlate with wound healing<sup>1</sup>. Measurements are taken on the area surrounding the wound and not directly on the wound surface. Roth and Weiss (1994)<sup>2</sup> consider that tcpO<sub>2</sub> greater than 20mmHg in room air predicts a positive response to hyperbaric oxygen (HBO). Refer Figure 1 for Mrs H's tcpO<sub>2</sub> measurements at 1ATA breathing both room air and 100% O<sub>2</sub> via a closed system.

Hyperbaric referral was undertaken as an option before referral to a plastic surgeon for a skin graft. The decision was made that she would initially undergo 30 treatments – 6 weeks, 5 days per week. The treatment table used on a daily basis at the RHH HMU for wound healing is two hours in length at 2.4ATA. 100% oxygen is breathed via a closed hooded circuit during this time.

Space limitations here deny a full explanation of the benefits of HBO in hypoxic wounds. In brief, hyperbaric oxygen increases the capillary oxygen tension which increases the amount of oxygen available to advancing cells of a wound. These cells are able to migrate further and retain the ability to divide. This enables the vascular supply to advance more quickly, thus ensuring faster closure of the wound.

Mrs H completed 30 HBO treatments during which time she had consistent wound management by the HMU staff. The wound was dressed 2-3 times per week with an alginate and foam. Figure 2 shows the wound following completion of her HBO. The wound is notably smaller – approximately 5 sqcms, pink and granulating well. At this point the dressing was changed to a silicone gauze ( Mepitel) Mrs H described virtually no pain or general discomfort. HBO has played a significant role in healing by improving tissue oxygenation and cellular function at the wound level. Mrs H did not require referral to the plastic surgery following her course of HBO. Wound management and dressings were continued by her GP and practice nurse until complete closure was achieved eleven months after the initial trauma was sustained.

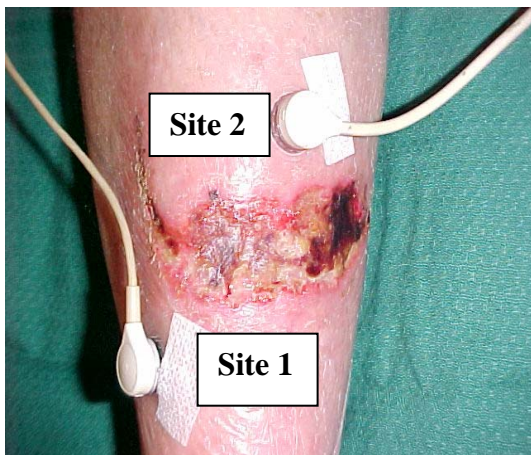
In summary, Mrs H is a 64 year old lady who sustained a small pre-tibial graze that did not heal with conservative treatment. Over a period of four months this wound developed into a painful chronic non-healing ulcer that impacted on her everyday life. Hyperbaric oxygen did not heal the wound completely but certainly aided the body's own healing abilities and allowed Mrs H to stay in her own home, not require a plastic surgery referral and therefore no general anaesthetic.

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<sup>1</sup> *Textbook of Hyperbaric Medicine 3<sup>rd</sup> Revised Edition*. K.K. Jain, 1999. Chapter 14, p218. Hogrefe & Huber Publishers Inc. Germany

<sup>2</sup> Roth RN, Weiss LD, (1994) Hyperbaric oxygen and wound healing. *Clinics in Dermatology*, 12:141-156.

Figure 1



<b>1 ATA Room air</b>			
Site 1	22	Site 2	33
<b>1 ATA 100% O<sub>2</sub></b>			
Site 1	267	Site 2	304

Figure 2

On completion of 30 HBO treatments



**THIS WILL BE A NEW SECTION  
A WEBSITE WILL BE FEATURED EACH NEWSLETTER.  
ANY SUGGESTIONS PLEASE CONTACT CAROL OR ANNE**

<http://www.worldwidewounds.com>

An online resource for dressing materials and practical wound management information New articles on the site include –

- [Clinical evidence on a sustained-release silver dressing](#)
- Encouraging patient involvement in the management of chronic leg ulceration
- Extracellular matrix: review of its roles in acute and chronic wounds
- Pain at wound dressing-related procedures: a template for assessment

### Subject Areas

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# WOUND TALK

Brought to you by Lotta Mank our roving reporter.



## HOW IT WAS IN THE BEGINNING

I started my nursing career in 1940 when I was 18 years old. This was in Leeds west Yorkshire, UK. For the first 3 months we were in PTS (preliminary training school). Every morning we stood to attention, while matron checked our hands and nails, shoes and uniform. Woe betide anyone with a hole in her black woollen stocking. I don't remember the pay but I do remember the stockings took most of it.

We learned about hygiene for days, in fact we had to learn how waste was carried from hospital drains etc to the local sewerage farm. From there we went on to bandaging. No sticky tape in those days! It was complicated head and eye bandages, spica and figure of 8 for limbs and joints. Nurses also cleaned the wards at that time. The bed frames and tops of the wheeled screens (no curtains then) a maid did the floors. We had a very low infection rate.

One of our main tasks was giving and emptying then cleaning bedpans. These were made of enamel and had to be scrubbed inside and out. Twice a day all patients had to have pressure point treatment. This meant rubbing heels, elbows, buttocks and shoulder blades with soap, alcohol then powder. It took ages to finish the ward. Each patient's skin was seen twice a day without fail. Every bed-bound patient had a daily bed-bath performed by 2 nurses. Lots of hot water and soap! If a patient couldn't feed themselves they were fed a full meal. Should they not be able to eat a full meal they were offered boiled, scrambled or poached egg. The nurse doing the feeding had to cook these herself in the ward kitchen.

We all lived in the nurses home and went to bed tired out every night. It was really hard work! When we went out we had to wear a navy mac and matching hat of the same material. Holidays were the only time we were allowed to be seen out in our own clothes.

Looking back it is hard to compare the way things are now but it was a career choice that stood me in good stead through out my working life.

***TASTE OF WOUND CARE***

**16 February 2006**

**Where: Huon Eldercare**

**Contact ANF for bookings**

**6.00 – 8.00 p.m.**

**Australian Wound Management  
Association  
6<sup>th</sup> National Conference**

***“MATRIX OF WOUND CARE”*  
National Conference Centre  
15-18 March 2006**

*All items featured are submitted with the philosophy of improving wound care for sufferers and carers. No financial support is given or offered by wound care product manufacturers or distributors in the making of the newsletter. If you have any concerns or questions about items featured, please contact either:*

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