

WoundCare

VOL.6 NO.1 2008
CAN \$9.95



CANADA

THE OFFICIAL PUBLICATION OF THE CANADIAN ASSOCIATION OF WOUND CARE

PRACTICAL CONSIDERATIONS FOR
THE ENHANCEMENT OF NUTRITION
AND HYDRATION IN PATIENTS

FOOT CARE PRACTICES OF
PERSONS LIVING WITH DIABETES
PRIOR TO AMPUTATION

PREVENTATIVE FOOT CARE:
HOW SIMPLE PRACTICES
CAN PREVENT COMPLICATIONS

THE ROLE OF HYPERBARIC OXYGEN
THERAPY IN WOUND HEALING



**Best Practice
Recommendations for
the Prevention and
Treatment of Skin Tears**

**Pratiques recommandées
pour la prévention et le
traitement des déchirures
cutanées**

Canadian Association
of Wound Care



Association canadienne
du soin des plaies

Your patients will welcome our newest arrivals.

 **smith&nephew**
ALLEVYN[®]
Wound Dressings

Introducing ALLEVYN Ag, ALLEVYN Gentle and ALLEVYN Gentle Border.

ALLEVYN Gentle and ALLEVYN Gentle Border minimize pain at dressing changes while maximizing comfort. ALLEVYN Ag capitalizes on the proven antimicrobial protection of silver sulfadiazine (SSD). Combined with the superior fluid management known to ALLEVYN, our dressings offer the very best in patient care. **Embrace it! Your patients will be thankful.**



*Trademark of Smith & Nephew © 2007



Prevention Is the First Step



Sue Rosenthal

According to the Canadian Diabetes Association, almost three million Canadians currently have diabetes. This number is expected to soar over the next two decades due to an aging population, increased obesity rates and the large number of immigrants to Canada who come from regions where the populations are at higher risk of type 2 diabetes. For the wound-care community, the implications of this issue have already been felt and will continue to be an area of great concern. According to the National Institutes of Health, 15 per cent of persons

with diabetes will end up with a diabetic foot ulcer. While preventing type 2 diabetes is the most important health strategy, wound-care clinicians can be effective at the frontlines in helping people already diagnosed with diabetes. In this issue of *Wound Care Canada*, we look at a number of ways that wound-care clinicians can prevent diabetic foot ulcers—everything from basic foot care to patient education and offloading. We even have a story on how Canadians are helping wound-carers in Mexico, where a foot ulcer means almost certain amputation.

This issue is not all about diabetes, however. You'll find the next article in the popular CAWC series of best practice recommendations, on skin tears. We round things out with shorter articles that have become reader favourites: Rob Miller's "Wound Sleuth," literature reviews, and wound-care news from across Canada and around the world. You'll also see listings for the many important wound-care events being held across the country this year. ☺

*Sue Rosenthal,
Editor*

Première étape : la prévention

Selon l'Association canadienne du diabète, près de trois millions de Canadiens sont actuellement atteints du diabète. Au cours des deux prochaines décennies, ce nombre devrait monter en flèche, en raison du vieillissement de la population, de la hausse du taux d'obésité et du nombre croissant d'immigrants au Canada provenant de régions où la population est à un niveau de risque plus élevé d'être atteinte du diabète de type 2. Pour la communauté en soins de plaies, cela représente un défi de taille qui se fait déjà sentir et qui continuera d'être d'une grande importance. Le National Institutes of Health indique que 15 % des personnes diabétiques auront un ulcère plan-

taire en raison du diabète. Bien que la prévention du diabète de type 2 soit la meilleure stratégie, les cliniciens en soins de plaies peuvent participer activement en aidant les personnes ayant été diagnostiquées avec le diabète. Dans ce numéro de *Wound Care Canada*, nous examinons différentes approches disponibles pour les cliniciens dans la prévention des ulcères plantaires dus au diabète, commençant par les soins de base des pieds en passant par l'éducation du patient et la réduction de pression. Nous avons également une histoire sur des Canadiens qui apportent leur aide en soins de plaies au Mexique, où un ulcère plantaire signifie souvent une amputation.

Ce numéro ne traite pas seulement du diabète. Il contient également un nouvel article de la populaire série de l'ACSP sur les recommandations des pratiques exemplaires. Ce mois-ci, les lésions cutanées sont à l'honneur. Vous pourrez terminer votre lecture par un des courts articles qui sont devenus vos préférés : « Wound Sleuth » de Rob Miller, les revues littéraires et les nouvelles sur le soin de plaies au Canada et à travers le monde. Vous y trouverez également la liste de nombreux événements importants sur le soins des plaies qui auront lieu à travers le pays cette année. ☺

*La rédactrice,
Sue Rosenthal*

**Sue Rosenthal,
BA, MA,**
specializes in health
and wellness
communications and
has been associated
with the CAWC
since 2000.

DOES DRESSING
DESIGN AFFECT
PERFORMANCE?

WHAT IS AN OPTIMUM
AMOUNT OF SILVER
TO KILL BACTERIA?

AQUACEL Agⁱ
Hydrofiber® Dressing with Silver

DOES IT KILL MRSA & VRE?

Making the Choice Clear

AQUACEL Ag[®] dressing is the only antimicrobial with all the benefits of Hydrofiber[®] ConvaTec Technology

- **Gels on contact with exudate**—absorbs and retains exudate and locks away harmful components contained within exudate¹⁻³
- **Effective antimicrobial**—low concentration of ionic silver kills a broad range of wound pathogens in the dressing including MRSA and VRE⁴
- **Enhances patient comfort**—soft and conformable for ease of application
- **Allows for non-traumatic removal**—without damaging newly-formed tissue
- **Supports healing**—by providing a moist environment

For more information, call the ConvaTec Customer Relations Center at 1 800 465-6302, Monday through Friday, 8:00 AM to 7:00 PM (EST), or visit our Web Site at www.convatec.ca

References: 1. Walker M, Hobot JA, Newman GR, Bowler PG. Scanning electron microscopic examination of bacterial immobilisation in a carboxymethyl cellulose (AQUACEL[®]) and alginate dressings. *Biomaterials*. 2003;24:883-890. 2. Bowler PG, Jones SA, Davies BJ, Coyle E. Infection control properties of some wound dressings. *J Wound Care*. 1999;8(10):499-502. 3. Walker M, Cochrane CA. Protease sequestration studies: a comparison between AQUACEL and Promogran in their ability to sequester proteolytic enzymes. WHR2494 WA139. May 27, 2003. Data on file, ConvaTec. 4. Jones SA, Bowler PG, Walker M, Parsons D. Controlling wound bioburden with a novel silver-containing Hydrofiber[®] dressing. *Wound Rep Reg*. 2004;12:288-294.

©/TM The following are trademarks of E.R. Squibb & Sons, L.L.C.: AQUACEL Ag and Hydrofiber. ConvaTec is an authorised user.
©2005 E.R. Squibb & Sons, L.L.C.
CA 06-1211-WA

CAWC Board of Directors
Conseil d'administration de l'ACSP

President/Présidente

Cathy Burrows, RN

Martine Albert, RN

Mario Côté, MD

Patricia Coutts, RN

David Haligowski, MD

Connie Harris, RN

David Keast, MD

Rob Miller, MD

Christine Pearson, RN, IIWCC

M. Gail Woodbury, PhD

**Chairman Emeritus/
Président émérite**

Gary Sibbald, MD

**Executive Director/
Directeur exécutif**

Cary Steinman

The Canadian Association of Wound Care is a non-profit organization of health-care professionals, industry participants, patients and caregivers dedicated to the advancement of wound care in Canada.

The CAWC was formed in 1995, and its official meeting is the CAWC annual conference held in Canada each year. The association's efforts are focused on five key areas: public policy, clinical practice, education, research and connecting with the international wound-care community. The CAWC works to significantly improve patient care, clinical outcomes and the professional satisfaction of wound-care clinicians.

L'Association canadienne du soin des plaies est un organisme sans but lucratif regroupant des professionnels de la santé, des gens de l'industrie, des patients et des membres du personnel soignant fortement intéressés à l'avancement des connaissances pour le soin des plaies au Canada.

Fondée en 1995, l'ACSP organise, chaque année, au Canada, un congrès qui lui tient lieu de réunion officielle, le Congrès annuel de l'ACSP. L'association consacre ses efforts dans cinq domaines particuliers : les politiques gouvernementales, la pratique clinique, la formation, la recherche et la création de liens avec la communauté internationale directement impliquée dans le soin des plaies. L'Association canadienne du soin des plaies vise une amélioration significative du soin donné au patient, des résultats cliniques et de la satisfaction professionnelle des spécialistes en soin des plaies.

CLINICAL PRACTICE

**Best Practice Recommendations for the
Prevention and Treatment of Skin Tears**14

**Pratiques recommandées pour la prévention
et le traitement des déchirures cutanées**32

**Enhancement of Nutrition and Hydration in Patients:
Practical Considerations for Professionals**54



**A Case Study for Off-loading:
Building a Custom Foot Orthotic for Mr. H**58

**The Role of Hyperbaric Oxygen Therapy
in Wound Healing:
Exploring the Therapeutic Use of Oxygen**60

**Foot-care Practices of Persons
Living with Diabetes Prior to Amputation**64

**Preventative Foot Care:
How Simple Practices
Can Prevent Serious Complications**68



**Safe at Home:
Practising Proper Infection Prevention and Control**70

EDUCATION

**CAWC Scholarships Provide Opportunity
and Improve Wound Care:
A Look at Last Year's Winners**72

**If There's a Wound, There's a Way:
From the Organizers of the World Union Congress 2008**74

**If you didn't receive this copy of *Wound Care Canada* by
post, make sure you get on the mailing list for future issues.
Send us your name and address at cawc@sympatico.ca.**



Editor/Rédactrice

Sue Rosenthal

E-mail: WCCeditor@cawc.net

Associate Editor/Rédactrice adjointe

Catherine Harley

Scientific Advisor/

Conseiller scientifique

Heather Orsted, RN, BN, ET, MSc

Publisher/Éditeur

BCS Communications Ltd.

255 Duncan Mill Road, Suite 803

Toronto, ON M3B 3H9

Editorial Advisory Board/

Comité consultatif de rédaction

Diane Grégoire, RN, ET, BScN, MScN

Pamela Houghton, BScPT, PhD

David H. Keast, MSc, MD, FCFP

Advertising Sales/Publicité et vente

Steinman and Company

Phone: 416-782-2350

E-mail: WCCadvertising@cawc.net

Wound Care Canada is published by BCS Communications Ltd., on behalf of the Canadian Association of Wound Care. Canada's first publication devoted entirely to wound care, *Wound Care Canada* addresses the needs of clinicians, patients, caregivers and industry.

All editorial material published in *Wound Care Canada* represents the opinions of the authors and not necessarily those of the Canadian Association of Wound Care.

Discussions, views and recommendations as to medical procedures, choice of treatments, dosage or other medically specific matters are the responsibility of the authors. No responsibility is assumed by the publisher or publishing partners for any information, advice, errors or omissions contained herein.

The inclusion of advertising and sponsored material in *Wound Care Canada* does not constitute a guarantee or endorsement of any kind by the Canadian Association of Wound Care.

All rights reserved. Contents may not be reproduced without written permission of the publisher. Printed in Canada. © 2008.

Special thanks to Smith & Nephew for augmenting the *Wound Care Canada* mailing list.

Canadian Publication Mail

Sales Product Agreement No. 40065546

Return mail to

CAWC, 4 Glenarden Road,

Toronto, ON M6C 3J7



Wound Care Canada is printed on acid-free paper that contains a minimum of 20 per cent post-consumer fibre.

INTERNATIONAL PARTNERSHIPS

Canadian Nurses Involved in Diabetes Prevention Program in Mexico	75
-------------------------------------------------------------------------------	----

Departments



Editor's Message

Prevention is the First Step/ Première étape : la prévention	3
-----------------------------------------------------------------------	---

News in Wound Care

Upcoming Events and Wound-care-related News	8
------------------------------------------------------	---



From our Partners

News from North American Wound Care Council Partners	10
------------------------------------------------------------	----



Puzzling Cases

The Wound Sleuth is on the Trail of a Wet Foot!	56
----------------------------------------------------------	----

Interview

The Role of Pedorthists in Wound Management	76
------------------------------------------------------	----

CAWC News

The Latest Association News	78
-----------------------------------	----

Literature Review

Articles of Interest to Wound-care Professionals	82
-----------------------------------------------------------	----



The CAWC Gets a New Home

Earlier this year, the CAWC moved into new offices to accommodate our recent expansion of activities. As a result, the CAWC has a new mailing address and new phone numbers. Please update your contact list so you can stay in touch!

2171 Avenue Road, Suite 102, Toronto, ON M5M 4B4

Phone: 416-485-CAWC (2292) Fax: 416-485-2291

Forward-Thinking Patient Care

Dramatically advancing fecal incontinence management



Designed to:

Reduce risk of skin breakdown

Reduce risk of infection

Improve patient care



For more information on this product and others, call our Customer Relations Center (Registered Nurses on staff) at 1 800 465-6302, Monday through Friday, 8:00 AM to 7:00 PM (EST), or visit our Web Site at www.convatec.ca

CAWC Events

Special Theme Meetings

Victoria, BC:
October 24–26, 2008

Visit www.cawc.net

Halifax, NS:
November 7–9, 2008

See page 78 for details.

Other Events

SAWC/WHs 2008

April 24–27, 2008
San Diego
Convention Center
San Diego, CA
www.sawc.net

World Union of Wound Healing Societies

June 4–8, 2008
Metro Toronto
Convention Centre
Toronto, ON
www.wuwhs2008.ca

WOCN Society 40th Annual Conference

June 21–28, 2008
Orlando World Center Marriott
Orlando, FL
www.wocn.org

Education

Update: IIWCC Approved for Inclusion in Master's Program

This popular program, which brings together a mix of physicians, nurses, and other health professionals working in the field or in related industry, has now been approved for credit as part of a new flexible master's program in the Department of Public Health

Sciences and the University of Toronto.

For information, call Sandra Gauci at 416-323-6400 ext. 4608.

Update: UWO's Master of Clinical Science Program Approved

The recently launched Master of Clinical Science program is a one-year (three terms) course-work Master's program that offers specialty and advanced practice options to professionals in clinical practice. The focus is on the development of clinical and research skills beyond those of professional entry level. There are two fields of study: Manipulative Therapy and Wound Healing. The program is now officially approved by the Ontario Council of Graduate Programs. The first class began in September 2007. Participants will complete the course requirements by July 2008 and graduate at fall convocation in October 2008. The admission deadline for next September is March 1, 2008.

For more information or to apply, please visit www.uwo.ca/fhs/pt/new/prospective/mclsc/index.html.

Wound Infection Institute Continues to Grow

Chaired by Keith Harding, the Wound Infection Institute (WII) now has over 130 members and includes many leading figures in wound management and infection control. Representing Canada, Heather Orsted is the Vice Chair of the Institute, and David Keast is Treasurer. "I am very happy to have Heather and David joining me on the committee," says Harding. "They bring considerable expertise to the Institute. I have worked with them and the CAWC on many occasions, the CAWC being one of the world's leading societies in wound care today."

What does the Institute aim to provide the clinical community? A consensus paper on wound infection is one of six key projects initiated by its executive body and will be launched at the World Union of Wound Healing Societies in Toronto in June 2008.

The Institute's first annual general meeting, also planned for June 2008, should see the Institute becoming an independent, self-governed body of clinicians providing a stream of original work within the three core areas of evidence, education and research.

"Our ultimate vision is to be recognized as the leading interdisciplinary international group working in wound infection," says Harding.

For more information about

the WII and the upcoming WII meeting in Toronto on June 2, 2008, go to www.woundinfection-institute.com.

World Union of Wound Healing Societies' Congress Draws Near

Toronto will be hosting this year's international wound congress and you don't want to miss it! This ground-breaking conference will focus exclusively on the presentation of wound-care evidence and the transfer of knowledge, skills, and attitudes for improved patient outcomes. In addition to a stimulating pre-conference day, three plenary sessions featuring internationally respected speakers, 10 concurrent streams with more than 100 educational sessions, and the world's largest wound-care trade exhibition, there will be opportunities to explore and experience the city at one of its most beautiful times of the year.

Come to Toronto and learn about comprehensive therapeutic strategies and how they can be translated into better wound care.

Don't wait. Register today for Congress 2008 at www.worldunion2008.com.

First International Pediatric Enterostomal Therapy Meeting

The First International Pediatric Enterostomal Therapy meeting held in Montreal on October 1-3, 2007, was a real success. More than 200 people from 17 countries attended the meeting. The participants showed great interest for all the lectures, deliv-

ered by a faculty of international speakers. Among the 25 speakers was Sandra Quigley, who adapted the Braden Scale to the paediatric population. She gave a highly appreciated lecture about pressure-ulcer risk assessment in paediatrics.

A survey done during the meeting showed that 100 per cent of the attendees wish to see the Pediatric Enterostomal Therapy meeting becoming a biennially recurring event. Louise Forest-Lalande, chair of the meeting, informed the participants about the possibility of joining the Pediatric meeting to the congresses of the European and the World Councils of Enterostomal Therapists.

Le premier congrès international de stomathérapie pédiatrique



Diane Grégoire, Louise Forest-Lalande and Chantal Leduc.

Le premier congrès international de stomathérapie pédiatrique récemment tenu à Montréal a remporté un grand succès. Plus de 200 délégués, venus de 17 pays y ont participé. Ils ont été très intéressés par les présentations de 25 conférenciers internationaux, parmi lesquels madame Sandra Quigley, responsable de l'adaptation de l'échelle

de Braden à la population pédiatrique. Madame Quigley a partagé sa vision de l'évaluation du risque de plaie de pression chez l'enfant.

Un sondage réalisé pendant le congrès a démontré que 100% des participants souhaitent voir le congrès de stomathérapie pédiatrique devenir un événement biennal récurrent. Louise Forest-Lalande, organisatrice du congrès, a informé les participants de la possibilité de joindre le congrès pédiatrique au congrès des Associations européenne et mondiale des stomathérapeutes.

Les soins de plaies au cœur du savoir infirmier

De l'évaluation à l'intervention pour mieux prévenir et traiter L'Ordre des infirmières et infirmiers du Québec entend soutenir les infirmières dans leur pratique quotidienne relativement à la prévention et au traitement des plaies en publiant un ouvrage de référence qui permettra aux étudiantes et étudiants en soins infirmiers, tant au niveau collégial qu'universitaire, ainsi qu'aux membres de la profession, d'acquérir ou d'approfondir leurs connaissances dans ce domaine.

L'ouvrage comprend un historique sur l'évolution du soin des plaies et expose les notions essentielles pour comprendre et déterminer les soins et traitements requis (anatomie de

la peau et physiologie de la cicatrisation, préparation du lit de la plaie, évaluation de la plaie, nutrition, douleur, qualité de vie, enseignement au client et à la famille, documentation en soins). Il traite également des plaies chroniques (ulcères de plaies de pression, ulcères des membres inférieurs et ulcères du pied diabétique), des plaies aiguës (brûlures, déchirures cutanées, plaies chirurgicales et plaies traumatiques), des modalités adjuvantes, ainsi que des produits et pansements disponibles.

Foot Care Nurses of Canada Forming New Association

On September 22, 2007, a group of 60 foot-care nurses, educators and managers from across Canada met in Winnipeg, Manitoba, to discuss how to introduce national foot-care nurse guidelines for skills, education and certification. All 60 participants supported a draft position statement proposed by an Ad Hoc committee, and a consensus was reached to begin the development of a national communication strategy that could reach an estimated 3,000–6,000 foot-care nurses in Canada. It is understood that this is a huge undertaking, and there are many steps that need to happen in order for the ultimate goal of national guidelines and certification for foot-care nurses to occur.

The newly appointed committee of Foot Care Canada would like to take this opportunity to invite any interested foot-care nurse, regulatory body, educator and/or policy-maker to attend a workshop April 13, 2008, from 9:00 a.m. to 3:15 p.m., at St. Lawrence College in Kingston, Ontario. This workshop will follow a foot-care conference on April 11-12. For details about both events, visit the CAWC Web site at www.cawc.net/open/library/clinical/specialty.html.

New Home Kit from DM Systems

DM Systems now offers the Heelift® Home Kit for the home health-care market. The kit is designed to aid in the prevention and treatment of heel pressure ulcers with home-based patients who may be at risk. With Heelift® Home Kit, patients at home will benefit physically from the use of a hospital-grade product to protect against heel ulcers or to treat pre-existing conditions. Heelift® Home Kit contains one Heelift® Suspension Boot, the product proven effective in the prevention and treatment of heel pressure ulcers, a laundry bag, and an instruction sheet in English, Spanish, German and French. A new, slimmer design of the Suspension Boots has features to increase comfort, ease of use and support. ☺



News from North American Wound Care Council Partners

Canadian Association for Enterostomal Therapy (CAET)

The Canadian Association for Enterostomal Therapy (CAET) looks forward to 2008 as a year of collaboration with various professional, industry and volunteer associations. The following is a synopsis of these initiatives:

■ **ETNEP Distance Education Program NEW Web-based Curriculum** accepted students in September 2007. The curriculum is divided into three modules: ostomy (September 2007), continence (February 2008) and wound (September 2008). **Partners:** CAET membership and industry

■ **CAET ET Certification Examination Development** begins January 2008 with a completion date by Fall 2008. The first certification examination is scheduled for Spring 2009. **Partner:** Canadian Nurses Association (CNA)

■ **Best Practice Guidelines of Ostomy Care and Management.** A 16-member expert panel of ET nurses and other health professionals will begin development of the BPG January 2008 for completion by November 2008. **Partner:** Registered Nurses' Association

of Ontario (RNAO)

■ **Equitable Financial Recognition for Those with Ostomies in Canada.** The CAET and the United Ostomy Association of Canada will develop strategies to convince government officials that this health-care necessity requires equitable attention and support. **Partner:** United Ostomy Association of Canada (UOAC)

■ **Ethical Education Code of Conduct and Program Development.** Beginning in January, the CAET and CAWC will begin developing strategies and programs to address the ethical considerations and requirements of health professional education, and delivery in wound-care management.

Partners: CAWC and industry

■ **World Union of Wound Healing Societies Conference.** The CAET, a co-hosting society, looks forward to the celebration of the third World Congress, in Toronto, Ontario.

Partners: CAWC, University of Toronto, sponsoring co-hosts and the world!

For further information, contact Kathryn Kozell, President, or Catherine Harley, Executive Director, at www.caet.ca.

Association for the Advancement of Wound Care (AAWC) Advancing the Practice (ATP) Came "Home!"

In January, the AAWC's Advancing the Practice (ATP) campaign's online resource library moved to a sub-domain of the AAWC's Web site—www.aawconline.org—rather than staying as a completely separate Web site. Now you can access the wealth of knowledge found at this new section of AAWC's site with a simple click from the AAWC homepage, www.aawconline.org.

The goals of ATP are to help spread awareness of wound care as a profession and to provide valuable resources to those who are interested in wound-care information, education and resources. Best of all, it's free. That's one more way AAWC is "Advancing the Practice!"

Did you keep your New Year's resolution?

You've felt for quite a while that it's time for a change in your wound-care career. You just can't seem to find the time to start looking. It's no secret that many

job seekers and employers are discovering the advantages of searching online for jobs and for qualified candidates to fill them. If you're ready to look online, you're already one step ahead of the game. In the coming months, several employers in the wound-care field will be posting ads for open positions at the AAWC Career Center. Be sure to post your resume early for free at <http://careers.aawconline.org>.

Coming Soon: New Educational Brochures on Skin Care

AAWC will be introducing a new, easy-to-follow educational brochure on skin care. The title of the brochure is "The Skin You're In." It's a guide to protecting skin from climate and the environment. The new brochure is geared toward the lay public and will be accessible from the AAWC Web site as a free, downloadable PDF. Print many and place them throughout your office or facility! If desired, you may purchase the brochure (when available) in multiples of 100 for a nominal fee from the AAWC Online Store found at www.aawconline.org.

**Mexican Association For
Holistic Wound Care and
Healing (AMCICHAC)**

**The First National Meeting
of the AMCICHAC**

The Mexican Association for Holistic Wound Care and Healing (AMCICHAC) celebrated its first national meeting September 19-22, 2007, in Boca del Rio, Veracruz, Mexico. This association was formed by Mexican specialists in wound care and healing, including researchers, nurses, physicians, patients and anyone involved in this broad and exciting area. The Canadian Association of Wound Care was very active through the executive director, president and past presidents in

providing the new Association with the blueprints of the CAWC. Dr. José Contreras-Ruiz, who has participated with the CAWC in several activities, is the first president of the Mexican association and is very appreciative of the CAWC's help and support.

The first national meeting of the AMCICHAC was developed with the highest standards in education, ethics and research following the CAWC's vision and provided a forum for interdisciplinary learning in wound care and ostomy therapy for the first time in Mexico. The event was considered a success by all those involved. It included 32 wound-care experts from

all over Mexico as the national faculty and 16 invited faculty from Spain, Brazil, the U.S., Dominican Republic, Canada, Colombia and Costa Rica. Dr. Gary Sibbald and Heather Orsted, both past presidents of the CAWC, participated as two of the lecturers.

Four hundred people from all the disciplines involved in wound care attended. Wound-care industry also participated, with 17 booths.

Awards were given to the best research presentations, and the Canadian contingent was very happy to see that pressure ulcer prevention was presented as a very important topic.

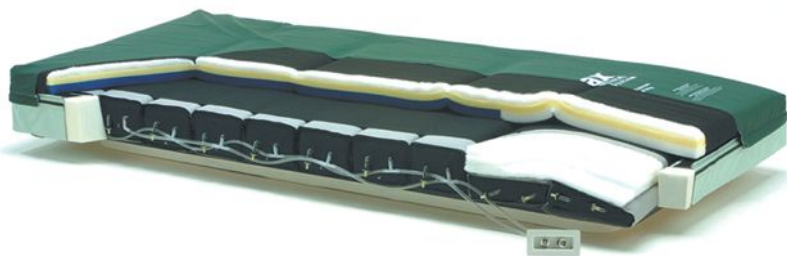
During the closing ceremony,

the first 10 honorary members of the Association were named, and both Sibbald and Orsted were honoured with this title.

The AMCICHAC is considered a "sister" association of the CAWC because the CAWC, through the North American Wound Care Council, has been involved in supporting this group with continuing information and advice. It makes the CAWC very proud to see how sharing what we have with others and following the association's mission of international co-operation has resulted in projects as important as the AMCICHAC and its successful first national meeting. ☺

RELIABLE & COST EFFECTIVE PRESSURE RELIEF THERAPY

AccuMax
QUANTUM™ CONVERTIBLE
Pressure Relief System



**6 anatomically-designed
pressure relief zones**

**10 horizontally-oriented
nylon-covered air sectors**

**Firm side rails for
additional security**

**Optional control unit for
alternating pressure**



SUPERIOR PRODUCTS
SOUND ADVICE

9100 Ray Lawson Blvd., Montreal (Quebec) H1J 1K8
Tel.: 800-361-4964 / Fax: 514-356-0055
www.mipinc.com



OASIS[®]

HEALTHPOINT[®]

A DFB COMPANY

1-800-441-8227
www.healthpoint.com

References: **1.** Data on file. Healthpoint, Ltd, Fort Worth, TX 76107. **2.** Brown-Etris M, Cutshall WD, Hiles MC. A new biomaterial derived from small intestine submucosa and developed into a wound matrix device. *Wounds*. 2002;14:150-166.

OASIS is a registered trademark of Cook Biotech, Inc.

© Copyright 2006, Healthpoint, Ltd.

TM0607C-0406

**When wounds fail to progress after 2–4 weeks
with your standard care...**

enables the body to
get things moving again

Simple application, proven results¹

- Significantly improves wound management¹
- Supports the body's natural wound response by replacing the missing or failing extracellular matrix (ECM)²
- An easy addition to your standard wound care
- In the office, off the shelf for once-weekly application
- In a recent clinical study, the average cost of OASIS[®] for 12 weeks in venous stasis ulcers was \$320 (US dollars)¹

INTRODUCE

OASIS[®]
WOUND MATRIX



Sheet of OASIS[®] Wound Matrix

Get things moving again



Best Practice Recommendations for the Prevention and Treatment of Skin Tears

By Kimberly LeBlanc, BScN, RN, ET, MN, IIWCC; Dawn Christensen, BScN, RN, ET, MHScN, IIWCC; Heather L. Orsted, MSc, RN, BN, ET; David H. Keast, MSc, MD, FCFP

Abstract

The Canadian Association of Wound Care (CAWC) has published Best Practice Recommendations for preventing and treating various wounds, including pressure ulcers, venous leg ulcers and diabetic foot ulcers. The Registered Nurses' Association of Ontario (RNAO) has published Nursing Best Practice Guidelines for the assessment and management of pressure ulcers, venous leg ulcers and diabetic foot ulcers. To date there are no Canadian recommendations or guidelines for the prevention and treatment of skin tears. This article's purpose is to fill the gap of missing best practice recommendations (but not guidelines).

While no Canadian guidelines exist for the prevention and treatment of skin tears, much evidence to support skin tear management can be extrapolated from the

RNAO Best Practice Guidelines for the Prevention and Treatment of Pressure Ulcers and the National Guideline Clearinghouse guideline for Preventing Pressure Ulcers and Skin Tears.

Through this paper, clinical decision-making for the management and prevention of skin tears can be guided by the pathway for assessment and treatment of skin tears (see page 15). It is recommended that the clinician identify and treat the underlying causes, identify and manage patient-centred concerns, follow best practice local wound care and consider adjunctive therapies when warranted. The recommendations also address the critical need for organizational and educational activities that support the implementation of best practice guidelines into clinical practice.

Introduction

Skin tears are the result of trauma to the skin from shearing, friction or blunt trauma and are frequently mismanaged. Health-care professionals must become aware of which individuals are at risk for developing skin tears, how to prevent these wounds, and how to treat them once they occur.¹ Skin tears can cause stress to patients and their families and are often difficult wounds to treat due to

the physical changes associated with aging and co-existing illnesses. The elderly are at a higher risk for skin tears due to the fragility of the aging skin, flattening of the basal cell layer and impaired circulation. More than 1.5 million skin tears occur each year in adults in health-care facilities in the United States.² When the cause of the skin tears is known, they often occur from the following events: wheelchair injuries

The appropriate care of the patient with a skin tear can present a complex problem for health-care professionals, as literature pertaining to the prevention and treatment of skin tears is limited. Following a literature review, the authors could find no literature addressing the prevalence and incidence of skin tears in Canada's elderly population.

(25 per cent), accidentally bumping into objects (25 per cent), transfers (18 per cent), and falls (12.4 per cent). In 1991, Malone et al. conducted a one-year retrospective chart review of incident reports from a large long-term-care facility. They concluded that 80 per cent of skin tears occurred on the arms, especially the forearms.³ White, Karam and Cowell⁴ concluded that skin tears are most likely to occur during peak activity hours—6:00 a.m. to 11:00 a.m. and 3:00 p.m. to 9:00 p.m. Baranoski⁵ reports that skin tears occur most often in the upper extremities. However, they can occur anywhere on the body and can even be mistaken for Stage II pressure ulcers on the buttock and back.⁶

In recent literature, increasing attention has been given to skin tears, but no gold standard has been developed for their management. While the prevention of skin tears is the primary focus for managing this problem, health-care professionals working with the elderly population must be equipped to manage these wounds when they do occur.^{7,8,9} By recognizing which patients are at risk for skin tears, preventing skin injuries, and using dressings appropriately, we can save patients undue pain and suffering.¹⁰

Recommendation 1: (Level of Evidence: IV)

Obtain a complete patient history that includes general health status and identifies risk factors that may put the patient at risk for a skin tear and factors that may affect the healing of existing skin tears.

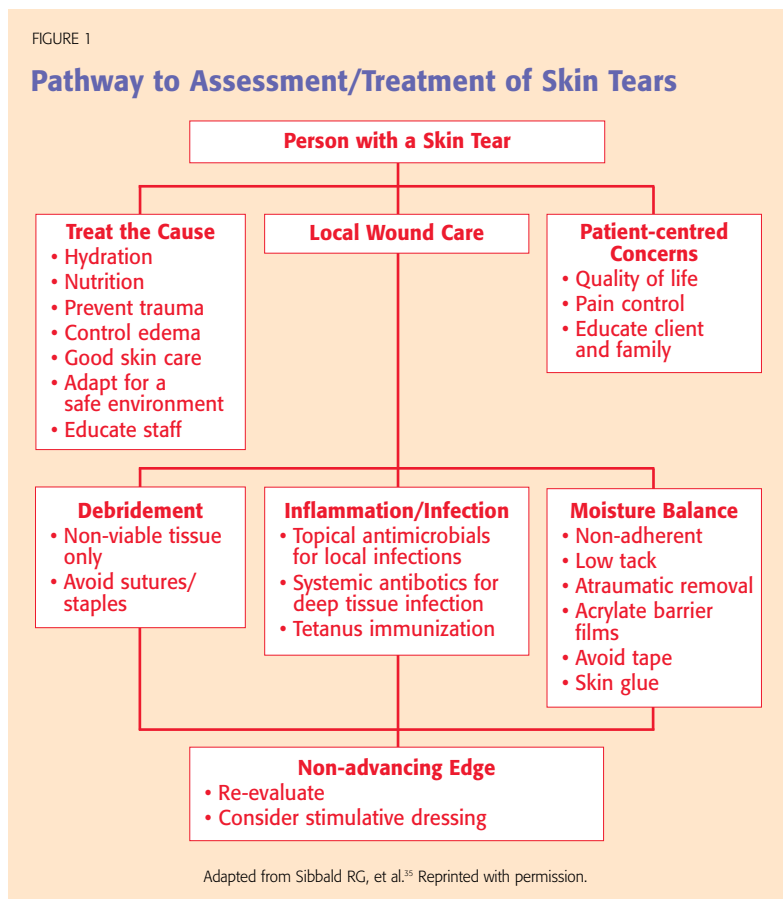
Discussion

Skin tears are the result of shearing, friction or blunt trauma that causes separation of skin layers. The subsequent wounds are partial or full thickness, depending upon the degree of tissue damage.¹ Compared with more extensive and costly pressure ulcers, diabetic foot ulcers, venous leg ulcers and arterial ulcers, skin tears are often seen as minor, inconsequential wounds. In reality, these wounds can be painful and can lead to complications if not treated appropriately.¹⁷

To identify persons at risk, and to prevent and treat skin tears in the elderly population, it is imperative to understand the skin changes associated with aging. These subtle changes increase the risk of skin tear development and interfere with healing.^{5,10}

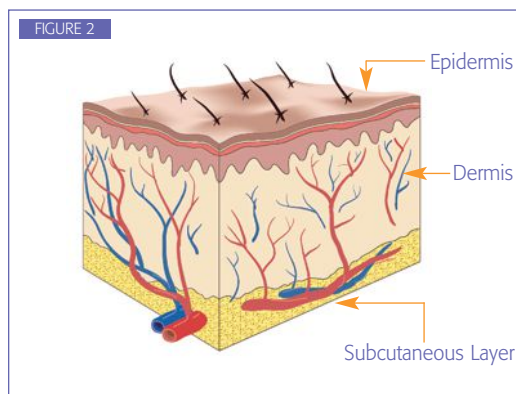
Skin Changes with Aging

Intrinsic factors. With increasing age, individuals experience



dermal and subcutaneous tissue loss, epidermal thinning, and serum composition changes that cause decreased skin surface moisture. The skin's elasticity and tensile strength decrease as these other changes occur.^{5,18} The risk of skin tears is further increased by dehydration, poor nutrition, cognitive impairment, altered mobility and decreased sensation.^{2,6} All these factors are common in the elderly and combine to increase the skin's vulnerability to trauma.¹⁹

Wound healing occurs in a well-orchestrated sequence



Structural layers of the skin.

continued on page 16

TABLE 1

Quick Reference Guide: Prevention and Treatment of Skin Tears

No. Recommendations		RNAO and NGCH Guidelines		Level of Evidence
		Prevention	Treatment	
Identify and Treat the Cause				
1	Obtain a complete patient history that includes general health status and identifies risk factors that may put the patient at risk for a skin tear and factors that may affect the healing of existing skin tears.	RNAO 1.1 (IV) NGCH (IV) RNAO 2.2, 3.8, 3.11, 3.12 (IV)	NGCH (IV) RNAO 1, 12, 21 (IV)	IV
2	Identify persons at high risk for skin tears.	RNAO 1.1, 1.2 (IV)	NGCH (IV)	IV
3	Support the prevention of skin tears through skin hygiene and hydration, responsible bathing, good nutrition, appropriate clothing, the removal of environmental risk factors, and correct turning, positioning and transferring.	NGCH (IV) RNAO 1.4 (IV), 3.11 (IV, Ib), 3.8, 3.9, 3.10, 3.11 (IV)	NGCH (IV) RNAO 7 (III), 8(IV)	IV
Address Patient-centred Concerns				
4	Assess and assist with psychological needs in the development of a patient-centred plan (pain and quality of life).	RNAO 2.1, 2.2 (IV), 3.3 (IV),	RNAO 2, 3, 9, 10 (IV)	IV
Local Wound Care				
5	Classify and document skin tears according to degree of trauma.	RNAO 1.5 (IV), 2.1 (IV)	RNAO 4 (IV), 5 (IV), 6 (IV), 12 (IV) NGCH III	III-IV
6	Provide and support an optimal wound-healing environment.	RNAO 2.1 (IV), 1.4 (IV), 1.5 (IV) NGCH (IV)	RNAO 4 (IV), 5, (IV), 6 (IV), 19 (IV), 20 (IV), 23 (IV), 24 (III), 25 (IV), 26 (III), 27 (IV), 28 (IV), 29 (III), 30 (Ib), 31 (III, IV), 32 (Ib), 33 (IV), 34 (III), 37 (Ib), 38 (III), 39 (IV), 40 (Ib), 41 (Ib), 42 (IV), 43 (IV), 44 (III) NGCH (IV)	III
7	Determine effectiveness of interventions.	RNAO 6.1, 6.2, 6.3, 6.4, 7.1, 7.2, 7.3 (IV) NGCH (IV)	NGCH (IV)	IV
8	Consider the use of adjunctive therapies for non-healing but healable skin tears.		RNAO 35 (Ia), 36 (Ia, III, IV)	Ia-IV
Provide Organizational Support				
9	Develop an interprofessional team with flexibility to meet the patient’s needs.	3.13 (IV)	RNAO 51, 52, 53, 54, 55, 56, 57, 58 (IV)	IV
10	Educate patient, caregiver, and health-care professional on the prevention and treatment of skin tears.	RNAO 5.1 (IV), 5.2 (III), 5.3 (IV), 5.4 (IV) NGCH (IV)	RNAO 48, 49, 50 (IV)	IV

continued on page 18

Biatain - Ibu

Reclaim a life with less pain



After living with pain for eleven years this dressing was a true miracle!

Stanley Begg
wound patient
Toronto, Canada



Exudate management and release of ibuprofen

- **Biatain - Ibu** is a unique combination of excellent exudate management and continuous release of ibuprofen^{2,4}
- **Biatain - Ibu** may reduce wound pain caused by tissue damage^{1,2,3}
- **Biatain - Ibu** releases ibuprofen locally with no observed systemic effect²

www.coloplast.ca

¹ Sibbald et al., 2006. Decreased chronic (persistent) wound pain with a novel sustained release ibuprofen foam dressing. Symposium on advanced wound care, 2006, April, San Antonio, Texas, USA

² Jørgensen, B.; Friis, G. J.; Gottrup, F. Pain and quality of life for patients with venous leg ulcers: Proof of concept of the efficacy of **Biatain - Ibu**, a new pain reducing wound dressing. Wound repair and regeneration 2006, 14 (3), in press.

³ Flanagan, M.; Vogensen, H.; Haase, L. Case series investigating the experience of pain in patients with chronic venous leg ulcers treated with a foam dressing releasing ibuprofen. World Wide Wounds April 2006.

⁴ Steffansen, Bente and Herping, Sofie Paarup Kirkeby. Novel wound models for characterizing the effects of exudates levels on the controlled release of ibuprofen from foam dressings. European Wound Management Association, Poster. 2006, Prague, Czech Republic.

Biatain - Ibu



1-888-880-8605
www.coloplast.ca

of events. The cascade starts with hemostasis and progresses through inflammation, proliferation and maturation.²⁰ There are many factors that either enhance or hinder the wound-healing process. Some of the factors deterring wound healing include age; nutritional status; medications, such as immunosuppressives, anti-inflammatory agents, and anticoagulants; smoking; underlying disease states; and local wound conditions.²¹

Extrinsic factors. Extrinsic factors also contribute to skin tear development. One extrinsic factor is the risk for mechanical trauma when assistance is required for bathing, dressing, toileting, and transferring.⁴ Because soap reduces the skin's natural lubrication (reducing the oils found on the skin surface), frequent bathing, coupled with the natural decrease in lubrication associated with aging, can increase an elderly patient's risk for skin tear development.^{4,22} The resulting dry skin is more susceptible to friction and shearing, making those with dry skin more susceptible to skin tears.

Prevention of skin tears, especially in the elderly, presents a clinical challenge for health-care professionals because even the slightest bump or action may result in trauma and a skin tear. Removal of adhesive tapes or dressings can cause skin tears on fragile skin, as can trauma occurring while ambulating.⁵

Patients who are dependent on others for total care are at the greatest risk for skin tears. These patients frequently acquire skin tears during routine activities such as dressing, bathing, repositioning and transferring.

Risk factors for the development of skin tears¹⁶

- advanced age > 85 years
- gender (female)
- race (Caucasian)
- immobility (chair- or bed-bound)
- inadequate nutritional intake
- long-term corticosteroid use
- history of previous skin tears
- altered sensory status
- cognitive impairment
- stiffness and spasticity
- polypharmacy
- presence of ecchymoses
- dependence for activities of daily living
- using assistive devices
- applying and removing stockings
- removing tape
- vascular problems
- cardiac problems
- pulmonary problems
- visual impairment
- neuropathy
- having blood drawn
- transfers and falls

Independent ambulatory patients are at the second-highest risk, with the majority of their skin tears occurring on their lower extremities.⁴

Recommendation 2: (Level of Evidence: IV)

Identify persons at high risk for skin tears.

Discussion

The RNAO pressure ulcer guidelines (Risk Assessment and Prevention,¹¹ Assessment and Management RNAO¹²) and the NGCH¹³ guidelines recommend a risk assessment that includes a comprehensive head-to-toe assessment upon admission and thereafter as per the individual facility's policies. The RNAO^{11,12} supports the use of validated risk-assessment tools.

Validated risk-assessment tools are available to predict pressure ulcers¹⁴ and are well utilized; the same is not true for skin tears. White, Karam and Cowell⁴ developed a three-group risk-assessment tool to assess skin tear risk; however, this tool has not been widely used and does not appear in recent literature searches. The prevention of skin tears is paramount in the treatment;^{6,15} therefore, a validated and widely accepted tool is needed to predict and identify those who are at high risk for skin tears.

By identifying those at risk, health-care professionals can implement an appropriate prevention program before an injury occurs. The cause, duration and history of alteration in skin integrity, co-existing health issues, medications and mobility level are a few of the issues that should be included in this risk assessment.¹⁶ If all of these issues are considered, the treating team can develop an interprofessional treatment plan to address each patient's physical, social and emotional needs.^{9,15}

Though there is a lack of risk assessment tools for the prediction of skin tears, the literature does offer prevention strategies.^{4,9,15,16} Individuals should be assessed for risk factors upon admission to health-care services and whenever the individual's condition changes.

Recommendation 3: (Level of Evidence: IV)

Support the prevention of skin tears through skin hygiene and hydration, responsible bathing, good nutrition, appropriate clothing, the removal of environmental risk factors, correct turning, positioning and transferring.

Discussion

The RNAO guidelines (Risk Assessment and Prevention RNAO,¹¹ Assessment and Management RNAO¹²) and the NGCH¹⁵ guidelines recommend implementation of systematic prevention protocols. Skin tears can be relatively simple to prevent if time is taken to identify those at high risk and to implement a prevention protocol for every individual.⁵ Ratliff and Fletcher⁹ indicated that once a skin-related problem is acknowledged, implementation of prevention measures and identification of those at high risk will decrease the incidence of skin tears. Bank and Nix¹⁹ conducted a 13-month, retrospective, pre-intervention review. They found that after the implementation of a prevention program, the incidence of skin tears decreased.

Ensuring a safe environment is imperative for the success of a prevention program. This can be accomplished by determining and removing potential causes for trauma.^{10,13,23} Some specific strategies that can be implemented include

- having those at risk wear long sleeves, long pants or knee-high socks¹³
- providing shin guards for those who experience repeat skin tears to shins¹⁹
- determining and removing potential causes for trauma
- ensuring a safe environment with adequate lighting^{10,13,19,24}
- minimizing objects that can be a source of blunt trauma^{4,6,9,10,11,13,23,24}
- padding edges of furniture and equipment, providing an uncluttered pathway, and avoiding scatter rugs.^{10,13,23,24}

Susceptibility to dryness and low relative humidity increases as skin ages. Baths are dehydrating, and showers that are not too long and too hot are preferable. Overheated homes in the winter months can lead to drying of the skin. Hydration needs to be distinguished from lubrication. Lubrication is the result of coating the skin's surface with an oily covering that prevents water loss. Hypoallergenic moisturizers have a continuous water phase of suspended oil. When the water evaporates, oil is left behind, thus hydrating the skin.²⁵

The need to provide a safe environment also extends to

protecting the individual at high risk from trauma during routine care and from self-injury.^{10,13,18,23,24} This includes

- applying hypoallergenic moisturizer at least two times per day
- minimizing bathing
- providing protection from trauma during routine care
- providing protection from self injury
- ensuring proper transfer and lifting techniques to avoid shearing and friction when transferring or moving individuals
- padding bed rails, wheelchair legs or other objects that may lead to blunt trauma
- promoting adequate nutrition and hydration
- avoiding adhesive products on frail skin (If dressings or tapes are required, use paper tapes or silicone dressings to avoid skin stripping or tearing the skin with the removal of adhesives^{5,18,24})
- keeping finger and toe nails short and filed to prevent self-inflicted skin tears²³

Nutritional support plays a vital role in wound healing. Without adequate nutritional intake, the body is unable to repair damaged tissue or mount an offensive against the microbial invasion and infection.^{13,26,27} Each step of the wound-healing process is dependent upon circulating amino acids, lipids and carbohydrates. Optimal nutritional intake will improve skin health, assist with the healing of the current skin tear and help with the prevention of future skin tears.

Hydration and nutritional health can be assessed through observation, history and blood sample monitoring.^{13,26,27} An interprofessional team—including a dietitian—is crucial for patients with chronic wounds, including those at risk for skin tears.²⁶

Recommendation 4: (Level of Evidence: IV)

Assess and assist with psychological needs in the development of a patient-centred plan (that addresses pain and quality of life).

Discussion

The RNAO guidelines (Risk Assessment and Prevention RNAO,¹¹ Assessment and Management RNAO¹²) and the NGCH¹³ guidelines provide validation for Recommendation 4. A psychological assessment that includes an assessment of quality of life should be

performed to determine the individual's motivation and ability to understand and adhere to the plan of care.²⁸ Skin tears frequently occur on the upper limbs and are visible to the individual and the family. These unsightly wounds can add to the psychological pain felt by the patient and their families, thus adding stress and influencing physical pain.^{9,29,30}

Patients who are thus suffering from skin tears are in need of psychological support. As with any chronic illness, they must contend with alterations to their lifestyle and will require additional support to cope effectively with the impact of the skin tear on their quality of life.³⁰

The level or degree of pain experienced by a patient is unique to that individual and plays a vital role in their quality of life and well-being. Pain is a symptom associated with actual or perceived injury and is defined by the patient's perception of the pain. Skin tears are often described as painful, and pain management should be addressed as part of the treatment plan. Krasner et al.²⁹ describe pain as a unique experience that differs among individuals. The individual with a skin tear will experience varying degrees of pain: the acute pain at initial injury, chronic pain from the wound, and psychological pain associated with the wound.^{29,30,31,32}

RNAO Recommendation 9 of the Assessment and Management of Pressure Ulcers guidelines indicates that all patients should be assessed at regular intervals using the same validated pain-assessment tool each time.¹² Currently no validated assessment tools are specific to wound pain; however, a number of validated pain assessment tools can be utilized depending upon the patient's cognitive level.²⁸

When assessing pain in the elderly population, simply worded questions and tools, which can be easily understood, are the most effective, as older adults frequently are encumbered by numerous negative factors such as sensory deficits and cognitive impairments. Subjective tools such as the Visual Analogue Scales (VAS) and the Faces Scale are highly effective for this population.

When addressing skin tears, it is also important to note that lack of sensation (as seen in individuals with paralysis) or the cognitive ability to recognize pain (as seen in individuals suffering from various forms of

dementia) can not only potentiate the occurrence of skin tears but can also negatively affect healing times and preventative measures.^{30,31,33,34}

The patient's individual perception of pain is the reality that must be respected and addressed by the interprofessional team. It is important to create an environment of trust and caring.²⁹ This accurate assessment of the type of pain experienced, its intensity and the impact it has on the patient's quality of life must be taken into consideration when creating a personalized plan of care and should be an integral part of the overall clinical assessment.^{28,29}

Recommendation 5: (Level of Evidence: III-IV)

Classify and document skin tears according to degree of trauma.

Discussion

The RNAO guidelines (Risk Assessment and Prevention RNAO¹¹ Assessment and Management RNAO¹²) and the NGCH¹³ guidelines provide recommendations related to the classification of wounds. Wounds should be classified in a systematic and universally accepted manner.²⁸ To accurately document and treat skin tears, it is important that a common language be used to describe these challenging wounds. Proper documentation is vital to understanding the extent of the problem. Skin tears *should not be grouped* into pressure ulcer categories.

The Payne-Martin Classification for Skin Tears is widely used to define and classify these wounds.^{15,16} Developed in the late 1980s and revised in 1993, this tool aids in the distinction of skin tears as a complex wound type and provides the health-care provider with the means to enhance documentation and track outcomes of care.¹⁰

Recommendation 6: (Level of Evidence: III)

Provide and support an optimal wound-healing environment.

Discussion

The RNAO guidelines (Risk Assessment and Prevention RNAO¹¹ Assessment and Management RNAO¹²) and the NGCH¹³ guidelines provide multiple recommenda-

continued on page 22

Pressured to Prevent Heel Ulcers?

Choose Heelift® Suspension Boot—The Pressure-Free Solution



HERE'S THE PROOF



Heelift®
Suspension Boots

provide a pressure-free environment that helps eliminate the onset of pressure ulcers for susceptible high risk patients, as well as patients already suffering from heel pressure ulcers.

Distributed by:



McArthur Medical Sales Inc.
1846 5th Concession W. • Rockton, ON LOR 1X0
1.800.996.6674
www.mcarthurmedical.com



Manufactured by: **DM SYSTEMS INC.** www.dmsystems.com

Heelift® Original and Smooth Patent No. 5449339.
Additional patents pending. Suggested Code: E0191

©2007, DM Systems, Inc. All rights reserved.

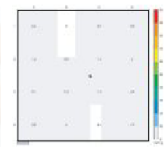
Using a 16-sensor, force sensing pad carefully affixed to the left heel of two subjects, pressure was "mapped" while the patients were lying supine and also with the knee flexed 30 degrees. Pressure mapping readings were done separately with the patient using various pressure reduction mattresses and numerous foot positioners, and heel protectors.

In all tests, Heelift® provided a pressure-free solution compared to the other typically used options.

Pressure Mapping of the Heel - Supine

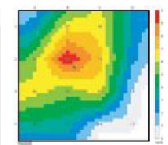
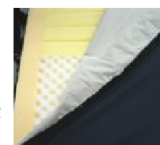
Heelift® Suspension Boot

Sensors included	16
Variation coefficient	63.7%
Standard deviation	1.47
Average pressure	2.3
Maximum pressure	5.9
Center of pressure	2.7, 2.5



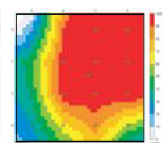
Pressure Reduction Mattress

Sensors included	16
Variation coefficient	59.7%
Standard deviation	26.8
Average pressure	44.8
Maximum pressure	100
Center of pressure	2.2, 2.2



Heel Protector

Sensors included	16
Variation coefficient	36.4%
Standard deviation	28.2
Average pressure	77.5
Maximum pressure	100
Center of pressure	2.8, 2.4



Heel Pillow

Sensors included	16
Variation coefficient	40.5%
Standard deviation	28.1
Average pressure	69.4
Maximum pressure	100
Center of pressure	2.1, 2.5

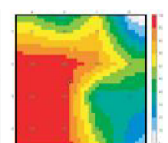







TABLE 2

Payne-Martin Classification for Skin Tears

Payne-Martin Skin Tear Classification ^{15,16} Skin Tear Category			Description
Category I: Skin Tears without Tissue Loss	Linear type (full thickness)	Category I skin tear: Linear type 	Linear type (full thickness): epidermis and dermis are pulled in one layer from supporting structures. The wound is incision-like in appearance.
	Flap type (partial thickness)	Category I skin tear: Flap type 	Flap type (partial thickness): epidermis and dermis are separated. Flap can be completely approximated or approximated to expose no more than 1 mm of the dermis.
Category II: Skin Tears with Partial Tissue Loss	Scant tissue loss type	Category II skin tear: < 25% Partial tissue loss 	Scant tissue loss type: 25% or less of the epidermal flap is lost.
	Moderate to large tissue loss type	Category II skin tear: > 25% Partial tissue loss 	Moderate to large tissue loss type: more than 25% of the epidermal flap is lost.
Category III: Skin Tears with Complete Tissue Loss		Category III skin tear: Complete tissue loss 	The epidermal flap is absent.

tions related to the assessment and treatment of wounds. Prevention of skin tears should be the primary focus; however, health-care professionals must be equipped to manage these challenging wounds should they occur.

While skin tears represent a specific type of wound, the same principles used to manage other wounds should be employed when treating skin tears.^{7,8} To adequately treat wounds, several areas must be addressed: co-existing factors, nutritional support, pain management, local wound conditions, and optimal dressing selection.³⁵ When treating skin tears, the first step is to assess the local conditions within the wound and determine the skin tear category using the Payne-Martin Classification for Skin Tears.^{15,16} Bacteria and necrotic tissue must be removed and the appropriate dressing selected to maintain moisture balance. Moist wound healing—versus a dry dressing—is the method of choice. Actual product selection will depend on the wound assessment.³⁵

Wound Cleansing


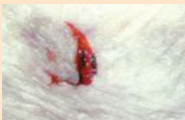



Wound cleansing is an important component of wound management (RNAO Assessment and Management¹²). Optimal wound healing cannot occur unless all foreign debris has been removed from the wound—and cleansing is the easiest method for accomplishing this goal.³⁶ Cleansing is used to decrease surface slough and debris in the wound, thus lowering the bioburden.^{21,36}

Don't forget the tetanus shot!

Tetanus is an acute, often fatal disease caused by wound contamination with *Clostridium tetani*. Human tetanus immunoglobulin (TIG) should be given to all individuals who have had skin integrity interrupted by a non-surgical mechanism and who have not received a tetanus toxoid (Td) inoculation in the past 10 years. The TIG should be given before wound debridement because exotoxin may be released during wound manipulation.³⁸

TABLE 3

Dressing Selection Specific to Skin Tears

Payne-Martin Skin Tear Classification ^{15,16} Skin Tear Category			Skin Tear Care Considerations
Do not suture or staple due to the fragility of the skin^{12,16}			
Category I: Skin Tears without Tissue Loss	Linear type (full thickness)	Category I skin tear: Linear type 	Based on assessment: Control bleeding, approximate edges, secure edges with 2-octylcyanoacrylate topical bandage (skin glue). ^{7,40,41} or Approximate edges. Cover with silicone or low-tack foam dressing. Use alginate under foam if skin tear is bleeding. or Approximate edges. Control bleeding. Cover with absorbent clear acrylic dressings. ⁸ Do not remove for 21 days or if peri-wound exhibits signs and symptoms of infection.**
	Flap type (partial thickness)	Category I skin tear: Flap type 	Based on assessment: Control bleeding, approximate edges, secure edges with 2-octylcyanoacrylate topical bandage (skin glue). ^{5,40,41} or Approximate edges. Cover with silicone or low-tack foam dressing. Use alginate under foam if skin tear is bleeding. or Approximate edges. Control bleeding. Cover with absorbent clear acrylic dressings. ⁸ Do not remove for 21 days or if peri-wound exhibits signs and symptoms of infection.**
Category II: Skin Tears with Partial Tissue Loss	Scant tissue loss type, < 25% partial tissue loss	Category II skin tear: < 25% Partial Tissue Loss 	Based on assessment: Approximate edges. Cover with silicone or low-tack foam dressing. Use alginate under foam if skin tear is bleeding. or Approximate edges, control bleeding, cover with absorbent clear acrylic dressings. ⁸ Do not remove for 21 days or if peri-wound exhibits signs and symptoms of infection.**
	Moderate to large tissue loss type: > 25% partial tissue loss	Category II skin tear: > 25% Partial tissue loss 	Based on assessment: Cover with silicone or low-tack foam dressing. Use alginate under foam if skin tear is bleeding. or Approximate edges. Control bleeding. Cover with absorbent clear acrylic dressings. ⁸ Do not remove for 21 days or if peri-wound exhibits signs and symptoms of infection.**
Category III: Skin Tears with Complete Tissue Loss		Category III skin tear: Complete tissue loss. 	Based on assessment: Cover with silicone or low-tack foam dressing. Use alginate under foam if skin tear is bleeding. or Approximate edges. Control bleeding. Cover with absorbent clear acrylic dressings. Do not remove for 21 days or if peri-wound exhibits signs and symptoms of infection.**

**Use with caution with heavily exudating wounds. Control bleeding first. Dressings are designed to be left in place for extended periods of time, and early removal may interfere with skin tear healing.

continued on page 24

Krasner³⁷ outlined the best practices for cleansing wounds with necrotic debris. She suggests using cleansing/irrigation with non-cytotoxic solutions such as normal saline or non-ionic surfactant cleansers and safe pressures of less than 12 pounds per square inch (psi), achieved by using a 19-gauge needle and a 35 cc syringe. Healing wounds without debris should be gently cleansed with non-cytotoxic solutions such as normal saline or non-ionic surfactant cleansers at low pressure of less than 8 psi to protect granulating tissue.^{36,37}

Moist Wound Healing

The importance of moist wound healing in healable wounds cannot be overstated.³⁵ RNAO recommendations (RNAO Assessment and Management¹²) demonstrate overall high levels of evidence to support moist wound healing as an integral part of any wound management plan. Sibbald et al.²¹ indicated that when compared with dry wounds, a moist wound environment accelerates wound healing. Appropriately utilized dressings can optimize the wound-healing environment by maintaining the optimal moisture levels to promote cell growth and healing.^{12,21,37}

Dressing Selection

RNAO recommendations (RNAO Assessment and Management¹²) support the need for a systematic approach to dressing selection. Ovington³⁹ cited seven dressing recommendations, which were also endorsed by the RNAO Recommendation 31. Recommendations include choosing a dressing that will maintain constant moisture, be appropriate in accordance to the local wound environment, protect the peri-wound skin, control or manage exudate, control or manage infection, and consider caregiver time. These recommendations should be followed when assessing wounds and deciding which dressing or product to use.

Unlike pressure ulcers and other chronic wounds, skin tears are acute wounds that have the potential to be closed by primary intention. Traditionally, wounds closed by primary intention are secured with suture or staples.¹⁶ Given the fragility of the elderly skin,^{1,2,34} sutures and staples are not a viable option, and other methods are required.^{5,34,42,43} Sutton and Pritty⁴³ conducted a randomized controlled study comparing

pretibial laceration management options. They reported that most pretibial lacerations responded best to conservative management and that adhesive strips were preferable over suturing. This research supporting the use of adhesive strips is dated, and, while no current research is available to support a change in practice, *expert opinion suggests that adhesive strips are not the current treatment option of choice for these wounds.*^{7,8,40,41}

Nazarko²⁴ reviewed one protocol for treating skin tears. Calcium alginates were used to control bleeding after initial injury. Once the bleeding was controlled, the skin tears were treated according to category. Category I skin tears were treated with adhesive strips anchor, Category II skin tears were treated with a combination of adhesive strips and soft silicone or low-tack foam dressings, and Category III skin tears were treated with soft silicone or low-tack foam dressings. It was concluded that skin tears using these listed treatments should heal within seven to 10 days.

O'Regan¹⁶ systematically reviewed the existing literature on the treatment of skin tears. She concluded that wounds should be systematically cleaned with normal saline, bleeding should be controlled, clots should be removed, the skin flap should be approximated if possible and a hydrogel, alginate, petroleum gauze, foam, hydrocolloid or transparent film dressing or wound closure strips should be applied, depending on the wound characteristics.

In more recent literature, absorbent clear acrylic dressings^{7,41} have been successfully used to treat Category I to III skin tears with low to moderate exudate. These dressings are semi-permeable and can be left in place for up to 21 days. In a small study, LeBlanc and Christensen⁷ examined a convenience sample of five patients with Category I to II skin tears who were treated with absorbent clear acrylic dressings.⁷ They found complete wound closure with no report of wound infection and minimal reported pain in all five patients. Dressings were removed at 21 days, and complete wound closure was seen in all patients.

Another feasible option for Category I and Category II skin tears with less than 25 per cent epidermal flap loss is approximation of the edges of the skin tear/flap tissue as close as possible. Instead of achieving this goal with

continued on page 26

Changing the standard of healing

Advanced Therapies

Proven outcomes

Cost-Effective

Innovative therapeutic medical devices that promote wound healing and treat complications of immobility. Working with health care professionals everywhere to help change the standard of healing.

KCI Medical Canada Inc.

95 Topflight Drive • Mississauga • Ontario L5S 1Y1
Canada • Toll free 1 800 668 5403

Tel 1 905 565 7187

Fax 1 905 565 7270

www.kci-medical.com



KCI
The Clinical Advantage

2008 KCI Licensing, Inc. All rights reserved. All trademarks and service marks designated herein are the property of KCI and its affiliates and licensors. Those KCI trademarks designated with the "®" or "TM" symbol are registered in at least one country where this product/work is commercialised, but not necessarily in all such countries. The V.A.C.® (Vacuum Assisted closure®) System is subject to patents and/or pending patents. Note: Specific indications, contraindications and precautions and safety tips exist for this product and therapy. Please consult your physician, product instructions and safety tips prior to applications.

adhesive strips, a viable alternative is the use of 2-octylcyanoacrylate topical bandage (skin glue).^{7,40,41} Milne and Corbett⁴⁴ examined a convenience sample of 20 patients with category II to III skin tears who were treated with 2-octylcyanoacrylate topical bandage. Complete healing was seen with one application with no reported wound infection and minimal reported pain. Cost average was less than \$1 per application at the time of the study.

Other possible topical treatment choices may include silicone-based mesh or foam products, absorbent clear acrylic dressings,⁸ calcium alginate dressings or foam dressing.²⁴ The use of hydrocolloids or traditional transparent film dressings is not recommended as they may cause skin stripping if not removed properly. As well, the skin flap may be lifted during removal, thus slowing healing.⁴² If the skin tear is infected or extensive, the wound should be assessed by a physician, enterostomal therapist or another wound-care specialist to determine best treatment options.²⁸

Recommendation 7: (Level of Evidence: III-IV)
Determine effectiveness of interventions.

Discussion

RNAO (Assessment and Management RNAO⁴⁵) and the NGCH¹³ guidelines recommend examining the edge of the wound to determine the effectiveness of the interventions and to establish a renewed plan of care if progress is not as anticipated.

Evaluation needs to be an ongoing step in the wound-healing process, and the clinician needs to address three key issues:^{45,46}

1. How do you know if your treatment plan has been effective?
2. How do you currently evaluate wound healing?
3. Is wound closure the only successful wound-care outcome?

A healthy wound has a pink wound bed and an advancing wound margin, while an unhealthy wound has a dark, friable wound bed with undermined wound margins. Flanagan⁴⁷ states that a 20 to 40 per cent reduction of wound area in two and four weeks is likely to be a reliable predictive indicator of healing.

The edge of the wound is an assessment step in the Pathway to Assessment/Treatment of Skin Tears (Figure 1) to determine if epidermal cell migration

FIGURE 3

Treatment of a Category II Skin Tear with Skin Glue in a 92-year-old Male



Day 0, prior to application



Day 0, after application



Day 3



Day 7

FIGURE 4

Treatment of a Category III Skin Tear with an Absorbent Clear Acrylic Dressing in an 87-year-old Male



Day 0



Day 3



Day 14

has begun. It is a part of the cyclical process of wound management. If the wound is healing, keratinocytes and responsive wound cells migrate and cause the edge of the wound to advance. If the edge is not migrating, the wound will require a full reassessment of cause and corrective therapies. If patient and wound are optimized and the edge is still not migrating, then a wound may need advanced therapies to kick-start the healing process.⁴⁶ If signs of healing still do not occur, then a biopsy should be taken to rule out infection or disease such as pyoderma gangrenosum, Marjolin's ulcer or other atypical wound-related conditions.⁴⁷

Change to the wound edge is only one outcome measure. Wound closure is not always the expected result. In some instances, as with other co-existing factors such as arterial insufficiency, wound closure may not be realistic. Wounds that are unlikely to heal need to have alternative outcome expectations such as wound stabilization, reduced pain, reduced bacterial load and decreased frequency of dressing changes.^{46,48}

Recommendation 8: (Level of Evidence: Ia-IV)

Consider the use of adjunctive therapies for non-healing but healable skin tears.

Discussion

The RNAO (Assessment and Management RNAO¹²) guideline supports the recommendation to consider adjunctive therapies for non-healing but healable wounds and indicates that there are multiple levels of evidence, depending on the modality. Given the nature of these wounds, skin tears, especially Category I and II skin tears, should resolve in a timely fashion without the need for adjunctive therapies if best practice wound care is followed. Based on clinical experience with pressure ulcers, it is accepted that if, despite optimal wound care and controlled intrinsic and extrinsic factors, the wound is not progressing at a rate of 20 to 40 per cent reduction of wound area in two and four weeks,⁴⁷ the clinician might consider adjunctive therapies such as electrical stimulation, growth factors and bioactive agents.^{45,46,47} NGCH guidelines¹³ provide recommendations for skin tears that mirror the recommendations for pressure ulcers, and, as such, non-healing complex

FIGURE 5

Treatment of a Category III Skin Tear with Soft Silicone Foam Dressing



skin tears should also be considered for possible adjunctive therapies if timely healing rates are not experienced. Referrals may be required for some therapies, and they may not be available in all health-care settings. Cultural and religious beliefs may prove to be barriers to certain interventions.⁴⁶

Recommendation 9: (Levels of Evidence: IV)

Develop an interprofessional team with flexibility to meet the patient's needs.

Discussion

The RNAO guidelines (Risk Assessment and Prevention RNAO¹¹ Assessment and Management RNAO¹²) provide recommendations relating to the development of an organized interprofessional team approach to managing wounds.

Patients, families and caregivers need the wound-care expert's professional knowledge, but they also require the added expertise of other interprofessional team members. Members can include, but are not limited to, occupational therapists, physical therapists, dietitians, social workers, general physicians, general nurses, enterostomal therapy nurses, pharmacists, social workers, and discharge planners. All health-care professionals involved in the care of the patient with skin tears must be willing and able to work together toward positive patient outcomes. A team of health-care professionals working together is more effective than one health-care professional working in isolation. At the core of the team should be the patient and the family. The patient's desires and wishes must be respected even if they differ from the ultimate goals of the health-care team.⁴⁹

Recommendation 10: (Level of Evidence: IV)

Educate patient, caregiver, and health-care professional on the prevention and treatment of skin tears.

Discussion

The RNAO guidelines (Risk Assessment and Prevention RNAO¹¹ Assessment and Management RNAO¹²) and the NGCH¹⁵ guidelines support the need to educate patients, caregivers and health-care professionals on the prevention and treatment of skin tears.

Patient, family and health-care professionals require ongoing education and support to ensure current evidence-based practice is being followed.⁵⁰ Prevention is a critical element in a successful wound-care plan, and education is a key component in any successful preventative or treatment program.^{9,22} Education is particularly important in the prevention of skin tears. All caregivers must be aware of the proper techniques for providing care without causing skin tears. Education should include the points discussed in Recommendation 3.^{7,8,9}


In addition to these strategies it is important to involve those at risk, their family members and their caregivers in the prevention process, thus empowering them to play a proactive role in skin-tear prevention,⁷ resulting in successful skin-tear prevention and management.⁵⁰ A needs assessment of patients and caregivers should be performed and documented, including baseline information pertaining to knowledge, beliefs, health practices and perceived learning needs of patients, families and caregivers. Cultural and psychological variables will also be factors in developing prevention and management strategies.⁵⁰

Responsible Bathing

- should be based on individual need and preference
- should be performed with either soapless products or Ph-balanced soaps
- involves limiting baths; showering instead with warm, not hot, water
- includes the application of hypoallergenic moisturizers post showering while skin is still damp but not wet

Conclusion

Skin tears represent a specific and challenging type of laceration that most often affects the elderly population. Skin tears are a common problem that health-care professionals face when caring for the elderly. Prevention of these wounds is the primary focus for managing this problem. However, health-care professionals must be equipped to manage these challenging wounds when they occur.

Literature pertaining to the prevention and treatment of these wounds is limited. Further research is needed to determine the prevalence and incidence in the Canadian elderly population. A validated skin-tear prediction scale and best practice prevention and treatment guidelines are needed to assist health-care professionals in identifying those at risk, and in preventing and treating these painful wounds. 

References

1. Thomas Hess C. Skin IQ. *Advances in Skin and Wound Care*. 2004; 17(6):277.
2. Bryant R, Rolstand B. Examining threats to skin integrity. *Ostomy/Wound Management*. 2001;47(6):18-27.
3. Mason SR. Type of soap and the incidence of skin tears among residents of a long-term care facility. *Ostomy/Wound Management*. 1997;43(8):26-30.
4. White M, Karam S, Cowell B. Skin tears in frail elders: A practical approach to prevention. *Geriatric Nurse*. 1994;15(2):95-9.
5. Baranoski S. How to prevent and manage skin tears. *Advances in Skin and Wound Care*. 2003;16(5):268.
6. McGough-Csarny J, Kopac CA. Skin tears in institutionalized elderly: An epidemiological study. *Ostomy/Wound Management*. 1998;44: 145-255.
7. LeBlanc K, Christensen D. An approach to managing skin tears in the elderly population: A case series. Poster Presentation presented at the Canadian Association of Wound Care Annual Conference, Montreal, QC. 2005.
8. LeBlanc K, Christensen D, Cuillier B. Managing skin tears in long-term care. Poster Presentation presented at the Canadian Association of Wound Care Annual Conference Montreal, QC. 2005.
9. Ratliff CR, Fletcher KR. Skin tears: A review of the evidence to support prevention and treatment. *Ostomy/Wound Management*. 2007;53(3):32-42.
10. Baranoski S. Skin tears: The enemy of frail skin. *Advances in Skin and Wound Care*. 2000;13:123-126.
11. Registered Nurses' Association of Ontario (RNAO). Nursing Best Practice Guideline: Risk Assessment and Prevention of Pressure Ulcers. Toronto: RNAO. 2005.
12. Registered Nurses' Association of Ontario (RNAO). Nursing Best Practice Guideline: Assessment and Management of Pressure Ulcers. Toronto: RNAO. 2002.

continued on page 30

Regulate to accelerate



3M™ Tegaderm™ Matrix Matrix Dressing

Get in the fast lane with Tegaderm™ Matrix to accelerate wound healing. This unique dressing is impregnated with polyhydrated ionogen (PHI) ointment which down-regulates MMPs, balancing the chronic wound environment and accelerating healing.¹⁻²

- Normalizes wound micro-environment³⁻⁵
- Regulates MMPs (matrix metalloproteinases)²
- Facilitates re-epithelialization²

Go full throttle! For more information, contact your 3M Health Care representative or the 3M Health Care Customer Helpline at 1 800 364-3577.

References: 1. Karim RB, et al. (2006). MMP-2 Assessment as an Indicator of Wound Healing: A Feasibility Study. *Advances in Skin & Wound Care* 19(6): 324-327; 2. Monroe S, et al. (2005). Effect of Polyhydrated Ionogens (PHI) on Viability and Matrix Metalloproteinase Levels in Cultures of Normal and Diabetic Human Dermal Fibroblast. Poster Presentation WHS. Chicago. May 2005; 3. Hoekstra M, et al. (2003). Poly Hydrated Ionogens regulate Matrix Metalloproteinases Expression and Reactive Oxygen Species in Recalcitrant Wounds. *European Tissue Repair Society Congress*, September 2003; 4. Körber A, et al. (2006). Erfolgreiche Behandlung therapieresistenter chronischer Wunden mit DerMax (Successful treatment of therapy-refractory chronic wounds with Tegaderm Matrix). *Zeitschrift für Wundheilung* 6: 310-314; 5. van den Berg AJJ, et al. (2003). A novel formulation of metal ions and citric acid reduces reactive oxygen species in vitro. *J Wound Care* 12(10).



13. Ayello EA. Preventing pressure ulcers and skin tears. Available online at www.guideline.gov/summary/summary.aspx?ss=15&doc_id=3511&nbr=2737. Accessed April 30, 2007.
14. Ayello EA, Braden B. Why is pressure ulcer risk so important? *Nursing* 2001;31(11):74-79.
15. Payne RL, Martin MC. Defining and classifying skin tears: Need for a common language. *Ostomy/Wound Management*. 1993;39(5):16-26.
16. O'Regan A. Skin tears: A review of the literature. *World Council of Enterostomal Therapists Journal*. 2002;22(2):26-31.
17. Cuzzell J. Wound assessment and evaluation: Skin tear protocol. *Dermatology Nursing*. 2002;14(6):405.
18. Birch S, Coggins T. No-rinse, one step bed bath: The effects on the occurrence of skin tears in a long-term care setting. *Ostomy/Wound Management*. 2003;49(1):64-67.
19. Bank D, Nix D. Preventing skin tears in a nursing and rehabilitation center: An interdisciplinary effort. *Ostomy/Wound Management*. 2006;52(9):38-46.
20. Ovington L. Bacterial toxins and wound healing. *Ostomy/Wound Management*. 2003;49(7A) Supp:8-12.
21. Sibbald RG, Williamson D, Orsted HL, Campbell K, Keast D, Sibbald D. Preparing the wound bed: Debridement, bacterial balance and moisture balance. *Ostomy/Wound Management*. 2000;46(11):14-35.
22. Brillhart B. Pressure sore and skin tear prevention and treatment during a ten month program. *Rehabilitation Nursing*. 2005;30(3):85-91.
23. Baranoski S. Skin tears: Guard against this enemy of frail skin. *Nursing Management*. 2001;32:25-32.
24. Nazarko L. Preventing and treating skin tears. *Nursing and Residential Care*. 2005;7(12): 549-550.
25. Sibbald RG, Cameron J, Alavi A. Dermatological aspects of wound care. In Krasner DL, Rodeheaver GT, Sibbald RG, (eds.). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*, Fourth Edition. Wayne, PA: HMP Communications. 2007.
26. Zagoren AJ, Johnson DR, Amick N. Nutritional assessment and intervention in the adult with a chronic wound. In Krasner DL, Rodeheaver GT, Sibbald RG, (eds.). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*, Fourth Edition. Wayne, PA: HMP Communications. 2007.
27. Kane DP. Chronic wound healing and chronic wound management. In Krasner DL, Rodeheaver GT, Sibbald RG, (eds.). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*, Fourth Edition. Wayne, PA: HMP Communications. 2007:11-24.
28. Keast D, Parslow N, Houghton P, Norton L, Fraser C. Best Practice Recommendations for the Prevention and Treatment of Pressure Ulcers: Update 2006. *Wound Care Canada*. 2006;4(1):19-29.
29. Krasner DL, Papen J, Sibbald RG. Helping patients out of the SWAMP: Skin and wound assessment and management of pain. In Krasner DL, Rodeheaver GT, Sibbald RG, (eds.). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*, Fourth Edition. Wayne, PA: HMP Communications. 2007.
30. Price P. Health-related quality of life. In Krasner DL, Rodeheaver GT, Sibbald RG, (eds.). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*, Fourth Edition. Wayne, PA: HMP Communications. 2007.
31. Popescu A, Salcido R. Wound pain: A challenge for the patient and the wound care specialist. *Advances in Skin & Wound Care*. 2004;17(1):14-20.
32. Kennedy-Evans KL. Addressing the pain: An innovative solution for skin tears: A case study. *Ostomy/Wound Management*. 2004;50(2):9-10.
33. Flaherty E. Assessing pain in older adults. *Best Practices in Nursing Care to Older Adults*. 2000 Jan.
34. Baranowski S. Skin tears: Staying on guard against the enemy of frail skin. *Nursing* 2003. Supplement 2003:14-21.
35. Sibbald RG, Orsted HL, Coutts PM, Keast DH. Best Practice Recommendations for Preparing the Wound Bed: Update 2006. *Wound Care Canada*. 2006;4(1):15-29.
36. Rodeheaver GT, Ratliff CR. Wound cleansing, wound irrigation, wound disinfection. In Krasner DL, Rodeheaver GT, Sibbald RG, (eds.). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*, Fourth Edition. Wayne, PA: HMP Communications. 2007.
37. Krasner D. How to prepare the wound bed. *Ostomy/Wound Management*. 2001;47(4):59-61.
38. Carden DL. Tetanus. In Tintinalli JE, Kelen GD, Stapczynski JS, (eds.). *Emergency Medicine: A Comprehensive Study Guide*, Sixth Edition. American College of Emergency Physicians. 2004.
39. Ovington L, Peirce B. Wound dressings: Form, function, feasibility, and facts. In Krasner DL, Rodeheaver GT, Sibbald RG, (eds.). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*, Third Edition. Wayne, PA: HMP Communications. 2001:311-20.
40. Fleck C. Preventing and treating skin tears. *Advances in Skin & Wound Care*. 2007;20(6): 315-320.
41. Roberts J. Preventing and managing skin tears: A review. *Journal of Wound Ostomy Continence Nursing*. 2007;34(3):256-259.
42. Edwards H, Gaskill D, Nash R. Treating skin tears in nursing home residents: A pilot study comparing four types of dressings. *International Journal of Nursing Practice*. 1998;4(1):25-32.
43. Sutton R, Pritty P. Use of sutures or adhesive tapes for primary closure of pre-tibial lacerations. *British Medical Journal* 1985;290(6482).
44. Milne CT, Corbett LQ. A new option in the treatment of skin tears for the institutionalized resident: Formulated 2-octacyanacrylate topical bandage. *Geriatric Nursing*. 2005;26(5):321-5.
45. Registered Nurses' Association of Ontario (RNAO). Nursing Best Practice Guideline: Assessment and Management of foot ulcers for persons with diabetes. Toronto: RNAO. 2005.
46. Orsted H, Searles OD, Trowell H, Shapera L, Miller P, Rahman J. Best Practice Recommendations for the Prevention, Diagnosis and Treatment of Diabetic Foot Ulcers: Update 2006. *Wound Care Canada*. 2006;4(1):39-51.
47. Flanagan M. Improving accuracy of wound measurement in clinical practice. *Ostomy/Wound Management*. 2003;49(10):28-40.
48. Enroch S, Price P. Should alternative end points be considered to evaluate outcomes in chronic recalcitrant wounds? *World Wide Wounds*. October 2004. Available online at www.worldwidewounds.com.
49. Krasner DL, Rodeheaver GT, Sibbald RG. Interprofessional Wound Caring. In Krasner DL, Rodeheaver GT, Sibbald RG, (eds.). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*, Fourth Edition. Wayne, PA: HMP Communications. 2007.
50. Erwin-Toth P, Stenger B. Teaching wound care to patients, families and healthcare providers. In Krasner DL, Rodeheaver GT, Sibbald RG, (eds.). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*, Fourth Edition. Wayne, PA: HMP Communications. 2007:45-50.

Tempur-Pedic® ...your partner in good health and healing



Tempur-Pedic Swedish Mattresses™ and Tempur-Med® hospital mattresses mould to the patient's body and displace their weight, providing total body support and effectively lowering pressure on the skin.

Hospital trials performed worldwide have proven that the use of Tempur-Pedic and Tempur-Med surfaces decrease pressure ulcer prevalence. They have also proven that people suffering from back pain and other ailments experienced tremendous pain-relief when using a Tempur-Med mattress.

"Considering that prevention of pressure ulcers is far more economical than treatment, we are convinced that medium to high-risk patients can definitely benefit from the use of the Tempur-Med hospital mattress."

- G. Lalonde
Head Nurse, New Products
Veteran Affairs Canada

For more information or to find a dealer near you,
Visit www.tempurpedicmedical.ca or
call 1-800-887-4321


TEMPUR-PEDIC®
PRESSURE RELIEVING
SWEDISH MATTRESSES AND PILLOWS

Medical

Pratiques recommandées pour la prévention et le traitement des déchirures cutanées

Par Kimberly LeBlanc, BScN, RN, ET, MN, IIWCC; Dawn Christensen, BScN, RN, ET, MHScN, IIWCC; Heather L. Orsted, MSc, RN, BN, ET; David H. Keast, MSc, MD, FCFP

Résumé

L'Association canadienne pour le soin des plaies (ACSP) a publié les Pratiques recommandées pour la prévention et le traitement de diverses plaies, notamment les ulcères de pression, les ulcères veineux de la jambe et les ulcères du pied diabétique. L'Association des infirmières et infirmiers autorisés de l'Ontario (AIIAO) a publié les Lignes directrices sur les pratiques exemplaires pour l'évaluation et la prise en charge des ulcères de pression, des ulcères veineux des membres inférieurs et des ulcères du pied diabétique. Jusqu'à présent, il n'y a pas de recommandations ou de lignes directrices canadiennes pour la prévention et le traitement des déchirures cutanées. Le but de cet article est de combler la brèche des recommandations manquantes (et non des lignes directrices).

Bien qu'il n'existe pas de lignes directrices canadiennes pour la prévention et le traitement des déchirures cutanées, on peut extrapoler certaines preuves à l'appui pour la prise en charge des déchirures

cutanées, selon les lignes directrices de l'AIIAO dont *La prévention et le traitement des ulcères de pression* et les lignes directrices du National Guideline Clearinghouse pour la prévention des ulcères de pression et des déchirures cutanées.

Dans cet article, le processus décisionnel clinique pour la prise en charge et la prévention des déchirures cutanées peut être guidé par le cheminement de l'évaluation et du traitement des déchirures cutanées (voir page 34). On recommande au clinicien d'identifier et traiter les causes sous-jacentes, d'identifier et prendre en charge les besoins particuliers du patient, de suivre les pratiques des soins des plaies recommandées localement ainsi que d'envisager des traitements d'appoint, lorsque justifié. Les recommandations proclament la nécessité d'inclure des activités organisationnelles et éducationnelles qui facilitent la mise en œuvre des lignes directrices dans la pratique clinique.

Les déchirures cutanées sont le résultat d'un traumatisme à la peau dû au cisaillement, à la friction ou à un traumatisme contondant et sont souvent mal gérées. Les professionnels de la santé doivent apprendre à reconnaître quelles personnes sont à risque de déchirures cutanées, comment prévenir ces plaies, et comment les traiter quand elles surviennent.¹ Les déchirures cutanées sont sources de stress pour les patients et leurs proches en plus d'être souvent difficiles à traiter en raison des changements

physiques associés au vieillissement et aux maladies concomitantes. Les personnes âgées sont à risque plus élevé de déchirures cutanées en raison de la fragilité de la peau vieillissante, de l'écrasement de la couche de cellules basales et du ralentissement de la circulation. Plus de 1,5 millions de déchirures cutanées surviennent chaque année chez les adultes dans les établissements de soins de santé aux États-Unis.² Lorsque la cause des déchirures cutanées est connue, il est possible

suite à la page 34

Les soins appropriés des déchirures cutanées peuvent présenter un problème complexe pour les professionnels de la santé, puisque la littérature relative à la prévention et au traitement des déchirures cutanées est limitée. Suite à un recensement littéraire, les auteurs n'ont pas trouvé d'articles portant sur la prévalence et l'incidence des déchirures cutanées dans la population des personnes âgées du Canada.



IMAGE © ANDRÉS RODRÍGUEZ/SHUTTERSTOCK

Your time is valuable: **STOP** wasting it treating preventable wounds.

New reports demonstrate the CAWC's Pressure Ulcer Awareness Program (PUAP) can reduce your prevalence as much as **57%** and your incidence as much as **71%**!

Put the evidence into practice . . . implement the PUAP. Save thousands of dollars in treatment costs and hundreds of hours in nursing time.

Find out more at www.preventpressureulcers.ca
or e-mail us at info@preventpressureulcers.ca.



Canadian Association
of Wound Care

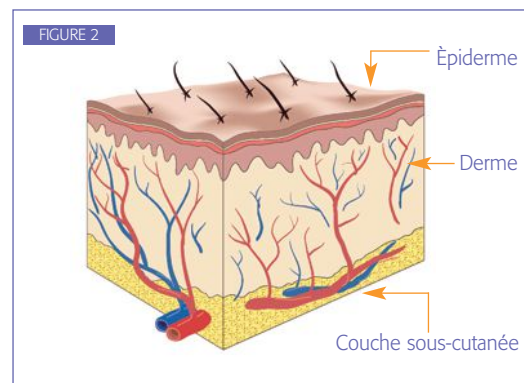


Association canadienne
du soin des plaies

www.cawc.net

d'identifier qu'elles surviennent souvent à la suite des événements suivants : blessures en fauteuil roulant (25 pour cent), heurts accidentels d'objets (25 pour cent), transferts (18 pour cent) et chutes (12,4 pour cent). En 1991, Malone *et al.* ont mené une revue rétrospective pendant une année de rapports d'incidents notés au dossier dans un vaste établissement de soins prolongés. Ils ont conclu que 80 pour cent des déchirures cutanées survenaient sur les bras, spécialement aux avant-bras.³ White, Karam et Cowell⁴ concluent que les déchirures cutanées sont plus susceptibles de survenir durant les heures de forte activité – 6 h à 11 h et 15 h à 21 h. Baranoski⁵ signale que les déchirures cutanées surviennent le plus souvent aux membres supérieurs. Cependant, elles peuvent survenir n'importe où sur le corps et peuvent même être prises à tort pour des ulcères de pression de Stade II au niveau des fessiers et dans le dos.⁶

La littérature récente, accorde davantage d'attention aux déchirures cutanées, mais aucun modèle de



Couches structurales de la peau.

référence de prise en charge n'a été élaboré. Bien que la prévention des déchirures cutanées soit le centre d'attention primaire dans la prise en charge de ce problème, les professionnels de la santé œuvrant avec une population de personnes âgées doivent être équipés pour prendre ces plaies en charge lorsqu'elles surviennent.^{7,8,9} En reconnaissant quels patients sont à risque de déchirures cutanées, en prévenant les blessures cutanées et en utilisant les pansements de façon appropriée, nous pouvons épargner à ces patients douleur et souffrance indues.¹⁰

Recommandation 1 : (Niveau de preuve : IV)

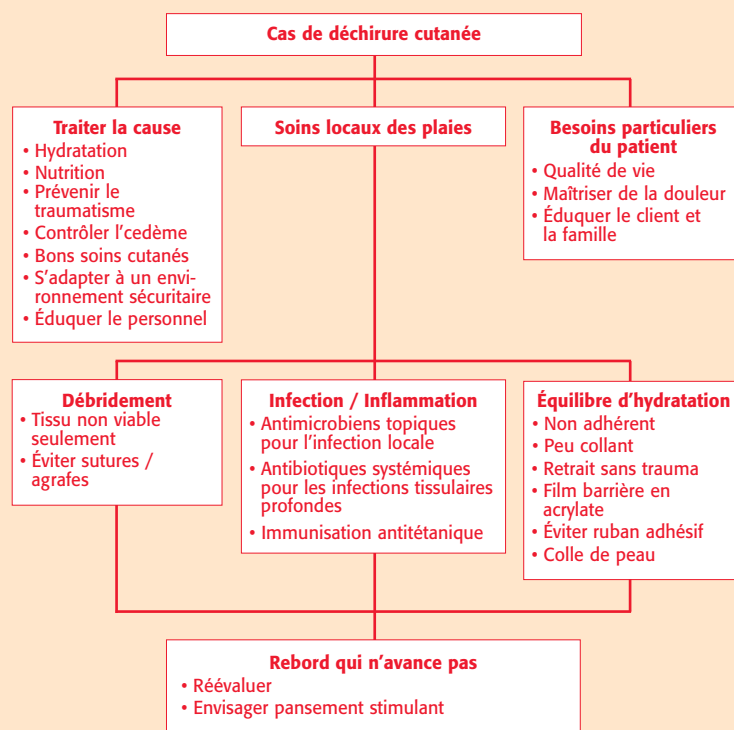
Obtenir une anamnèse complète du patient qui comprend l'état de santé général et identifier les facteurs de risque qui peuvent mettre le patient à risque de déchirures cutanées et les facteurs qui peuvent affecter la guérison des déchirures cutanées existantes.

Discussion

Les déchirures cutanées sont le résultat du cisaillement, de friction ou d'un traumatisme contondant qui entraîne la séparation des couches de la peau. Les plaies subséquentes sont d'épaisseur partielle ou pleine, selon le degré de lésion tissulaire.¹ Comparativement aux ulcères de pression, aux ulcères du pied diabétique, aux ulcères veineux des membres inférieurs et aux ulcères artériels, plus extensifs et plus coûteux, les déchirures cutanées sont souvent vues comme des plaies mineures et sans conséquences. En réalité, ces plaies peuvent être douloureuses et entraîner des complications si elles ne sont pas traitées de façon appropriée.¹⁷

FIGURE 1

Cheminement de l'évaluation/du traitement des déchirures cutanées



D'après Sibbald RG et al.³⁵ Réimprimé avec permission.

TABLEAU 1

Guide de référence rapide : Prévention et traitement des déchirures cutanées

No	Recommandation	Lignes directrices de la RNAO (AIIAO) et du NGCH		Niveau de preuve
		Prévention	Traitement	
Identifier et traiter la cause				
1	Obtenir une anamnèse complète du patient qui comprend l'état de santé général et identifier les facteurs de risque qui peuvent mettre le patient à risque de déchirures cutanées et les facteurs qui peuvent affecter la guérison des déchirures cutanées existantes.	RNAO 1.1 (IV) NGCH (IV) RNAO 2.2, 3.8, 3.11, 3.12 (IV)	NGCH (IV) RNAO 1, 12,	IV 21 (IV)
2	Identifier les personnes à risque élevé de déchirures cutanées.	RNAO 1.1, 1.2 (IV)	NGCH (IV)	IV
3	Soutenir la prévention des déchirures cutanées par l'hygiène et l'hydratation de la peau, bains raisonnables, bonne nutrition, vêtements appropriés, retrait des facteurs de risque environnementaux, tourner, positionner et transférer le patient correctement.	NGCH (IV) RNAO 1.4 (IV), 3.11 (IV, Ib), 3.8, 3.9, 3.10, 3.11 (IV)	NGCH (IV) RNAO 7(III), 8(IV)	IV
Répondre aux besoins particuliers du patient				
4	Évaluer et répondre aux besoins psychologiques dans l'élaboration d'un plan axé sur le patient (douleur et qualité de vie).	RNAO 2.1, 2.2 (IV), 3.3 (IV),	RNAO 2, 3, 9, 10 (IV)	IV
Soins locaux des plaies				
5	Classifier et documenter les déchirures cutanées selon le degré de traumatisme.	RNAO 1.5 (IV), 2.1 (IV)	RNAO 4(IV), 5 (IV), 6(IV), 12 (IV) NGCH III	III-IV
6	Procurer et soutenir un environnement optimal de guérison des plaies.	RNAO 2.1 (IV), 1.4 (IV), 1.5 (IV) NGCH (IV)	RNAO 4 (IV), 5, (IV), 6(IV), 19 (IV), 20 (IV), 23(IV), 24 (III), 25(IV), 26 (III), 27 (IV), 28 (IV), 29 (III), 30 (Ib), 31 (III, IV), 32 (Ib), 33 (IV), 34 (III), 37 (Ib), 38 (III), 39 (IV), 40 (Ib), 41 (Ib), 42 (IV), 43 (IV), 44 (III) NGCH (IV)	III
7	Déterminer l'efficacité des interventions.	RNAO 6.1, 6.2, 6.3, 6.4, 7.1, 7.2, 7.3 (IV) NGCH (IV)	NGCH (IV)	IV
8	Envisager l'utilisation de traitements d'appoint pour les déchirures cutanées qui ne guérissent pas mais qui sont curables.		RNAO 35 (Ia), 36 (Ia, III, IV)	Ia-IV
Procurer un soutien organisationnel				
9	Mettre sur pied une équipe interprofessionnelle ayant la souplesse de répondre aux besoins du patient.	3.13 (IV)	RNAO 51, 52, 53, 54, 55, 56, 57, 58 (IV)	IV
10	Éduquer le patient, le soignant et le professionnel de la santé sur la prévention et le traitement des déchirures cutanées.	RNAO 5.1 (IV), 5.2 (III), 5.3(IV), 5.4(IV) NGCH (IV)	RNAO 48, 49, 50 (IV)	IV

suite à la page 36

Pour identifier les personnes à risque, et pour prévenir et traiter les déchirures cutanées dans la population âgée, il est obligatoire de comprendre les changements cutanés associés au vieillissement. Ces changements subtils augmentent le risque de déchirures cutanées et interfèrent avec la guérison.^{5,10}

Changements cutanés avec le vieillissement

Facteurs intrinsèques. Avec l'âge, les gens éprouvent une perte du tissu dermique et sous-cutané, un amincissement de l'épiderme, et des changements de la composition sérique qui entraîne une perte d'hydratation de la surface cutanée. L'élasticité et la résistance à la traction de la peau diminuent alors que surviennent ces autres changements.^{5,18} La déshydratation, une mauvaise nutrition, une atteinte cognitive, une altération de la mobilité et une perte de sensation augmentent davantage le risque de déchirures cutanées.^{2,6} Tous ces facteurs sont communs chez la personne âgée et se combinent pour augmenter la vulnérabilité de la peau aux traumatismes.¹⁹

La guérison de la plaie survient dans une séquence d'événements bien orchestrée. La cascade commence avec l'hémostase et progresse vers l'inflammation, la prolifération et la maturation.²⁰ De nombreux facteurs favorisent ou entravent le processus de guérison de la plaie. Certains facteurs entravant la guérison de la plaie comprennent l'âge, l'état nutritionnel, les médicaments

comme les immunosuppresseurs, les anti-inflammatoires et les anticoagulants, le tabagisme, les états morbides sous-jacents et les conditions locales de la plaie.²¹

Facteurs extrinsèques. Les facteurs extrinsèques contribuent aussi au développement des déchirures cutanées. Un des facteurs extrinsèques est le risque de traumatisme mécanique lorsqu'une aide est requise pour le bain, l'habillement, l'usage des toilettes et le transfert.⁴

Le risque de développement de déchirures cutanées du patient âgé est augmenté par des bains fréquents, combinés à l'utilisation de savon qui diminue la lubrification naturelle de la peau (éliminant les huiles présentes sur la surface de la peau).^{4,22}

L'assèchement de la peau qui en résulte est plus susceptible à la friction et au cisaillement, rendant les personnes, qui ont la peau sèche, plus susceptibles aux déchirures cutanées.

La prévention des déchirures cutanées, spécialement chez la personne âgée, présente un défi clinique pour les professionnels de la santé. Une faible secousse ou action peut entraîner un traumatisme et une déchirure cutanée. Le retrait des rubans ou pansements adhésifs peut causer des déchirures cutanées sur une peau fragile, de même envergure qu'un traumatisme provoquer lors de déplacement du patient.⁵

Les patients qui dépendent des autres pour tous leurs soins sont à risque plus élevé pour développer des déchirures cutanées. Ces patients écopent fréquemment de déchirures cutanées durant les activités routinières comme l'habillement, le bain, le repositionnement et le transfert.

Les patients ambulatoires indépendants sont en deuxième place pour développer des déchirures cutanées. Celles-ci surviennent la plupart du temps aux membres inférieurs.⁴

Recommandation 2 : (Niveau de preuve : IV)
Identifier les personnes à risque élevé de déchirures cutanées.

Discussion

Les lignes directrices sur les ulcères de pression de

suite à la page 38

Facteurs de risque pour le développement des déchirures cutanées¹⁶

- âge avancé > 85 ans
- sexe (femme)
- race (blanche)
- immobilité (confinement à la chaise ou au lit)
- apport nutritionnel insuffisant
- utilisation de corticostéroïdes à long-terme
- antécédents de déchirures cutanées antérieures
- statut sensoriel altéré
- atteinte cognitive
- raideur et spasticité
- polypharmacie
- présence d'ecchymoses
- dépendance pour les activités de la vie quotidienne
- utilisation d'appareils et accessoires fonctionnels
- application et retrait des bas
- retrait du ruban adhésif
- problèmes vasculaires
- problèmes cardiaques
- problèmes pulmonaires
- déficience visuelle
- neuropathie
- avoir une prise de sang
- transferts et chutes

InterDry™ Ag

Skin Fold Management

InterDry™ AG Textile with
Antimicrobial Silver Complex

InterDry™ Ag

Textile with Silver Complex

The **First** Innovative
Solution for Skin
Fold Management

- Translocates
and promotes
evaporation of
excess moisture

Kills bacteria

Reduces skin friction



Coloplast

www.coloplast.ca

l'AIIAO (Évaluation et prévention du risque,¹¹ Évaluation et prise en charge AIIAO¹²) et les lignes directrices du NGCH¹³ recommandent une évaluation du risque qui comprend une évaluation exhaustive à l'admission puis par la suite selon les politiques des établissements individuels. L'AIIAO^{11,12} appuie l'utilisation d'outils validés d'évaluation du risque.

Les outils validés d'évaluation de risque sont disponibles pour prédire les ulcères de pression¹⁴ et ils sont bien utilisés, mais la même chose n'est pas vraie pour les déchirures cutanées. White, Karam et Cowell⁴ ont élaboré un outil d'évaluation de risque de trois groupes pour évaluer le risque de déchirures cutanées; toutefois, cet outil n'a pas été largement utilisé et il n'apparaît pas dans les recherches de littérature récente. La prévention des déchirures cutanées est primordiale dans le traitement^{6,15}; c'est pourquoi un outil validé et largement accepté est nécessaire pour prédire et identifier ceux qui sont à risque élevé de déchirures cutanées.

En identifiant ceux qui sont à risque, les professionnels de la santé peuvent mettre en œuvre un programme de prévention approprié avant qu'une blessure ne survienne. La cause, la durée et l'histoire de l'altération de l'intégrité de la peau, les enjeux de santé concomitants, les médicaments et le niveau de mobilité sont quelques-uns des enjeux qui devraient être inclus dans cette évaluation du risque.¹⁶ Si on envisage tous ces enjeux, l'équipe traitante peut développer un plan de traitement interprofessionnel pour répondre aux besoins physiques, sociaux et émotionnels de chaque patient.^{9,15}

Bien qu'il y ait un manque d'outils d'évaluation de risque pour la prédiction des déchirures cutanées, la littérature offre des stratégies de prévention.^{4,9,15,16} Les personnes devraient être évaluées pour les facteurs de risque à l'admission aux services de soins de santé et lorsque l'état de santé de la personne change.

Recommandation 3 : (Niveau de preuve : IV)

Soutenir la prévention des déchirures cutanées par l'hygiène et l'hydratation de la peau, bains raisonnables, bonne nutrition, vêtements appropriés, retrait des facteurs de risque environnementaux, tourner, positionner et transférer le patient correctement.

Discussion

Les lignes directrices sur les ulcères de pression de l'AIIAO (Évaluation et prévention du risque,¹¹ Évaluation et prise en charge AIIAO¹²) et les lignes directrices du NGCH¹⁵ recommandent la mise en œuvre de protocoles systématiques de prévention. Les déchirures cutanées peuvent être relativement simples à prévenir si on prend le temps d'identifier ceux qui sont à risque élevé et pour mettre en œuvre un protocole de prévention pour chaque personne.⁵ Ratliff et Fletcher⁹ ont indiqué qu'une fois le problème de peau reconnu, la mise en œuvre de mesures de prévention et d'identification des individus à risque élevé diminuera l'incidence des déchirures cutanées. Bank et Nix¹⁹ ont mené une revue rétrospective, pré-interventionnelle de 13 mois. Ils ont trouvé qu'après la mise en œuvre d'un programme de prévention, l'incidence de déchirures cutanées diminuait.

Assurer un environnement sécuritaire est essentiel au succès d'un programme de prévention. Cela peut s'accomplir en déterminant et en retirant les causes possibles de traumatisme.^{10,13,23} Certaines stratégies spécifiques qui peuvent être mises en œuvre comprennent

- faire porter des manches longues, des pantalons longs ou des bas aux genoux à ceux qui sont à risque¹³
- procurer des protège-tibias à ceux qui subissent des déchirures cutanées répétées aux tibias¹⁹
- déterminer et retirer les causes possibles de traumatisme
- assurer un environnement sécuritaire avec un éclairage suffisant^{10,13,19,24}
- minimiser les objets qui peuvent être une source de traumatisme contondant^{4,6,9,10,11,13,23,24}
- matelasser les coins des meubles et de l'équipement, aménager un passage sans obstacles et éviter les carpettes^{10,13,23,24}

La peau vieillissante est plus susceptible à la sécheresse et à de faible taux relatif d'humidité. Les bains sont déshydratants, et les douches qui ne sont pas trop longues ni trop chaudes sont préférables. Les maisons surchauffées durant les mois d'hiver peuvent mener à l'assèchement de la peau. L'hydratation doit se distinguer de la lubrification. La lubrification est le résultat de l'enduit de la surface de la peau d'une couche

d'huile qui empêche la perte d'eau. Les hydratants hypoallergéniques ont une phase aqueuse continue en suspension dans l'huile. Lorsque l'eau s'évapore, l'huile reste derrière, ce qui hydrate la peau.²⁵

Le besoin de procurer un environnement sécuritaire s'étend aussi à la protection des traumatismes durant les soins routiniers et aux blessures auto-infligées involontairement^{13,18,23,24} pour la personne à risque élevé.

Cela comprend

- appliquer l'hydratant hypoallergénique au moins deux fois par jour
- minimiser les bains
- procurer une protection des traumatismes durant les soins routiniers
- procurer une protection des blessures auto-infligées
- assurer des techniques de transfert et de levage correct pour éviter le cisaillement et la friction lorsqu'on transfère ou qu'on déplace les personnes
- matelasser les côtés de lit, les pattes des fauteuils roulants ou autres objets qui peuvent entraîner un traumatisme contondant
- favoriser une nutrition et une hydratation suffisante
- éviter les produits adhésifs sur la peau fragile (Si des pansements ou des rubans adhésifs sont requis, utiliser des rubans adhésifs de papier ou des pansements de silicone pour éviter le décollement de la peau ou des déchirures de la peau avec le retrait des adhésifs.^{5,18,24})
- garder les ongles des mains et des pieds courts et limés pour prévenir les déchirures cutanées auto-infligées²³

Le soutien nutritionnel joue un rôle vital dans la guérison de la plaie. Sans un apport nutritionnel suffisant, le corps est incapable de réparer les tissus endommagés ou de monter une offensive contre l'invasion et l'infection microbiennes.^{13,26,27} Chaque étape du processus de guérison de la plaie dépend des acides aminés, des lipides et des glucides en circulation. Un apport nutritionnel optimal améliorera la santé cutanée, aidera à la guérison des déchirures cutanées courantes et aidera à la prévention de déchirures cutanées futures.

L'hydratation et la santé nutritionnelle peuvent être évaluée par l'observation, l'anamnèse et la surveillance

des prélèvements sanguins.^{13,26,27} Une équipe interprofessionnelle—y compris un diététiste—est cruciale pour les patients souffrant de plaies chroniques, notamment ceux qui sont à risque de déchirures cutanées.²⁶

Recommandation 4 : (Niveau de preuve : IV)

Évaluer et répondre aux besoins psychologiques dans l'élaboration d'un plan axé sur le patient (qui aborde la douleur et la qualité de vie.

Discussion

Les lignes directrices sur les ulcères de pression de l'AIIO (Évaluation et prévention du risque,¹¹ Évaluation et prise en charge AIIO¹²) et les lignes directrices du NGCH13 procurent une validation pour la Recommandation 4. Une évaluation psychologique comprenant une évaluation de la qualité de vie devrait être effectuée pour déterminer la motivation et la capacité de la personne de comprendre et d'adhérer au plan de soins.²⁸ Les déchirures cutanées surviennent fréquemment aux membres supérieurs et sont visibles pour la personne et sa famille. Ces plaies inesthétiques peuvent ajouter à la douleur psychologique ressentie par le patient et leurs proches, ajoutant ainsi du stress et une douleur physique déterminante.^{9,29,30}

Les patients qui souffrent ainsi de déchirures cutanées ont besoin de soutien psychologique. Comme avec toute maladie chronique, ils doivent faire face à des modifications de leur mode de vie et auront besoin de soutien supplémentaire pour faire face efficacement à l'impact des déchirures cutanées sur leur qualité de vie.³⁰ Le niveau ou le degré de douleur éprouvée par un patient est unique à cette personne et joue un rôle vital dans sa qualité de vie et son bien-être. La douleur est un symptôme associé à une blessure réelle ou perçue et se définit par la perception de la douleur du patient. Les déchirures cutanées sont souvent décrites comme douloureuses, et la gestion de la douleur devrait faire partie du plan de traitement. Krasner et al.²⁹ décrivent la douleur comme une expérience unique qui diffère entre les personnes. La personne souffrant de déchirures cutanées éprouvera divers degrés de douleur : douleur aiguë lors de la blessure initiale, douleur chronique de la plaie et douleur psychologique associée à la plaie.^{29, 30,31,32}

La Recommandation 9 de l'AIIAO des lignes directrices de l'évaluation et de la prise en charge des ulcères de pression indique que tous les patients devraient être évalués à intervalles réguliers utilisant le même outil validé de l'évaluation de la douleur à chaque fois.¹² Des outils d'évaluation non validés sont spécifiques à la douleur de la plaie; toutefois, de nombreux outils validés d'évaluation de la douleur peuvent être utilisés selon le niveau cognitif du patient.²⁸

Lors de l'évaluation de la douleur chez les personnes âgées, des questions et des outils formulés simplement, que l'on peut facilement comprendre, sont les plus efficaces, car les adultes plus âgés sont fréquemment encombrés de nombreux facteurs négatifs, notamment des déficits sensoriels et des déficiences cognitives. Des outils subjectifs comme les échelles visuelles analogiques (EVA) et l'échelle des visages sont fort efficaces pour cette population.

Lorsqu'on aborde les déchirures cutanées, il est aussi important de noter que la carence sensoriel (comme on le voit chez les personnes qui sont paralysées) ou l'incapacité cognitive de reconnaître la douleur (comme on le voit chez les personnes qui souffrent de diverses formes de démence) peut non seulement potentialiser l'occurrence de déchirures cutanées mais peut aussi affecter négativement les temps de guérison et les mesures préventives.^{30,31,33,34}

La perception individuelle de la douleur d'un patient est la réalité que l'équipe interprofessionnelle doit respecter et aborder. Il est important de créer une atmosphère de confiance et de compassion.²⁹ Cette évaluation précise du type de douleur éprouvée, son intensité et l'impact qu'elle a sur la qualité de vie du patient doivent être pris en considération lors de la création d'un plan de soins et devraient être une partie intégrante de l'évaluation clinique globale.^{28,29}

Recommandation 5 : (Niveau de preuve : III-IV)

Classifier et documenter les déchirures cutanées selon le degré de traumatisme.

Discussion

Les lignes directrices sur les ulcères de pression de l'AIIAO (Évaluation et prévention du risque¹¹, Évaluation et prise en charge AIIAO¹²) et les lignes directrices du

NGCH¹³ procurent des recommandations liées à la classification des plaies. Les plaies devraient être classées d'une manière systématique et universellement acceptée.²⁸ Pour documenter avec précision et traiter les déchirures cutanées, il est important d'utiliser un langage commun pour décrire ces plaies difficiles. Une documentation appropriée est vitale pour comprendre l'étendue du problème. Les déchirures cutanées *ne doivent pas être regroupées* selon les catégories des ulcères de pression.

La classification de Payne-Martin des déchirures cutanées est largement utilisée pour définir et classer ces plaies.^{15,16} Élaboré à la fin des années 1980 et révisé en 1993, cet outil aide à la distinction des déchirures cutanées comme type complexe de plaies et procure au prestataire de soins de santé les moyens d'améliorer la documentation et de faire le suivi du résultat des soins.¹⁰

Recommandation 6 : (Niveau de preuve : III)

Procurer et soutenir un environnement optimal de guérison des plaies.

Discussion

Les lignes directrices sur les ulcères de pression de l'AIIAO (Évaluation et prévention du risque,¹¹ Évaluation et prise en charge AIIAO¹²) et les lignes directrices du NGCH¹³ procurent des recommandations multiples liées à l'évaluation et au traitement des plaies. La prévention des déchirures cutanées devrait être la préoccupation primaire; toutefois, les professionnels de la santé doivent être équipés pour prendre en charge ces plaies difficiles lorsqu'elles surviennent.

Bien que les déchirures cutanées représentent un type spécifique de plaies, les mêmes principes utilisés pour la gestion des autres plaies devraient être utilisés dans le traitement des déchirures cutanées.⁷⁸ Pour traiter ces plaies de façon adéquate, plusieurs domaines doivent être abordés : facteurs concomitants, soutien nutritionnel, gestion de la douleur, conditions locales de la plaie, et sélection optimale des pansements.³⁵ Lorsqu'on traite les déchirures cutanées, la première étape est d'évaluer les conditions locales dans la plaie et de déterminer la catégorie de la déchirure cutanée en se servant de la Classification

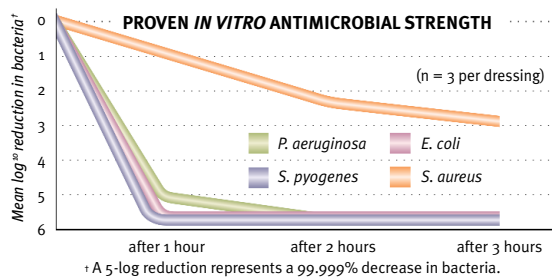
suite à la page 42

Release the power of silver.

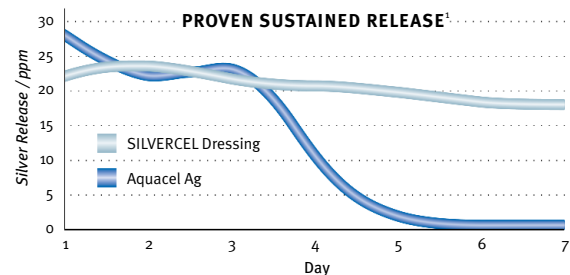


Strength & Endurance

- Effective antimicrobial performance—
with proven wet tensile strength¹



- Sustained release of silver for ongoing
antimicrobial protection¹



Visit www.jnjgateway.com for Essential Prescribing Information.

Johnson & Johnson Medical Products
200 Whitehall Drive, Markham, ON L3R 0T5
Tel: (English) 1 800 668-9045
Tél.: (Français) 1 800 668-9067



X-STATIC® - Noble Fiber Technologies Inc.,
Clarks Summit, PA USA



Capitalized product names are trademarks of Johnson & Johnson

1. In vitro. Data on file.

Johnson & Johnson Wound Management is a Unit of Johnson & Johnson Medical Products, a Division of Johnson & Johnson Inc.

*Trademark ©ETHICON, INC. 2007

TABLEAU 2

Classification des déchirures cutanées de Payne et Martin

Classification des déchirures cutanées de Payne et Martin ^{15,16}			Description
Catégorie I : Déchirures cutanées sans perte tissulaire	Type linéaire (pleine épaisseur)	Déchirures cutanées de catégorie I : Type linéaire	Type linéaire (pleine épaisseur) : l'épiderme et le derme sont tirés en une seule couche des structures de support. La plaie a l'apparence d'une incision.
	Type à lambeau (épaisseur partielle)	Déchirures cutanées de catégorie I : Type à lambeau	Type à lambeau (épaisseur partielle) : l'épiderme et le derme sont séparés. Le lambeau peut être complètement rapproché ou rapproché pour ne pas exposer plus de 1 mm du derme.
Catégorie II : Déchirures cutanées avec perte tissulaire partielle	Type de perte tissulaire faible	Déchirures cutanées de catégorie II : < 25 % de perte tissulaire partielle	Type de perte tissulaire faible : 25 % ou moins du lambeau d'épiderme est perdu.
	Type de perte tissulaire modérée à grande	Déchirures cutanées de catégorie II : > 25 % de perte tissulaire partielle	Type de perte tissulaire modérée à grande : plus de 25 % du lambeau d'épiderme est perdu.
Catégorie III : Déchirures cutanées avec perte tissulaire complète		Déchirures cutanées de catégorie III : Perte tissulaire complète	Le lambeau d'épiderme est absent.

Payne-Martin pour les déchirures cutanées.^{15,16} Les bactéries et le tissu nécrotique doivent être retirés et un pansement doit être choisi judicieusement pour maintenir l'équilibre hydrique. La guérison humide de la plaie—par rapport à un pansement sec—est la méthode de choix. Le choix effectif du produit dépendra de l'évaluation de la plaie.³⁵

Nettoyage de la plaie

Le nettoyage de la plaie est une composante importante de la prise en charge des plaies (Évaluation et prise en charge AIIAO¹²). La guérison optimale de la plaie ne peut survenir que si tous les débris étrangers ont été retirés de la plaie—et le nettoyage est la méthode la plus facile pour accomplir ce but.³⁶ Le nettoyage sert à diminuer l'exfoliation et les débris de surface dans la plaie, abaissant ainsi la charge microbienne.^{21,36} Krasner³⁷ a exposé les meilleures pratiques pour le






nettoyage des plaies avec débris nécrotiques. Elle suggère d'utiliser un nettoyeur/irrigation avec des solutions non cytotoxiques comme des nettoyeurs de salin physiologique ou de surfactant non ionique et des

N'oubliez pas le vaccin contre le tétanos!

Le tétanos est une maladie aiguë, souvent mortelle, causée par la contamination d'une plaie par *Clostridium tetani*. On doit donner de l'immunoglobuline anti-tétanique (IGAT) humaine à toutes les personnes dont l'intégrité cutanée a été interrompue par un mécanisme non chirurgical et qui n'ont pas reçu une inoculation de toxoïde tétanique (dT) au cours des 10 dernières années. L'IGAT devrait être donnée avant le débridement de la plaie puisque l'exotoxine peut être libérée pendant la manipulation de la plaie.³⁸

TABLEAU 3

Choix de pansements spécifiques aux déchirures cutanées

Classification des déchirures cutanées Payne-Martin ^{15,16}			Considérations de soins des déchirures cutanées
Ne pas suturer ou agraffer en raison de la fragilité de la peau^{12,16}			
Catégorie I : Déchirures cutanées sans perte tissulaire	Type linéaire (pleine épaisseur)	Déchirures cutanées de catégorie I : Type linéaire 	Basé sur l'évaluation : Maîtriser le saignement, rapprocher les lèvres de la plaie. Consolider les lèvres de la plaie avec un bandage topique au 2-octylcyanoacrylate (colle de peau). ^{7,40,41} ou Rapprocher les lèvres de la plaie. Couvrir avec un pansement de silicone ou de mousse peu collante. Utiliser de l'alginate sous la mousse si la déchirure cutanée saigne. ou Rapprocher les lèvres de la plaie. Maîtriser le saignement. Couvrir de pansements absorbants d'acrylique clair. ⁸ Ne pas enlever avant 21 jours ou si le tour de la plaie montre des signes et symptômes d'infection.**
	Type à lambeau (épaisseur partielle)	Déchirures cutanées de catégorie I : Type à lambeau 	Basé sur l'évaluation : Maîtriser le saignement. Rapprocher les lèvres de la plaie. Protéger les lèvres de la plaie avec un bandage topique au 2-octylcyanoacrylate (colle de peau). ^{5,40,41} ou Rapprocher les lèvres de la plaie. Couvrir avec un pansement de silicone ou de mousse peu collante. Utiliser de l'alginate sous la mousse si la déchirure cutanée saigne. ou Rapprocher les lèvres de la plaie. Maîtriser le saignement, couvrir de pansements absorbants acrylique clair. ⁸ Ne pas enlever avant 21 jours ou si le tour de la plaie montre des signes et symptômes d'infection.**
Catégorie II : Déchirures cutanées tissulaire partielle	Type de perte tissulaire faible, < 25% de perte tissulaire partielle	Déchirures cutanées de catégorie II : < 25 % de perte tissulaire partielle 	Basé sur l'évaluation : Rapprocher les lèvres de la plaie. Couvrir avec un pansement de silicone ou de mousse peu collante. Utiliser de l'alginate sous la mousse si la déchirure saigne. ou Rapprocher les lèvres de la plaie. Maîtriser le saignement. Couvrir de pansements absorbants acrylique clair. ⁸ Ne pas enlever avant 21 jours ou si le tour de la plaie montre des signes et symptômes d'infection.**
	Type de perte tissulaire modérée à grande : > 25% perte tissulaire partielle	Déchirures cutanées de catégorie II : > 25 % de perte tissulaire partielle 	Basé sur l'évaluation : Couvrir avec un pansement de silicone ou de mousse peu collante. Utiliser de l'alginate sous la mousse si la déchirure saigne. ou Rapprocher les lèvres de la plaie. Maîtriser le saignement, couvrir de pansements absorbants acrylique clair. ⁸ Ne pas enlever avant 21 jours ou si le tour de la plaie montre des signes et symptômes d'infection.**
Catégorie III : Déchirures cutanées avec perte tissulaire complète		Déchirures cutanées de catégorie III. Perte tissulaire complète. 	Basé sur l'évaluation : Couvrir avec un pansement de silicone ou de mousse peu collante. Utiliser de l'alginate sous la mousse si la déchirure saigne. ou Rapprocher les lèvres de la plaie. Maîtriser le saignement. Couvrir de pansements absorbants acrylique clair. ⁸ Ne pas enlever avant 21 jours ou si le tour de la plaie montre des signes et symptômes d'infection.**

**Utiliser avec prudence sur les plaies dont l'exsudat est abondant. Maîtriser d'abord le saignement. Les pansements sont conçus pour être laissés en place pendant un temps prolongé, et un enlèvement précoce peut entraver la guérison des déchirures cutanées.

suite à la page 44

pressions sécuritaires de moins de 12 livres par pouce carré (lpc), obtenues à l'aide d'une aiguille de calibre 19 et d'une seringue de 35 cc. Les plaies en voie de guérison sans débris devraient être nettoyées avec des solutions non cytotoxiques comme des nettoyeurs de salin physiologique ou de surfactant non ionique à faible pression de moins de 8 lpc pour protéger le tissu de granulation.^{36,37}

Guérison humide de la plaie

L'importance d'un milieu humide dans la plaie pour les plaies curables ne peut-être surestimée.³⁵ Les recommandations de l'AIIAO (Évaluation et prise en charge AIIAO.¹²) démontrent avec preuve à l'appui de données probantes, l'importance d'un niveau adéquat d'humidité dans la plaie comme partie intégrale de tout plan de prise en charge de la plaie. Sibbald et al.²¹ ont indiqué que comparé aux plaies sèches, le milieu humide accélère la guérison de la plaie. Une utilisation appropriée des pansements peut optimiser la guérison de la plaie en maintenant des niveaux d'humidité optimaux pour favoriser la croissance cellulaire et la guérison.^{12,21,37}

Sélection des pansements

Les recommandations de l'AIIAO (Évaluation et prise en charge AIIAO.¹²) appuient le besoin d'une approche systématique à la sélection des pansements. Ovington³⁹ a cité sept recommandations pour le choix des pansements, qui sont aussi endossées par la Recommandation 31 de l'AIIAO. Les recommandations comprennent le choix d'un pansement qui maintiendra une humidité constante, qui est approprié conformément au milieu local de la plaie, qui protège la peau environnante de la plaie, qui contrôle ou gère l'exsudat, qui contrôle ou gère l'infection, et qui tient compte du temps du soignant. Ces recommandations devraient être suivies lors de l'évaluation des plaies et lors du choix d'utilisation des pansements ou produits.

Contrairement aux ulcères de pression et autres plaies chroniques, les déchirures cutanées sont des plaies aiguës qui ont le potentiel d'être fermées par intention primaire. Traditionnellement, les plaies fermées par intention primaire sont immobilisées par suture ou agrafes.¹⁶ Compte tenu de la fragilité de la peau des personnes âgées,^{1,2,34} les sutures et les


agrafes ne sont pas une option viable, et d'autres méthodes sont requises.^{5,34,42,43} Sutton et Pritty⁴³ ont mené une étude contrôlée à répartition aléatoire comparant des options de prise en charge pour les lacérations prétibiales. Ils ont signalé que la plupart des lacérations prétibiales répondaient le mieux à une prise en charge conservatrice et que les bandes adhésives étaient préférables aux sutures. Cette recherche appuyant l'utilisation des bandes adhésives remonte de loin, et alors qu'il n'y a pas de recherche récente disponible pour appuyer un changement de pratique, l'opinion d'expert suggère que les bandes adhésives ne soient pas le traitement de choix actuel de ces plaies.^{7,8,40,41}

Nazarko²⁴ a revu un protocole de traitement des déchirures cutanées. Les alginates de calcium ont été utilisés pour maîtriser le saignement après la blessure initiale. Une fois le saignement maîtrisé, les déchirures cutanées ont été traitées selon leur catégorie. Les déchirures cutanées de Catégorie I ont été traitées à l'aide d'un ancrage par bandes adhésives, les déchirures cutanées de Catégorie II ont été traitées à l'aide d'une association de bandes adhésives et de pansement de silicone ou de mousse peu collante et les déchirures cutanées de Catégorie III ont été traitées à l'aide de pansement de silicone ou de mousse peu collante. On a conclu que les déchirures cutanées utilisant les traitements énoncés devraient guérir en moins de sept à 10 jours.

O'Regan¹⁶ a mené une revue systématique de la littérature existante sur le traitement des déchirures cutanées. L'auteur conclut que les plaies devraient être systématiquement nettoyées à l'aide de salin physiologique le saignement devrait être maîtrisé, les caillots devraient être retirés, le lambeau cutané devrait être rapproché si possible et un pansement d'hydrogel, d'alginate, de gaze de pétrole, de mousse, d'hydrocolloïde ou de pellicule transparente ou une fermeture de plaie devrait être appliquée, selon les caractéristiques de la plaie.

Les derniers écrits scientifiques présentent le succès des pansements absorbants d'acrylique clair^{7,41} utilisés pour traiter les déchirures cutanées de Catégorie I à III avec exsudat faible ou modéré. Ces pansements sont semi-perméables et peuvent être laissés en

suite à la page 46



Gentle.
Secure.
Sacrum.

The sacral dressing you've been waiting for

A new shaped sacral dressing with all the benefits of Mepilex® Border and Safetac® soft silicone adhesive technology.

- Shaped for comfort, conformability and fixation
- Provides secure fixation to reduce the risk of leakage
- Protects the peri-wound area from maceration
- Minimizes trauma and pain at dressing changes
- Maximum fluid handling for optimal moisture balance
- Viral, bacterial and waterproof for ultimate protection and security

● Mepilex® Border Sacrum



Safetac
TECHNOLOGY



**MÖLNLYCKE
HEALTH CARE**

place jusqu'à 21 jours. Dans une petite étude avec un échantillon de convenance, LeBlanc et Christensen⁷ ont examiné cinq patients souffrant de déchirures cutanées de Catégorie I à II qui ont été traitées à l'aide de pansements absorbants d'acrylique clair.⁷ Elles ont constaté une fermeture de plaie complète sans cas d'infection de la plaie rapporté et seulement de la douleur minime fut signalé chez tous les patients. Les pansements ont été enlevés après 21 jours, et on a observé une fermeture de plaie complète chez tous les patients.

Un autre choix possible pour les déchirures cutanées de Catégorie I et de Catégorie II avec moins de 25 pour cent de perte du lambeau épidermique est le rapprochement des lèvres de la déchirure cutanée/tissu du lambeau aussi près que possible. Au lieu d'utiliser des bandes adhésives, une alternative viable est l'utilisation de bandage au 2-octylcyanoacrylate topique (colle de peau).^{7,40,41} Milne et Corbett⁴⁴ ont examiné, grâce à un échantillon de convenance, 20 patients avec des déchirures cutanées de Catégorie II à III qui ont été traitées à l'aide de pansement au 2-octylcyanoacrylate topique. On a observé une guérison complète avec une application, sans cas d'infection rapporté et la

signalisation de douleur minime. Lors de cette étude, le coût moyen s'éleva à moins de 1\$ par application.

D'autres possibilités de traitements peuvent comprendre des produits de mailles ou de mousse à base de silicone, des pansements absorbants d'acrylique clair,⁸ des pansements d'alginate de calcium ou des pansements de mousse.²⁴ L'utilisation d'hydrocolloïdes ou de pansements de pellicule transparente ou traditionnels n'est pas recommandée. Ceux-ci peuvent causer des déchirures cutanées s'ils ne sont pas enlevés correctement. De plus, le lambeau cutané peut être soulevé lorsque le pansement est retiré, ralentissant ainsi la guérison.⁴² Si la déchirure cutanée est infectée ou étendue, la plaie devrait être évaluée par un médecin, une infirmière en stomathérapie ou un autre spécialiste en soin des plaies pour déterminer les meilleurs choix de traitement.²⁸

Recommandation 7 : (Niveau de preuve : III-IV)
Déterminer l'efficacité des interventions.

Discussion

Les lignes directrices de l'AIIAO (Évaluation et prise

FIGURE 3

Traitement d'une déchirure cutanée de Catégorie II à l'aide de colle de peau chez un homme de 92 ans



Jour 0, avant l'application



Jour 0, après l'application



Jour 3



Jour 7

FIGURE 4

Traitement d'une déchirure cutanée de Catégorie III à l'aide de pansements absorbants d'acrylique clair chez une femme de 87 ans



Jour 0



Jour 3



Jour 14

en charge AIIAO⁴⁵) et du NGCH¹³ recommandent l'examen des lèvres de la plaie pour déterminer l'efficacité des interventions et pour établir un plan de soins renouvelé, si le progrès n'est pas selon les résultats espérés. Le processus de guérison de la plaie doit être évalué de façon continue et le clinicien doit considérer trois enjeux clés :^{45,46}

1. Comment savez-vous si votre plan de traitement a été efficace?
2. Comment évaluez-vous présentement la guérison de la plaie?
3. Est-ce que le seul résultat pertinent est la fermeture de la plaie?

Une plaie saine a un lit de plaie rose et une marge de plaie qui s'avance, alors qu'une plaie malsaine a un lit de plaie foncé, friable avec des marges de plaie rongées. Flanagan⁴⁷ déclare qu'une réduction de 20 à 40 pour cent de la surface de la plaie en deux et quatre semaines est susceptible d'être un indicateur prédictif fiable de guérison.

La marge de la plaie est une étape d'évaluation dans le Cheminement de l'évaluation/du traitement des déchirures cutanées (Figure 1) pour déterminer si la migration des cellules épidermiques a commencé. Cela fait partie du processus cyclique de la prise en charge de la plaie. Si le processus de guérison est enclenché les kératinocytes et les cellules qui réagissent migrent et provoquent le rapprochement des lèvres de la plaie. Si le bord ne bouge pas, la plaie aura besoin d'une réévaluation complète adressant la cause et les thérapies correctives. Si le patient et la plaie sont optimisés et que le bord ne se déplace toujours pas, alors une plaie peut nécessiter des thérapies avancées pour démarrer le processus de guérison.⁴⁶ Si des signes de guérison ne se manifestent toujours pas, alors une biopsie devrait être faite pour déterminer la présence d'infection ou maladie comme le *pyoderma gangrenosum*, ulcère de Marjolin ou toute autre pathologie atypique liée aux plaies.⁴⁷

Le changement du bord de la plaie n'est qu'une mesure des résultats. La guérison de la plaie n'est pas toujours le résultat attendu. Dans certains cas comme l'insuffisance artérielle ou autres facteurs co-existants, la fermeture de la plaie n'est peut-être pas réaliste. Pour les plaies qui ne sont pas susceptibles de guérir on doit

FIGURE 5

Traitement d'une déchirure cutanée de Catégorie III à l'aide de pansement de mousse au silicone mou



mesurer d'autres résultats, comme la stabilisation de la plaie, la réduction de la douleur, une baisse de la charge bactérienne et une fréquence moindre de changements de pansements.^{46,48}

Recommandation 8 : (Niveau de preuve : la-IV)

Envisager l'utilisation de traitements d'appoint pour les déchirures cutanées qui ne guérissent pas mais qui sont curables.

Discussion

La ligne directrice de l'AIIAO (Évaluation et prise en charge AIIAO¹²) appuie la recommandation d'envisager les traitements d'appoint pour les plaies qui ne guérissent pas mais qui sont curables et indique qu'il y a des niveaux de preuve multiples, selon la modalité. Compte tenu de la nature des déchirures cutanées, spécialement les déchirures cutanées de Catégorie I et II, celles-ci devraient se résoudre de façon opportune sans la nécessité d'ajouter des traitements d'appoint si les lignes directrices de soin des plaies sont suivies.

Tout comme, l'expérience clinique avec les ulcères de pression il est accepté que le clinicien envisage des thérapies d'appoint comme la stimulation électrique, les facteurs de croissance et les agents bioactifs^{45,46,47} lorsque la plaie ne progresse pas à un rythme de 20 à 40 pour cent de réduction de la surface de la plaie en deux à quatre semaines,⁴⁷ malgré un soin optimal de la plaie et des facteurs intrinsèques et extrinsèques contrôlés.

Les directives du NGCH¹³ procurent des recommandations pour les déchirures cutanées qui sont un reflet des recommandations pour les ulcères de pression, et, à ce titre, les déchirures cutanées complexes

qui ne guérissent pas devraient aussi faire l'objet possible de thérapies d'appoint si on n'observe pas des taux de guérison opportuns. Un renvoi en consultation peut être requis pour certaines thérapies; elles ne sont pas nécessairement disponibles dans tous les contextes de soins de santé. Les croyances culturelles et religieuses peuvent se révéler des obstacles à certaines interventions.⁴⁶

Recommandation 9 : (Niveau de preuve : IV)

Mettre sur pied une équipe interprofessionnelle ayant la souplesse de répondre aux besoins du patient.

Discussion

Les lignes directrices de l'AIIO (Évaluation et prévention du risque,¹¹ Évaluation et prise en charge AIIO¹²) procurent des recommandations liées à la mise sur pied d'une approche par équipe interprofessionnelle organisée pour la prise en charge des plaies.

Les patients, les familles et les soignants ont besoin des connaissances professionnelles de l'expert en soins des plaies mais ils ont aussi besoin de l'expertise supplémentaire d'autres membres de l'équipe interprofessionnelle. Les membres peuvent comprendre, mais sans y être limités, des ergothérapeutes, des physiothérapeutes, des diététistes, des travailleurs sociaux, des omnipraticiens, des infirmières générales, des infirmières en stomathérapie, des pharmaciens, des travailleurs sociaux, et des planificateurs de congés. Tous les professionnels de la santé impliqués dans le soin des cas de déchirures cutanées doivent être désireux et capables de travailler ensemble à atteindre des résultats cliniques positifs. Une équipe de profes-

sionnels de la santé travaillant ensemble est plus efficace qu'un seul professionnel de la santé travaillant dans l'isolement. Au centre de l'équipe devraient se trouver le patient et la famille. Les désirs et les souhaits du patient doivent être respectés même s'ils diffèrent des buts ultimes de l'équipe de soins de santé.⁴⁹

Recommandation 10 : (Niveau de preuve : IV)

Éduquer le patient, le soignant et le professionnel de la santé sur la prévention et le traitement des déchirures cutanées.

Discussion

Les lignes directrices sur les ulcères de pression de l'AIIO (Évaluation et prévention du risque,¹¹ Évaluation et prise en charge AIIO¹²) et les lignes directrices du NGCH¹⁵ appuient le besoin d'éduquer les patients, les soignants et les professionnels de la santé sur la prévention et le traitement des déchirures cutanées.

Le patient, la famille et les professionnels de la santé ont besoin d'une éducation et d'un soutien permanent pour s'assurer que la pratique actuelle fondée sur des données probantes est suivie.⁵⁰ La prévention est un élément essentiel de la réussite d'un plan de soin des plaies, et l'éducation est un élément-clé de tout programme de prévention ou de traitement réussi.^{9,22} L'éducation est particulièrement importante dans la prévention des déchirures cutanées. Tous les soignants doivent être au courant des techniques appropriées pour procurer des soins sans causer de déchirures cutanées. L'éducation devrait inclure les points discutés dans la Recommandation.^{3,7,8,9}

En plus de ces stratégies, il est important d'impliquer ceux qui sont à risque, les membres de leur famille et leurs soignants dans le processus de prévention, ce qui leur permet de jouer un rôle proactif dans la prévention des déchirures cutanées,⁷ et qui entraîne la réussite de la prévention et de la prise en charge des déchirures cutanées.⁵⁰ Une évaluation des besoins des patients et des soignants devrait être faite et documentée, y compris les renseignements de base relatifs aux connaissances, aux croyances, aux pratiques de santé et aux besoins d'apprentissage perçus des patients,

suite à la page 50

Le bain raisonnable

- devrait être basé sur les besoins et les préférences du patient
- devrait être donné avec soit des produits sans savon ou des savons à pH équilibré
- implique des bains limités; prendre plutôt une douche à l'eau tempérée, pas trop chaude
- comprend l'application d'hydratants hypoallergéniques après la douche alors que la peau est encore humide mais pas mouillée

A POSITIVE MOVE FOR NEGATIVE PRESSURE

Smith & Nephew provides you with a simple, gentle and affordable alternative for negative pressure wound therapy (NPWT).

The choice is yours!

User-friendly display
improves efficiency

40-hour battery life
helps ensure
uninterrupted
therapy

Multiple overflow
protection options
provide added safety

Simple operation
requires minimal training



de leurs familles et des soignants. Les variables culturelles et psychologiques seront aussi des facteurs dans l'élaboration de stratégies de prévention et de prise en charge.⁵⁰

Conclusion

Les déchirures cutanées représentent un type spécifique et difficile de laceration qui affecte le plus souvent les personnes âgées. Les déchirures cutanées sont un problème commun auquel font face les professionnels de la santé quand ils s'occupent des personnes âgées. La prévention des déchirures cutanées est le centre d'attention primaire dans la prise en charge de ce problème. Toutefois, les professionnels de la santé doivent être équipés pour prendre ces plaies en charge lorsqu'elles surviennent.

La littérature relative à la prévention et au traitement de ces plaies est limitée. Une recherche plus avancée est nécessaire pour en déterminer la prévalence et l'incidence dans la population canadienne des personnes âgées. Une échelle validée de prédiction des déchirures cutanées et des directives de meilleure pratique dans la prévention et le traitement sont nécessaires pour aider les professionnels de la santé à identifier les personnes à risque, ainsi qu'à prévenir et traiter ces plaies douloureuses.

Références

1. Thomas Hess C. Skin IQ. *Advances in Skin and Wound Care*. 2004; 17(6):277.
2. Bryant R, Rolstand B. Examining threats to skin integrity. *Ostomy/Wound Management*. 2001;47(6):18-27.
3. Mason SR. Type of soap and the incidence of skin tears among residents of a long-term care facility. *Ostomy/Wound Management*. 1997;43(8):26-30.
4. White M, Karam S, Cowell B. Skin tears in frail elders: A practical approach to prevention. *Geriatric Nurse*. 1994;15(2):95-9.
5. Baranoski S. How to prevent and manage skin tears. *Advances in Skin and Wound Care*. 2003;16(5):268.
6. McGough-Csarny J, Kopac CA. Skin tears in institutionalized elderly: An epidemiological study. *Ostomy/Wound Management*. 1998;44: 14S-25S.
7. LeBlanc K, Christensen D. An approach to managing skin tears in the elderly population. Une série de cas. Présentation sur affiches, présentée lors de la Conférence annuelle de l'Association canadienne du soin des plaies à Montréal (Québec). 2005.
8. LeBlanc K, Christensen D, Cuillier B. Managing skin tears in long term care. Présentation sur affiches, présentée lors de la Conférence annuelle de l'Association canadienne du soin des plaies à Montréal (Québec). 2005.
9. Ratliff CR, Fletcher KR. Skin tears: A review of the evidence to support prevention and treatment. *Ostomy/Wound Management*. 2007;53(3):32-42.
10. Baranoski S. Skin tears: The enemy of frail skin. *Advances in Skin and Wound Care*. 2000;13:123-126.
11. Association des infirmières et infirmiers de l'Ontario (AIIAO). Lignes directrices des pratiques exemplaires des soins infirmiers : Évaluation du risque et prévention des ulcères de pression. Toronto: AIIAO. 2005.
12. Association des infirmières et infirmiers de l'Ontario (AIIAO). Lignes directrices des pratiques exemplaires des soins infirmiers : Évaluation du risque et prévention des ulcères de pression. Toronto: AIIAO. 2002.
13. Ayello EA. Preventing pressure ulcers and skin tears. Disponible en ligne à www.guideline.gov/summary/summary.aspx?ss=15&doc_id=3511&nbr=2737. Accédé le 30 avril 2007.
14. Ayello EA, Braden B. Why is pressure ulcer risk so important? *Nursing* 2001. 2001;31(11):74-79.
15. Payne RL, Martin MC. Defining and classifying skin tears: Need for a common language. *Ostomy/Wound Management*. 1993;39(5):16-26.
16. O'Regan A. Skin tears: A review of the literature. *World Council of Enterostomal Therapists Journal*. 2002;22(2):26-31.
17. Cuzzell J. Wound assessment and evaluation: Skin tear protocol. *Dermatology Nursing*. 2002;14(6):405.
18. Birch S, Coggins T. No-rinse, one step bed bath: The effects on the occurrence of skin tears in a long term care setting. *Ostomy/Wound Management*. 2003;49(1):64-67.
19. Bank D, Nix D. Preventing skin tears in a nursing and rehabilitation center: An interdisciplinary effort. *Ostomy/Wound Management*. 2006;52(9):38-46.
20. Ovington L. Bacterial toxins and wound healing. *Ostomy/Wound Management*. 2003;49(7A) Supp:8-12.
21. Sibbald RG, Williamson D, Orsted HL, Campbell K, Keast D, Sibbald D. Preparing the wound bed: Debridement, bacterial balance and moisture balance. *Ostomy/Wound Management*. 2000;46(11):14-35.
22. Brillhart B. Pressure sore and skin tear prevention and treatment during a ten month program. *Rehabilitation Nursing*. 2005;30(3):85-91.
23. Baranoski S. Skin tears: Guard against this enemy of frail skin. *Nursing Management*. 2001;32:25-32.
24. Nazarko L. Preventing and treating skin tears. *Nursing and Residential Care*. 2005;7(12):549-550.
25. Sibbald RG, Cameron J, Alavi A. Dermatological aspects of wound care. Dans Krasner DL, Rodeheaver GT, Sibbald RG, (éds.). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*, Fourth Edition. Wayne, PA: HMP Communications. 2007.
26. Zagoren AJ, Johnson DR, Amick N. Nutritional assessment and intervention in the adult with a chronic wound. Dans Krasner DL, Rodeheaver GT, Sibbald RG, (éds.). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*, Fourth Edition. Wayne, PA: HMP Communications. 2007.
27. Kane DP. Chronic wound healing and chronic wound management. Dans Krasner DL, Rodeheaver GT, Sibbald RG, (éds.). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*, Quatrième édition. Wayne, PA: HMP Communications. 2007:11-24.
28. Keast D, Parslow N, Houghton P, Norton L, Fraser C. Best Practice Recommendations for the Prevention and Treatment of Pressure Ulcers: Update 2006. *Wound Care Canada*. 2006;4(1):19-29.

suite à la page 52

MRSA STAPH INFECTION

Telfa™ AMD Dressings



Help protect your team
from infections like
MRSA with Telfa AMD
Antimicrobial Dressings.

**Protection your team
can't live without.**

**STRIKE OUT
INFECTION**

www.covidien.com

COVIDIEN, COVIDIEN with Logo and™ marked brands are trademarks of Covidien AG or an affiliate.
©2008 Covidien AG or an affiliate. All rights reserved.



COVIDIEN

positive results for life™

29. Krasner D, Papen J, Sibbald G. Helping patients out of the SWAMP: Skin and wound assessment and management of pain. Dans Krasner DL, Rodeheaver GT, Sibbald RG, (éds.). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*, Quatrième édition. Wayne, PA: HMP Communications. 2007.
30. Price P. Health-related quality of life. Dans Krasner DL, Rodeheaver GT, Sibbald RG, (éds.). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*, Quatrième édition. Wayne, PA: HMP Communications. 2007.
31. Popescu A, Salcido R. Wound pain: A challenge for the patient and the wound care specialist. *Advances in Skin & Wound Care*. 2004;17(1):14-20.
32. Kennedy-Evans KL. Addressing the pain: An innovative solution for skin tears: A case study. *Ostomy/Wound Management*. 2004;50(2):9-10.
33. Flaherty E. Assessing pain in older adults. *Best Practices in Nursing Care to Older Adults*. Janvier 2000.
34. Baranowski S. Skin tears: Staying on guard against the enemy of frail skin. *Nursing2003*. Supplement 2003:14-21.
35. Sibbald RG, Orsted HL, Coutts PM, Keast DH. Best Practice Recommendations for Preparing the Wound Bed: Update 2006. *Wound Care Canada*. 2006;4(1):15-29.
36. Rodeheaver G, Ratliff CR. Wound cleansing, wound irrigation, wound disinfection. Dans Krasner DL, Rodeheaver GT, Sibbald RG, (éds.). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*, Quatrième édition. Wayne, PA: HMP Communications. 2007.
37. Krasner D. How to prepare the wound bed. *Ostomy/Wound Management*. 2001;47(4):59-61.
38. Carden DL. Tetanus. Dans Tintinalli JE, Kelen GD, Stapczynski JS, (éds.). *Emergency Medicine: A Comprehensive Study Guide*, Sixième édition. American College of Emergency Physicians. 2004.
39. Ovington L, Peirce B. Wound dressings: Form, function, feasibility, and facts. Dans Krasner DL, Rodeheaver GT, Sibbald RG, (éds.). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*, Troisième édition. Wayne, PA: HMP Communications. 2001:311-20.
40. Fleck C. Preventing and treating skin tears. *Advances in Skin & Wound Care*. 2007;20(6): 315-320.
41. Roberts J. Preventing and managing skin tears: A review. *Journal of Wound Ostomy Continence Nursing*. 2007;34(3):256-259.
42. Edwards H, Gaskill D, Nash R. Treating skin tears in nursing home residents: A pilot study comparing four types of dressings. *International Journal of Nursing Practice*. 1998;4(1), 25-32.
43. Sutton R, Pritty P. Use of sutures or adhesive tapes for primary closure of pre-tibial lacerations. *British Medical Journal*. 1985;290(6482).
44. Milne CT, Corbett LQ. A new option in the treatment of skin tears for the institutionalized resident: Formulated 2-octacyanacrylate topical bandage. *Geriatric Nursing*. 2005;26(5):321-5.
45. Association des infirmières et infirmiers de l'Ontario (AIIAO). Lignes directrices des pratiques exemplaires des soins infirmiers : Évaluation du risque et prévention des ulcères du pied pour les diabétiques. Toronto: AIIAO. 2005.
46. Orsted H, Searles OD, Trowell H, Shapera L, Miller P, Rahman J. Best Practice Recommendations for the Prevention, Diagnosis and Treatment of Diabetic Foot Ulcers: Update 2006. *Wound Care Canada*. 2006;4(1):39-51.
47. Flanagan M. Improving accuracy of wound measurement in clinical practice. *Ostomy/Wound Management*. 2003;49(10):28-40.
48. Enroch S, Price P. Should alternative end points be considered to evaluate outcomes in chronic recalcitrant wounds? *World Wide Wounds*. Octobre 2004. Disponible en ligne à www.worldwidewounds.com.
49. Krasner DL, Rodeheaver GT, Sibbald RG. Interprofessional Wound Caring. Dans Krasner DL, Rodeheaver GT, Sibbald RG, (éds.). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*, Quatrième édition. Wayne, PA: HMP Communications. 2007.
50. Erwin-Toth P, Stenger B. Teaching wound care to patients, families and healthcare providers. Dans Krasner DL, Rodeheaver GT, Sibbald RG, (éds.). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*, Quatrième édition. Wayne, PA: HMP Communications. 2007:45-50.

Groupe de travail francophone en soins de plaie

Un groupe de travail de l'ACSP a été mis sur pied pour explorer, établir, discuter et traiter des besoins des professionnels francophones en soins de plaies. Le but de cette équipe est d'évaluer et d'inventorier les services, ressources et outils éducatifs disponibles en français et par la suite de développer et proposer des stratégies qui répondront aux besoins identifiés.

Vous recevrez sous peu un sondage, qui vous permettra de partager les besoins en soins de plaie spécifiques, à votre pratique professionnelle.

Vos besoins sont importants, vos commentaires et suggestions le sont tout autant. C'est le moment de nous procurer ces renseignements précieux! Par ailleurs, nous vous invitons à encourager vos collègues à répondre au sondage en grand nombre.

Demeurez au courant de l'évolution du travail de cette équipe et autres nouvelles en soins des plaies par le biais de : www.acsp.ca

Francophone Wound-care Task Force

A CAWC task force has been set up to explore, identify, discuss and address the needs of francophone wound-care professionals. The team's mandate is to assess and inventory the wound-care services, resources and educational tools available in French and then develop and propose strategies to meet any identified needs.

Shortly, you will receive a survey that will allow you to inform us about your professional practice and specific wound-care needs.

Your needs are important, and your comments and suggestions are essential. This survey is your opportunity to provide us with this valuable information! Additionally, be sure to encourage as many of your colleagues as you can to complete the survey.

Stay informed about this project and other wound-care news at www.cawc.net.

[you know better than anyone]

It's not just a wound, it's a patient.

NEW MEDIHONEY™ dressings make it easier to take care of both.

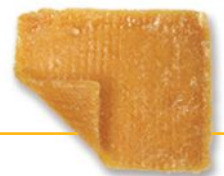
Unique MEDIHONEY™ dressings can be used for wound bed preparation and through all phases of wound healing. The dressings contain medical-grade Active *Leptospermum* Honey, which has been shown to have novel properties that help manage acute wounds, burns, and tough, chronic wounds of various etiologies.¹ With demonstrated efficacy from the onset of a wound through to closure,² MEDIHONEY's patented composition has everything a wound needs, when it needs it. And everything you need for a safer and easier way to provide exceptional patient care.

To learn more about MEDIHONEY™, the first antimicrobial honey-based dressing in Canada visit www.dermasciences.com.

If you would like to request a sample visit our website and click on the MEDIHONEY™ logo or call 1-800-387-5302.

*Highly absorbent Active
Leptospermum Honey
dressing promotes
dynamic moisture balance*

1. Gethin G, Cowman S. Case series of use of Manuka honey in leg ulceration. *International Wound Journal*. 2005;2(1):10–15.
2. Molan P. The evidence supporting the use of honey as a wound dressing. *International Journal of Lower Extremity Wounds*. 2006;5(1):40–54.



www.dermasciences.com

MEDIHONEY™ is a trademark of Comvita New Zealand Ltd. and is used with permission by Derma Sciences, Inc.
© 2008 Derma Sciences, Inc. All rights reserved.
DERM828510/07



ANTIMICROBIAL DRESSING

MEDIHONEY™
with Active *Leptospermum* Honey



Practical Considerations for the Enhancement of Nutrition and Hydration in Patients



by Chris Fraser

**Chris Fraser,
HBSc, RD,**

provides nutrition intervention for patients in the spinal cord injury and acquired brain-injury rehabilitation programs at the Parkwood Hospital site of St. Joseph's Health Care in London, Ontario, and is a member of Parkwood's Chronic Wound and Skin Health Team. She has presented on nutrition and wound management extensively throughout Canada and has been a frequent author of wound-related articles. She is a member of the College of Dietitians of Ontario and Dietitians of Canada.

Promoting optimal nutrition and hydration for the prevention or healing of skin breakdown can be challenging. Identifying factors that may be barriers to intake and that impact negatively on the meal experience is imperative. Implementing creative strategies customized to the individualized needs of our patients is necessary to prevent or reverse malnutrition. Skin breakdown and healing are multifactorial, with optimal nutrition and hydration being essential components in the healing mosaic. This article discusses practical considerations that may optimize the nutritional status of our patients.

Implement a med-pass program. A valuable strategy to increase total calorie, protein, vitamin and mineral intake is a med-pass program. The basis of this strategy is the provision of medications, typically three to four times daily, with a nutrient-dense liquid nutritional supplement rather than water, juice or ginger ale, which provide little to no nutritional value. Ideally, medications are to be taken with 60 millilitres (mL) (approximately one quarter of a can) of a nutrition supplement that contains two calories per mL. The recommended volume per med pass may be higher, such as 120 mL, depending on the patient's assessed needs and tolerance. For example, if Mr. Jones swallows his pills with 60 mL (four tablespoons) of a two-calorie-per-mL formula four times daily, he would consume 500 calories (based on a 250 mL can), 20 grams of protein and a variety of vitamins and minerals daily, in addition to foods and beverages consumed at meals and snacks. Over the course of a week,

this translates into an additional 3,500 calories, 140 grams of protein, plus vitamins and minerals. If a two-calorie-per-mL formula is not available, or if a patient does not like the taste of the formula, any supplement can be used: a one- or 1.5-calorie-per-mL liquid supplement, a nutrient-dense pudding or a liquid supplement that has been thickened for patients who are dysphagic (unable to safely swallow thin fluids).

It is recommended that a doctor's order be obtained to initiate a med-pass program and that the order be entered onto the patient's medication administration record so that the supplement is administered and recorded consistently. Some of the many potential benefits of the med-pass program include the avoidance of taste fatigue, decreased likelihood of a patient becoming overwhelmed by a large volume of supplement, and less wastage of supplements provided and not consumed. A patient is not as likely to fill up on supplements and therefore not consume other foods and beverages provided at meals and snacks. Patients who are volume-sensitive are able to tolerate smaller amounts distributed throughout the day. There are high-quality nutritional supplements available that have been customized to meet the needs of patients with pressure ulcers.

Liberalize diet restrictions. A patient may be on a low-fat, low-sodium or other modified diet but be eating so poorly that he or she is not eating even the minimum amount of fat or sodium allowed on the diet restriction. In an attempt to improve meal enjoyment, palatability and selection, we may discuss with the doctor the discontinu-

ation of this diet in order to promote better intake, while continuing to monitor the patient's other health issues.

Address impairments in dentition. Sometimes a person may not be eating well because weight loss or other factors may have led to ill-fitting dentures or poor dentition. Facilitating a dental consultation on a patient's behalf can resolve the issue that is impairing optimal intake.

Address impairments in swallowing. Similarly, people may limit their intake or avoid certain textures or consistencies because of an unidentified dysphagia. Being aware of a patient's trends in food intake is important; for example, if a person is consistently not eating the meat on meal trays, it may be more than a food preference and should serve as a red flag to dental, swallowing or other issues. Sometimes dysphagia diets—minced or pureed, for example—are considered “cruel and unusual punishment” by facility staff or family members; however, the identification of dysphagia and the initiation of a texture-modified diet may allow a patient to eat without the fear of choking or experiencing embarrassing coughing and sputtering when eating in a dining room setting.

It is important that direct questions be asked regarding dentition and dysphagia, as a patient may not identify these issues as impacting intake during a nutrition assessment.

Conduct supplement and snack audits. All members of the health-care team and support staff must identify and report foods, beverages, snacks and supplements accumulating at a patient's bedside. This may reflect inadequate intake, a meal plan that has not been customized to meet individual preferences, a change in health status, or other concerns. Food wastage, malnutrition and dehydration impact negatively on health-care costs.

Address physical and cognitive impairments. Ensure anyone who needs assistance receives the help they need. Here are some examples: assist someone with impaired hand function to remove lids and open containers and ensure that water jugs, snacks and supplements be placed within reach of a patient who has impaired mobility. A patient who has had a stroke may have left neglect, for example, and be unaware of a meal

tray or an item placed on the left-hand side of a table. A compensatory strategy is to place foods and beverages to the patient's right. An individual with a brain injury or other cognitive impairment may be overwhelmed or agitated by a full tray and benefit from having one item presented at a time. Specialized utensils and dishware such as large-handled or weighted cutlery and rimmed plates, as well as non-slip material beneath dishware may facilitate a patient's independence with meals. Patients who are dependent on others for eating are at high risk for malnutrition and dehydration.

Incorporate foods and fluids into therapy and recreation sessions. A strategy that can be effective is to communicate with all members of a patient's health-care team to have fluids, snacks and supplements incorporated into therapy or recreation sessions.

Encourage the involvement of family and friends. Significant others may be encouraged to bring in favourite or culturally relevant items. It's important to ensure, however, that education is provided regarding recommended restrictions or modifications. Simply having a bottle of favourite sauce, flavouring or spice available at meals may increase meal enjoyment.

Consider other ideas to optimize nutrition provision. How can a patient get more nutrition in the volumes that he or she is currently consuming? Consider the switch to homo milk from skim, 1% or 2% milk, as the additional calories from fat will spare protein for its role in skin integrity and other essential functions. If protein supple-

continued on page 81

Tactics for Enhancing Nutrition and Hydration

- Implement a med-pass program.
- Liberalize diet restrictions.
- Address impairments in dentition.
- Address impairments in swallowing.
- Conduct supplement and snack audits.
- Address physical and cognitive impairments.
- Incorporate foods and fluids into therapy and recreation sessions.
- Encourage the involvement of family and friends.
- Consider other ideas to optimize nutrition provision.
- Consider alternate means of nutrition/hydration.

Puzzling Cases: Wound Sleuth



BY Rob Miller,
MD, FRCPC

Rob Miller, MD, FRCPC, has been practising dermatology for the past 20 years. He worked as a general practitioner in Ontario, British Columbia and South America before pursuing his studies in dermatology at McGill University in Montreal, QC. He is currently Associate Professor of Medicine at Dalhousie University and Co-director of the Chronic Wound Care Clinic at the QEII Hospital in Halifax, NS.

A 55-year-old male was referred to the wound-care clinic for management of a wet foot! He had broken his leg and had been in a cast for a month. He also suffered from chronic plantar hyperhidrosis (increased sweating) and found his foot had become smelly and uncomfortable in his cast. When the cast was removed, his foot appeared as shown in figure 1.



Question: What clinical features do you notice?

Answer: The whitish discolouration represents maceration of the tissue. This is due to the excess sweating of the foot such that the epidermis (top layer of the skin) becomes excessively hydrated and whitish in colour, which indicates this increased moisture.

In addition, a large blister is on the heel region. This represents a friction blister, which has occurred due to the looseness of the cast and which has been made worse by the excess sweating.

Question: What is the treatment?

Answer: This patient required more time in his cast to ensure the proper setting of his bones. It was acceptable to the orthopedic surgeons to have him fitted with a removable cast so the cast could be taken off when he was not weight bearing. Subsequent follow-up showed that the removable cast controlled his problem.

In a wound-care clinic, one must be prepared to address a number of different therapeutic challenges. Although no specific wound is present, friction blisters and maceration may present unique problems, particularly in high-risk individuals such as persons with diabetes or those who suffer from arterial vascular disease. Left untreated, these problems could easily result in ulcer formation. ☞

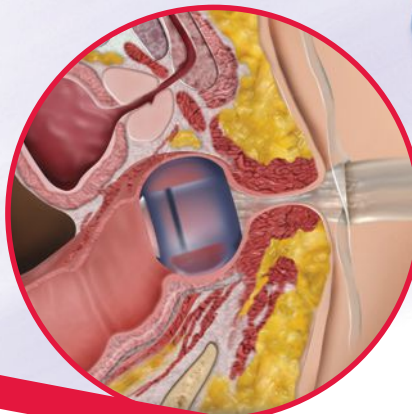
The Canadian Association of Wound Care (CAWC) Gets a New Home

Earlier this year, the CAWC moved into new offices to accommodate our recent expansion of activities. As a result, the CAWC has a new mailing address and new phone numbers.

Please update your contact list so you can stay in touch!

**2171 Avenue Road, Suite 102,
Toronto, ON M5M 4B4
Phone: 416-485-CAWC (2292)
Fax: 416-485-2291**

C. the difference



When it comes to patient well being, Hollister brings more innovation to healthcare. The **Zassi®** Bowel Management System diverts and contains potentially infectious stool. It is the only indwelling rectal catheter that provides access for rectally administered medications.

C. the difference

See how the Zassi® Bowel Management System can help your patients. Call **1.800.263.7400** or email **bowel.management@hollister.com** and discover why...

There's more to Hollister than ever before.

Caution: This device is restricted to sale by or on the order of a physician.

Prior to use of the Zassi® Bowel Management System, be sure to read: (i) the entire Zassi® Bowel Management System Instructions for Use package insert supplied with the product for device Intended Use, Description, Contraindications, Warnings, Precautions, Adverse Events, and Instructions for Use; and (ii) all other package inserts and labels supplied with the product and accessories. Date of Issuance: October, 2007



Attention to Detail. Attention to Life.

www.hollister.com

Hollister and logo, and "Attention to Detail. Attention to Life." are trademarks of Hollister Incorporated. Zassi is a trademark of Zassi Medical Evolutions, Inc. licensed to Hollister Incorporated. Covered under one or more of the following patents: US Patent 5569216, 7147627 and Australian Patent 2003207608 and other patents pending. ©2007 Hollister Incorporated.

A Case Study for Off-loading



BY Andrew Hoar

Ulcers occur in the diabetic neuropathic foot due to repetitive stress on insensitive feet. This repetitive stress causes the foot to develop hot spots, callus build-up, pressure necrosis, and, ultimately, ulceration. The most common area for pressure and excessive callus build-up occurs over the metatarsal heads, in particular the first metatarsal phalangeal joint (MTPJ) and the plantar surface of the hallux (great toe).¹ Effective pressure re-distribution (off-loading) is considered essential in the healing of plantar ulcers.² Useful off-loading mechanisms include reduction of walking speed, alteration of foot rollover during gait, and transfer of load from the affected areas to other areas of the foot or lower leg.

Although total contact casting (TCC) is considered to be the gold standard when off-loading neuropathic ulcers, it must be reapplied weekly and requires considerable experience by the clinician to avoid creating new lesions. Some mechanisms used as alternatives to TCC are removable walking casts, custom neuropathic walkers, half shoes and the wound-care shoe system (WCSS).

Key components of off-loading the forefoot during ambulation are the use of a rocker sole and pressure re-distribution of the local area of ulceration. Peak pressures in the rocker-soled shoe are reduced by approximately 30 per cent in the medial and central forefoot compared with a conventional shoe, but pressures are elevated in the heel and midfoot.³ Local relief of the ulceration is accomplished by the removal of material from the supporting surface below the point of contact (ulceration).

Discussion

When assessing the neuropathic foot ulcer it is important to test the joint range of motion of the foot and ankle. The foot must have a dorsiflexion range of at least 10 degrees to allow ambulation without harm to the hallux.⁴

Recognition of biomechanical issues such as hallux rigidus, a rigid first digit, is key to successful off-loading. Without alteration of biomechanical stresses caused by bony or structural deformities, wound healing may be compromised and will likely be unsuccessful due to continued trauma.

The WCSS is versatile, requiring minimal equipment to modify. It offers the clinician off-loading mechanics in conjunction with standard best practice protocols, promoting optimal wound healing in areas without access to TCC. If TCC is contraindicated due to poor balance, infected wound or ischemia, then the WCSS is an acceptable alternative. It is important to note that diabetic foot complications are best treated in a multidisciplinary setting and that any intervention that includes footwear modification should be followed up on a regular schedule to review fit and function or consider further modification.

Case Study

Presentation: Mr. H. is an active 29-year-old. He has type I diabetes, is a one-pack-per-day smoker, works full-time at a warehouse, and plays softball on weekends.

Mr. H. was presented to the leg ulcer clinic with the development of a callus over the first MTPJ and inter-phalangeal joint (IPJ) of his left and right great toes. The multidisciplinary team, consisting of a vascular surgeon, a wound-care nurse, a vascular technologist and a pedorthist, completed a detailed history and physical assessment. Part of this holistic assessment included an ankle-brachial pressure index, Hgb A1C, Semmes-Weinstein monofilament test and gait analysis.

The vascular lab reported an ankle-brachial index of 1.15. A Semmes-Weinstein monofilament test revealed loss of protective sensation to both feet. The range of motion of the first metatarsal phalangeal joint was

Andrew Hoar, CPed(C), is a

pedorthist in the Orthotic and Prosthetic Department at the QEII Health Sciences Centre in Halifax, NS.

evaluated by manual manipulation of the joint, which identified no movement in dorsiflexion—a condition known as hallux rigidus. Gait analysis identified altered mechanics of the foot during the stance and propulsion phases of gait, resulting in localized repetitive pressure upon the hallux. The shoe wear pattern was consistent with hallux rigidus.

Treatment plan: The treatment plan consisted of pressure off-loading with a pressure-reduction footwear system, debridement of callus, standard wound-care best practices and enrolment in a vascular risk reduction program.

Mr. H. was fitted with a WCSS (Figure 1). Proper fitting included total width and length, velcro strap closure length and placement of apex of the rocker sole. To ensure optimal effect of the rocker sole, the apex must be located proximal to (0.5 cm behind) the metatarsal heads.⁵ The plantar contact system enables the practitioner to off-load plantar ulcerations with four layers of increasingly firm durometer materials.⁶ The top layer of the multi-layer system to contact the foot is always a solid interface that will mould to the foot's contours. There are two layers of higher density ethel vinyl acetate (EVA) that is relieved using scissors and a small grinder to smooth the edges. The location of the relief is transferred to the top layer by demarcating the ulcer with a gel ink pen and having the patient stand wearing the WCSS. The ink is transferred to the top layer. The centre of the ulcer is then determined. A relief larger than the ulcer is cut out of each of the lower layers directly under the ulcer 0.5 cm wider medially, laterally, proximally and 1.25 cm wider distally. It is important to skive the edges (approximately 30 degrees) so that the relief away from the foot is slightly larger than the relief on the upper surface (Figure 2).

Mr. H. was informed of the purpose and proper use of the WCSS. Great emphasis was placed on the importance of wearing it when weight bearing, and limiting ambulation to self-care. Follow-up appointments were scheduled every two weeks where the fit, function and wear pattern of the WCSS were evaluated. Adjustments such as the replacement of top layer due to compression of the material were then completed.

At the initial visit (Figure 3) the callus and necrotic

tissue were debrided, exposing category 4a (University of Texas treatment-based diabetic foot classification system) plantar ulcerations of the left first MTPJ measuring 1 cm by 1 cm, and the IPJ of the hallux measuring 0.5 cm by 0.5 cm. Follow-up appointments were scheduled bi-weekly.

By week four (Figure 4) the MTPJ wound had reduced, measuring 0.5 cm by 0.5 cm. The wound at the IPJ of the hallux had closed and developed minimal callus.

By week six (Figure 5) the MTPJ wound had reduced, measuring 0.2 cm by 0.3 cm. The hallux callus remained minimal. The staining in the area of the MTPJ is residual cadexomer iodine.

By week eight (Figure 6) the wounds had closed and callus development was minimal.

Results: Mr. H. has progressed to wearing custom foot orthotics and modified athletic footwear. The orthotics incorporate a 5 mm accommodation at the first metatarsal joint on the right and 7.5 mm on the left, metatarsal pads and full-length poron/plastizote covers. Footwear was selected to provide a deep, wide toe box and modified to include a 12 mm rocker sole bilaterally.

Mr. H. has stopped smoking, returned to work, and with the assistance of his employer has changed jobs to a clerical position requiring less ambulation. Sadly, he no longer plays softball. Mr. H. still wears the WCSS as a house shoe every day and avoids walking in bare feet. He continues to be screened every three months, at which time the orthotic plastizote cover is replaced due to compression, and the footwear condition is evaluated. ☺

References

1. Levin ME. Pathogenesis and management of diabetic foot lesions. *The Diabetic Foot*, Fifth Edition. St. Louis, MO: CV Mosby. 1993; 2:17-56.
2. Birke J, Lewis K, Penton A, Pittman D, Tucker A, Durand C. The effectiveness of a modified wedge shoe in reducing pressure at the area of previous great toe ulceration in individuals with diabetes mellitus. *Wounds*. 2004;16(4):109-114.
3. Schaff PS, Cavanagh PR. Shoes for the insensitive foot: The effect of a "rocker bottom" shoe modification on plantar pressure distribution. *Foot and Ankle*. 1990;11(3):129-40.
4. Perry J. Normal and pathological gait. *Atlas of Orthotics*. St. Louis: CV Mosby. 1985:83-96.
5. Janisse DJ. Pedorthic care of the diabetic foot. *The Diabetic Foot*, Fifth Edition. St. Louis, MO: CV Mosby. 1993;25:549-75.
6. Elftman N. Management of the Neuropathic Foot. Supplement to *Journal of Orth/Pros*. 2005;17(2):4-25.



FIGURE 1



FIGURE 2



FIGURE 3



FIGURE 4



FIGURE 5



FIGURE 6

The Role of Hyperbaric Oxygen Therapy in Wound Healing

BY Martine Albert



Adequate oxygenation is vital for all of the steps involved in wound healing. Oxygen plays a fundamental role in the angiogenesis process, in fibroblast function, epithelialization and bacterial management. Hypoxia can be defined as an insufficient supply of oxygen to support biological processes. However, hypoxia can sometimes be seen at a level capable of supporting basal tissue maintenance, but not enough to allow for tissue growth or healing.¹ Hyperbaric oxygen therapy (HBOT) is a method of administering a higher dose of oxygen at an increased atmospheric pressure. The Undersea and Hyperbaric Medical Society describes HBOT as “the inhalation of 100 per cent oxygen while the entire patient is enclosed within a chamber at pressures of at least 1.4 atmosphere absolute or greater.”² HBOT provides a pharmacological dose of oxygen needed to stimulate and support wound healing for recalcitrant hypoxic wounds.

History

The therapeutic use of oxygen under pressure—known as hyperbaric oxygen therapy—is not a new modality; it has been used to assist wound healing for over 40 years, and even longer to treat other disorders. In the 1940s, HBOT was used to treat decompression sickness. In the 1950s and 1960s, gas poisoning, carbon-monoxide, poisoning gangrene and anemic states were treated with HBOT and showed good response. It was only in the 1960s that physicians started to use hyperbaric oxygen on wounds. HBOT is currently recognized and used as a primary treatment for decompression illness, air embolism and carbon-monoxide poisoning.³ It is regarded as an adjunctive therapy for certain types of wounds: clostridial myonecrosis, crush

injury, necrotizing soft tissue infections, chronic refractory osteomyelitis, radiated tissue, compromised skin grafts or flaps, and diabetic foot ulcers—all of which share a common pathophysiology of local hypoxia.

Physiological Effects of Oxygen in Wound Healing

Healing occurs in a predictable sequence of events that rests on a successful cellular and biochemical chain of events. Any disruption to these events can have a detrimental effect on the healing process. The key to successful management of any type of ulceration lies not only with the accurate identification of the underlying cause of the ulcer but also with the appropriate measures to remove or modify the causative factors interfering with healing.

To obtain closure on a recalcitrant wound, clinicians need to consider advanced treatments: biologic modalities and adjunctive therapies such as HBOT.

Any interruption of normal healing will result in a chronic wound. In many cases the pathological environment can be remedied with best-practice interventions aimed at correcting the offending agents, and with the judicious consideration of the local wound-care needs: i.e., debridement, moisture balance and bacterial balance. However, some chronic wounds still do not respond and become recalcitrant to any type of intervention. Tissue hypoxia is a key element of healing failure.

Adequate oxygenation fuels the cellular function essential to the tissue-repair process. As the wound enters the inflammatory phase initiating the healing process, the requirements for oxygen increase and are

Martine Albert, RN, BScN, IIWCC, is currently employed by the Calgary Health Region, Home Care. She has been part of the Skin and Wound Assessment and Treatment Team (SWAT) since 1998. Her scope of practice consists of policy development, education, clinical research and practice. She graduated from the University of Montreal in nursing in 1990.

accelerated due to oxidative cellular mechanisms. During normal wound healing, the fibroblasts are stimulated to make collagen. This supports the development of a collagen matrix, which forms a scaffold that supports new blood vessels (angiogenesis). Angiogenesis enables the delivery of oxygen and nutrients required to promote the healing process.⁴ The probability of wound healing is extremely high if the tissue oxygen tension (pO_2) at the wound site is 40 mmHg, where fibroblastic activity and cellular interactions are supported.⁵

Oxygen moves from areas of high concentration (pressure) to areas of low concentration (pressure). Wounds naturally have a hypoxic central zone that is surrounded by normal perfusion in the adjacent tissue.⁶ This produces an oxygen gradient from the peripheral tissues to the centre of the wound. The central hypoxic zone therefore creates a demand for oxygen and engages the adjacent tissue to provide oxygen to support the healing process through angiogenesis. Subsequently, hypoxic peri-wound tissues cannot provide adequate levels of oxygen to support cellular proliferation and the creation of new vessels to the central zone. A lack of oxygen, or poor oxygenation, prevents a normal healing pattern.

Oxygen is key to the phagocytosis and killing of bacteria by neutrophils or polymorphonuclear cells (PMNs).¹ Neutrophil phagocytosis creates a 25-fold increase in oxygen consumption.⁷ As the oxygen tension falls below 30 mmHg the efficiency of bacteriocidal action of PMNs begins to drop off dramatically.¹ Therefore, hypoxia weakens the tissues' resistance to bacteria. Oxygen also stimulates macrophages to produce angiogenic substances—as vascular endothelial growth factor (VEGF)—that attract and stimulate endothelial cells. Therefore, hypoxia weakens the neovascularization process.³

When wound hypoxia is the systemic cause of the healing failure, providing oxygen at the wound site is, essentially, treating the cause. Hyperbaric oxygen therapy is an adjunctive therapeutic modality in which the patient is given a high volume of pure oxygen to breathe in an environment of elevated atmospheric pressure, which leads to an increase in tissue oxygen pressures at the wound site.

HBOT stimulates fibroblast activity by providing an environment rich in oxygen, which supports the formation and deposition of collagen. The tissue's tensile

strength is then improved. HBOT reduces wound infection and potentiates the effect of antibiotics through its direct impact on anaerobic bacteria so they cannot proliferate and will eventually die, as well as through its indirect impact on aerobic bacteria by enhancing the microbicidal function of the PMNs.

Mechanism of Oxygen Transport with HBOT

At sea level, the air that we breathe is composed of 20 per cent oxygen and 80 per cent nitrogen, and the Earth's atmosphere exerts 101.325 kPa (14.7 psi) of pressure. This pressure is defined as 1 atmosphere absolute, abbreviated 1 ATA. HBOT provides an environment where the patient breathes 100 per cent oxygen at greater than normal atmospheric pressures of at least ≥ 1.4 ATA. The effects of HBOT are two-fold: those associated with high pressure and those associated with high pO_2 . Each haemoglobin molecule in a human red blood cell has four oxygen binding sites. At sea level or at normal atmospheric pressures, most healthy individuals naturally reach saturation of these red-cell binding sites, consequently reaching a predetermined cellular amount of oxygen. When a patient receives hyperbaric oxygen, the haemoglobin binding sites are quickly saturated and there is no significant increase in the amount carried by haemoglobin, which is already $\geq 95\%$ saturated with oxygen. The oxygen can then independently travel to the injured tissues without having to rely on red blood cells for transport. This excess of oxygen is dissolved into the plasma, creating an elevated tissue oxygen tension at the wound site. It is important to note that the oxygen diffusion is directly proportional to the increased partial pressure of oxygen (pO_2) present in the circulating plasma caused by HBOT.⁸ Warriner states that the radius of the oxygen diffusion from the capillaries into the extracellular compartment increases four-fold when oxygen is breathed at 3 ATA.⁸

HBOT consists of a patient breathing 100 per cent oxygen while the entire body is enclosed in a pressure chamber large enough to accommodate either one person (monoplace) or more than one person (multiplace). The topical application of oxygen is not recognized as a hyperbaric therapy. Topical oxygen therapy that encloses a body part (e.g., a lower extremity with wounds) lacks strong clinical evidence at this time.⁹

Patient Selection

HBOT is an adjunctive modality to enhance evidence-based practice and is not a substitute treatment for other therapeutic measures. The role of the health-care professional working in HBOT is to rigorously and discriminately select those patients that need and that will most likely benefit from this therapeutic intervention and, thereafter, to safely provide the hyperbaric treatment. The indication for HBOT is evidenced by the presence of tissue hypoxia either as a causal or as a contributing factor to impaired healing. Measuring transcutaneous pressure oxygen, $TcPO_2$, in tissue adjacent to the wound can be useful in discriminating those patients without significant hypoxia who do not require HBOT from those who do.¹⁰ $TcPO_2$ is a quick, simple, reliable non-invasive diagnostic technique for an objective assessment of local cutaneous oxygenation.

It is always important to ascertain if large vessel disease is a contributing factor in the hypoxic state of the peri-wound tissues. Impaired perfusion of the larger vessels will decrease the oxygenation of the tissues surrounding the wound, and HBOT will not reverse this state of hypoxia. A referral to a vascular specialist is then indicated.² It is also imperative to ensure that all of the local underlying factors that impede healing are corrected; otherwise, HBOT could be used erroneously.


Conclusion

Hyperbaric oxygen therapy is an adjunctive treatment to enhance best-practice wound care. HBOT allows the reversal of a hypoxic state by increasing the oxygen diffusion within the plasma, consequently promoting angiogenesis, encouraging fibroblastic activity and supporting the tissues to resist against bacteria.

The medical use of oxygen under pressure is an evolving specialty. Many types of recalcitrant wounds have

$TcPO_2$ provides clinical information to determine

- if a patient does not need HBOT
- if a patient needs HBOT and responds to an O_2 challenge
- if a patient is hypoxic and HBOT will not reverse the condition

responded favourably to HBOT. However, despite its long history of therapeutic use and the literature supporting HBOT as an effective adjunctive modality for hypoxic recalcitrant wounds, skepticism still shadows the effectiveness of HBOT for wound healing due to the small number of well-executed controlled randomized trial studies, as well as the high cost associated with this treatment. It is important to note that many Canadian health-care systems will cover the cost of HBOT, but that the hidden costs to the patient and their families can be overwhelming. This includes the costs of accommodation, food, transportation/travel and, possibly, lost wages. Consequently, many clinicians remain guarded in recognizing HBOT as an adjunctive therapy to support wound healing. For further details on HBOT and to locate a HBOT clinic near you, visit www.uhms.org. 

References

1. Wright J. Hyperbaric oxygen therapy for wound healing. 2002. Available online at www.worldwidewounds.com. Accessed October 23, 2007.
2. The Undersea & Hyperbaric Medical Society. Indications for hyperbaric oxygen therapy; Definition of hyperbaric oxygen therapy. Retrieved February 11, 2008, from www.uhms.org/Default.aspx?tabid=270.
3. Stone A J, Cianci P. The adjunctive role of hyperbaric oxygen therapy in the treatment of lower extremity wounds in patients with diabetes. *Diabetes Spectrum*. 1997;10(2):118-123.
4. Bowler PG, Duerden BI, Armstrong DG. Wound microbiology and associated approaches to wound management. *Clinical Microbiology Reviews*. 2001;14(2):244-269.
5. Rakel A, Huot C, Ekoe JM. Canadian Diabetes Association technical review: The diabetic foot and hyperbaric oxygen therapy. *Canadian Journal of Diabetes*. 2006;30(4):411-421.
6. Silver IA. The measurement of oxygen tension in healing tissues. In Herzog H, (ed.). *Progress in Respiration Research*. 1969;3:124-135.
7. Cianci P, Hunt TK. Adjunctive hyperbaric oxygen therapy in the treatment of the diabetic foot, In Bowker JH, Pfeifer M, (eds.). *Levin and O'Neals the Diabetic Foot*, Seventh Edition. Philadelphia: Mosby Inc. 1998:339-363.
8. Warriner RA, Beard T. The role of the hyperbaric medicine team in chronic wound care. In *Chronic Wound Care: A Clinical Source for Healthcare Professionals*, Fourth Edition. 2007:395-402.
9. Suzuki K. A guide to hyperbaric oxygen therapy for diabetic foot wounds. *Podiatry Today*. 2007;20(12):18-22.
10. Warriner RA, Fife CE. Diabetes watch: What you should know about using HBOT in diabetic wounds. *Podiatry Today*. 2007;16(5):14-18.

HBOT session

A typical HBOT treatment for a wound is capable of providing tissue oxygen levels greater than 11 times normal.

- patient is placed either in a monoplace or a multiplace chamber
- lasts two hours
- 100% delivery of oxygen at 2.0-2.4 ATA (45 feet under sea level)
- three periods of 30 minutes at 2.0-2.4 ATA
- two periods of five minutes for air breaks
- HBO treatments are sometimes called "dives" by patients

New



- High density foam for total body cleansing
- Antimicrobial properties to help prevent infection
- No rinse formula for one step cleansing
- Moisturizes and conditions the skin
- Pediatrician-tested

A non-rinse antimicrobial foam cleanser for total body cleansing

 **smith&nephew**
SECURA[®]
Total Body Foam Cleanser

Foot-care Practices of Persons Living with Diabetes Prior to Amputation



BY Kyle Goettl

Kyle Goettl, RN, BScN, is the Nurse Clinician for the Regional Amputee Rehabilitation Program based at Parkwood Hospital, part of St. Joseph's Health Care, in London, Ontario. He has a special interest in wound care and preventative education for people living with diabetes. He is a member of the CAWC and the Canadian Diabetes Association.

While developing educational strategies and materials for an in-patient amputee rehabilitation population (80 per cent diabetic) at Parkwood Hospital, St. Joseph's Health Care London in London, Ontario, it became apparent that new patients lacked knowledge on living with diabetes and managing foot care. To better assess the level of these patients' knowledge in order to develop more effective educational programs, a survey of self-reported foot-care practices of persons living with diabetes prior to a unilateral or bilateral lower-limb amputation was undertaken.

A questionnaire was developed and administered to a small sample of volunteers with diabetes who were admitted to a rehabilitation program following a recent lower extremity amputation.

The questionnaire included questions relating to foot-care practices prior to amputation, soaps used, and previous education about foot care and diabetes.

The questionnaire also asked whether the participants had loss of protective sensation, and personal knowledge of diabetic blood sugars.

Results and Discussion

Thirty-three of the 34 surveys given to patients were returned, resulting in a 97 per cent response rate. Results for each question are presented on the following pages as percentages. The results in Table 1 were obtained from chart review and are noted for the purpose of background information. It was noted that 84.8 per cent of participants were male and 15.2 per cent were female. The average age of the males was 62.9 years, with an age range of 42–79, compared to an average age of 64 years for the females and an age range of 58–80.

Fifty-seven per cent of the males and 75 per cent of the females had non-insulin dependent diabetes at the time of admission into the program. The home address for 81.8 per cent of the group was outside of the city of

Did You Know?

- Approximately 15 per cent of all patients with diabetes mellitus will develop a foot or leg ulcer at some time during the course of their disease.
- The majority of lower limb amputations are preceded by a foot ulceration.¹
- Eighty four per cent of diabetic foot ulcers can be attributed to external factors, such as ill-fitting shoes and socks, mechanical trauma, stress ulcers and paronychia.²
- Providing foot-care strategies for people living with diabetes should be standard at the time of diagnosis. Foot examination with a 10 gram monofilament (Semmes Weinstein test) by a health-care professional should be an annual event at minimum.
- A study by De Berardis et al. found that "those patients who had received foot education and had their feet examined were significantly more likely to regularly check their feet."³

London and reflects the regional nature of this program.

Table 1 represents the breakdown of gender with regard to level of amputation:

TABLE 1 Level of Amputation	Below knee	Bilateral below knee	Above knee	Through knee
Female	75%	0%	25%	0%
Male	75%	10.7%	10.7%	3.6%

The most direct causes for amputation are displayed in Table 2. Amputations that occurred for ischemia/peripheral vascular disease (PVD) were those that occurred post failed bypass or as a result of extreme claudication pain. Those with “foot wound” as the most direct cause of amputation were those that had their leg(s) removed because of a non-healing, non-treatable wound as determined by the individual surgeon in acute care.

TABLE 2 Most Direct Cause of Amputation (n=33)	Percentage
Traumatic	6.1%
Ischemia/PVD	21.2%
Foot Wound	69.7%
Cancer	3.0%

The information in Table 3 and Table 4 (see next page) reflects foot-care practices of 33 volunteers who completed the survey about practices and knowledge prior to amputation. In Table 3, 60.6 per cent of the respondents reported that they were not in the habit of visually checking their feet on a daily basis, and 12.1 per cent reported not checking the skin of their feet at all. Interestingly, 39.4 per cent of respondents reported checking their feet daily prior to amputation. What is unclear from the data is the timeline of daily foot checks prior to the amputation. Did they check daily once a problem with their feet had been identified? Or had they been diligent with daily foot inspections since they were diagnosed with diabetes?

The use of a mirror to visualize all areas of the foot is recommended for diabetic foot inspection. In this study, 72.7 per cent of the respondents reported

having never used a mirror as part of their foot care.

People who live with diabetes are at risk for developing a peripheral neuropathy related to diabetes. This can leave the foot vulnerable to harm from unnoticed pressure. In Table 3, 51.5 per cent of respondents reported having never checked the inside of their shoes or socks for pressure points or foreign objects, a common source of diabetic foot wounds.¹

Amazingly, in Table 5 (see page 67), 45.5 per cent of the respondents reported having never received information on how to look after their feet, while 30.3 per cent had received foot-care instructions within the previous year. What is unclear is whether that 30.3 per cent received initial foot-care instructions after seeking out help for a foot wound or whether their foot-care instructions were part of a regular ongoing follow-up with their primary care provider or diabetes education centre.

The most striking finding is that 45.5 per cent of the amputees reported having never received foot care education!

A high percentage of respondents reported having their feet examined by a health-care professional (57.6 per cent) and having received education about their diabetes (42.4 per cent) within one year of their admission. What is unclear again is whether these contacts were emergent in nature as a result of a foot-care problem or whether they were part of an ongoing diabetes education and follow-up plan.

The data from Table 5 demonstrate that 16.2 per cent of respondents were unaware of a significant loss of protective sensation in their remaining foot. Testing for loss of protective sensation with a 10 gram monofilament should be performed annually on someone living with diabetes by a qualified health-care professional, and more often if a significant loss of protective sensation is detected.

The effects of diabetes and natural aging—such as circulation changes—can alter the integrity of the body’s first line of defense, the skin. Dried, cracked skin can promote bacterial growth and possible skin breakdown. People living with diabetes as well as the elderly need to choose their body cleansing products wisely in order to maintain their skin integrity and protective acid mantle on their skin surface. Most soaps and detergents are alkaline and induce an increase in cuta-

TABLE 3

Before your amputation...

Question (n=33)	7 times a week or more	5–6 times a week	3–4 times a week	1–2 times a week	Less than once a week	Never
How many times a week were you examining your feet?	39.4%	15.2%	12.1%	9.1%	12.1%	12.1%
How often did you use a mirror to examine your feet?	9.1%	3.0%	3.0%	6.1%	6.1%	72.7%
How often did you check the inside of your socks and shoes before you put them on?	27.3%	3.0%	—	6.1%	12.1%	51.5%
How often did you or a caregiver wash your feet?	60.6%	6.1%	21.2%	12.1%	—	—

neous pH, which affects the physiologic protective acid mantle of the skin by decreasing the fat content. In addition, repeated washings with soap may reduce the normal skin flora, leading to an increased colonization of skin with coagulase-negative staphylococci.⁴ Information regarding the pH and irritation potential of products marketed for sensitive skin is not usually available.⁴ A study published in 2002 compared many popular brands of soaps and cleansers marketed for dry skin and found that only one, Dove Baby™, had a neutral pH of 7, whereas four versions of Zest™ tested very alkaline—between 9.75 and 9.97—with a very high irritation index between 3.713 and 4.99.⁴ Responses in the survey (Table 8) highlight the need for people living with diabetes to be better informed so that they can choose their cleansing products wisely in order to adequately maintain their first line of defence.

Over half of the respondents in Table 7 identified a “good blood sugar” range outside of that recommended by the Canadian Diabetes Association.

Over half of the people in this study have had diagnosed diabetes for over 15 years. The mean years

living with diabetes for the males was 18.43, and for the females 9.63. The males ranged from four to 35 years and the females from four months to 20 years of living with diabetes. Anecdotally, several of those who reported living with diabetes for less than five years stated that they first were diagnosed with diabetes after seeking medical help for a foot wound.

Clinical Relevance

These results suggest that people with an amputation and diabetes were lacking important information about diabetes management in the time leading up to the amputation. The majority of these individuals who required a lower extremity amputation also did not participate regularly in good foot-care practices. Since people who have had an amputation to one extremity are at much higher risk of amputation of the remaining limb, further education of this population seems to be warranted. Because this population of people with diabetes was sampled after an amputation had occurred, it is not known whether the general population of people with diabetes also lack these important practices and knowledge.

Whether or not enhanced education of this patient population can reduce the incidence of foot wounds and lower extremity amputations remains to be determined. Since these preliminary findings from this pilot study involved a small sample that was not randomly chosen, the results of this work will need to be confirmed by future research.

There is room for improvement in promoting best practice foot care in people living with diabetes. People

TABLE 4

Question (n=33)	Yes	Sometimes	No
Did you wash between your toes with a washcloth?	75.0%	15.6%	9.4%
Did you dry between your toes with a towel?	81.3%	9.4%	9.4%

TABLE 5

When was the last time you...

Question (n=33)	Less than 1 year	1–2 years	3–5 years	More than 6 years	Never
received instructions on how to look after your feet?	30.3%	3.0%	6.1%	15.2%	45.5%
had your feet examined by a chiropodist, podiatrist, family doctor or nurse?	57.6%	15.2%	9.1%	—	18.2%
received education about your diabetes?	42.4%	—	18.2%	36.4%	3.0%

TABLE 6

As of today...

Question (n=32)	Yes	No
do you have normal sensation to your remaining foot?	56.3%	43.8%

Monofilament test score at the time of admission

- 62% of patients had a score of 6 or less indicating a high risk of further injury due to loss of protective sensation.

TABLE 7

Question	Blood Sugar Reading (n=33)	Percentage
What do you consider to be a good blood sugar reading?	Inside correct range (7)	45.3%
	Outside correct range	54.7%

living with diabetes and those caring for loved ones living with diabetes should be given the opportunity to access current information that can help them to make informed decisions regarding their own foot care.

Education on preventative strategies must be reviewed regularly throughout the course of living with diabetes (not just at the time of diagnosis). Health-care professionals working with people living with diabetes must maintain a current knowledge base on preventative foot care. The health-care professional should be able to adapt the content of their teaching to the specific needs of the learner. They should also employ measurement tools to ensure that their educational efforts have been effective. 🗣️

References

1. Gibbons GW, Eliopoulos GM. Infection of the diabetic foot. In Kozak GP, Campbell DR, Frykberg RG, Habershaw GM, (eds.). *Management of Diabetic Foot Problems*, Second Edition. Philadelphia: WB Saunders. 1995:121.
2. Apelqvist J, Larsson J, Agardh CD. The influence of external precipitating factors and peripheral neuropathy on the development and outcome of diabetic foot ulcers. *J Diabetes Complications*. 1990;4(1):21-25.
3. De Berardis G, Pellegrini F, Franciosi M, et al. Physician attitudes toward foot care education and foot care examination and their correlation with patient practice. *Diabetes Care*. 2004;27:286-287.
4. Baranda L, González-Amaro R, Torres-Alvarez B, et al. Correlation between pH and irritant effect of cleansers marketed for dry skin. *International Journal of Dermatology*. 2002;41:494-499.

TABLE 8

What brand of soap were you using?

Soap name (n=33)	Percentage
Antibacterial Soap	3.0%
Dove™	12.1%
Lux™	3.0%
Glycerine Soap	3.0%
Irish Spring™	15.2%
Ivory™	24.2%
Lever™	3.0%
Oil of Olay	3.0%
Palmolive™	3.0%
Skin-So-Soft™	3.2%
Zest™	21.2%
Unknown	6.1%

Preventative Foot Care

BY Mariam Botros,
DCh;
Laura Lee Kozody,
BSc, DCh;
Heather L. Orsted,
RN, BN, ET, MSc

This article highlights the importance of foot care for everyone—not only people with high-risk feet. Readers are encouraged to use the basic steps mentioned in the article as a guide for preventing foot problems in both patients and themselves.

Introduction

The foot is made up of 26 bones, 33 joints and more than 100 tendons, ligaments and muscles. There are over 300 foot ailments that can occur, and it is estimated that 75 per cent of people will have foot problems at some time in their life. These problems can result from the intrinsic manifestations of systemic disease, inheritance, and abnormal foot structure or extrinsic factors such as long years of abuse, improperly fitted shoes and poor foot care or hygiene. Lack of mobility from foot problems can impact quality of life, and poor foot alignment can have an effect on the whole body.

Symptoms of certain diseases, like diabetes or conditions that affect circulation or nerves, can appear initially in the foot.

Early detection of common foot conditions may prevent and correct problems that could lead to both acute and chronic foot-related health conditions.

Common Foot Problems and Solutions

Fungal infections such as athlete's foot occur in moist warm areas, such as the environment in a shoe. The treatment for this condition is to apply appropriate foot hygiene, dry well interdigitally, use antifungal medication and wear shoes that have uppers made out of breathable material.

Dry skin can cause burning and stinging in feet, and lead to cracks that may cause secondary infections. The

treatment for dry skin is to use daily moisturizers that contain active ingredients such as urea or lactic acid.

Corns and calluses are the result of friction and shear stress over a bony prominence. The treatment for this condition is debridement, appropriate shoes and regular use of pumice and emollients.

Ingrown toe nails occur when part of the nail breaks into the skin of the toe. This can result in secondary infection as a result of the break in skin integrity. This problem is treated through appropriate nail cutting, packing to re-distribute the pressure on the side of the nail, and treating secondary infection. Shoes with a round toe box reduce the pressure on the sulci. Surgery is indicated if conservative measures fail or if the problem is recurrent.

Warts are skin growth resulting from viral infections. The treatment for this condition is freezing or medications that destroy the virus, and routine debridement.

General foot pain, such as heel pain, arch pain, and toe pain, is usually associated with traumatic injury and complicated by structural problems. The treatment for these conditions is based on assessment but is usually corrected through the combination of good physical therapy treatment, properly

fitted shoes and orthotics.

Flat feet, highly arched feet, bunions (hallux valgus) or hammer toes are foot deformities with an origin usually based in heredity, and complicated by improperly fitted shoes. The treatment for these conditions is good shoes and orthotics to prevent the deformity from progressing. Surgery may be an option if conservative management fails.



FIGURE 1
Callused feet



FIGURE 2
Ingrown toe nail



FIGURE 3
Hammer toes

Foot-care Tips

There are common proactive steps that most people can do to reduce the probability of incurring serious problems such as infections, injuries or foot strain.

Do ...

- Inspect feet daily.
- Watch for signs of infections.
- Wash feet well with mild soap and water, and dry well.
- Trim toe nail straight across or see a specialist.
- See a specialist regarding callus/corns/warts/ulcers.
- Moisturize and pumice dry skin.

Don't ...

- Forget your interdigital spaces.
- Dig down the sides of nails or cut too short.
- Use self-prescribed over-the-counter products to treat corns, calluses or warts.
- Use sharp instruments.
- Apply cream between toes.

Shoes

Shoes are often the cause of foot problems. Proper shoes help to avoid a variety of different problems. Footwear referral may be required.

Do ...

- Buy shoes that fit or see a footwear specialist.
- Buy shoes at the end of the day.
- Buy a firm-fitting heel.
- Buy a walking shoe with Velcro or laces and mid-tarsal support.
- Have enough room in the forefoot—wide, deep and long enough.
- Buy leather shoes or other breathable material with a shock-absorbing sole.
- Purchase the right shoe for the appropriate activity.

Don't ...

- Buy shoes that you hope will stretch; this will create pressure. Don't wear hand-me-downs.
- Buy them first thing in the day when the foot is less swollen; the shoe will be snug by the end of the day.
- Buy a shoe that is too big; it will create shear.
- Buy slip-on shoes for walking, as they will result in foot strain and toe deformity.
- Buy narrow or pointed shoes or shoes with a shallow toe box; this will result in blisters and bursitis.
- Buy synthetic shoes; they do not allow the foot to breathe and may lead to maceration.
- Wear high heels or slip-on shoes for activity; they result in foot strain, musculoskeletal pain, foot deformity, corns and calluses.

Barriers to Basic Foot Care

People who neglect to perform basic foot care do so for various reasons, or fail to seek appropriate help if they are unable to perform it themselves. Some of these causes may be associated with forgetfulness, a lack of motivation or the belief that foot care is unimportant. Other factors may relate to physical barriers such as vision problems or lack of mobility or sensation. In some cases, the barrier is financial. Cost of foot-care services, stable walking shoes, orthotics and various creams may be too high for many people.

This brief overview is not intended to make everyone a foot expert, nor does it even touch on the multitude of different foot problems that people can have. The key is to treat problems as soon as possible to prevent them from worsening. When self-care does not resolve the foot problem, get a referral to or seek the help of a health-care professional who is a foot specialist. Don't suffer silently ignoring the pain. Just because the feet are the farthest from the brain doesn't mean they should be the furthest from the mind.

The key elements of preventative care include

- annual examination of the feet by a health-care provider
- foot-wear and foot-care education
- daily self-care of the feet
- routine prophylactic foot care once barriers are identified
- properly fitted shoes

Remember, early detection and appropriate intervention will prevent many foot-related problems. ☺

Resources

- Ahroni JH. Teaching foot care creatively and successfully. *Diabetes Ed.* 1993;19:320-5.
- Inlow S. Sixty-second foot exam for people with diabetes. *Wound Care Canada.* 2004;2(2):10-11.
- Lorimer D, French G, O'Donnell M, Burrows J. *Neale's Disorders of the Foot*, Seventh Edition. New York: Churchill Livingstone. 2006.
- Newton K. Healthy feet for an active life. 2006. Available online at www.wvu.edu/~exten/infores/pubs/fypubs/WLG_461_Healthy_Feet.pdf. Accessed December 3, 2007.
- Ontario Podiatric Medical Association. Ontario Podiatric Medical Association Web site. 2007. Available at www.opma.ca.
- Ontario Society of Chiropodists. Ontario Society of Chiropodists Web site. 2007. Available at www.ontariochiropodist.com.

Safe at Home:

Practising Proper Infection Prevention and Control

BY Risa Cashmore,
RN, BSc, CIC,
CCHN(c);
Anne Bialachowski,
RN, MS(c), CIC

Should all home health-care professionals be educated in infection prevention and control (IPAC)? Yes! Every person who provides health care, particularly in home care, must use effective IPAC strategies.

In the last decade, home health care has become the fastest growing segment of the health-care system. However, IPAC efforts have not kept pace with these changes and have lagged behind.

For the past 40 years, acute-care facilities were the centre of the infection control universe; as such, IPAC efforts were based largely on acute-care practices. Now, infection control in a home health setting is a challenge because (a) few home health agencies have dedicated infection-control staff, (b) there are no uniform definitions for infection surveillance for home care, and (c) home health care is delivered in an uncontrolled environment where family members often assist with care.

Prevent Infections

So why does having an effective IPAC program in home health care matter? Most importantly, practising proper IPAC will help prevent or reduce the risk of infection to our clients, family members, and others. Following are some other good reasons:

- 1. Our clients are susceptible to infections.** The majority of home-care clients are 65 years of age or older, and older age increases one's risk of infection. Chronic illnesses (such as diabetes, cancer, kidney disease, etc.) or acute conditions (such as malnutrition) increase the elderly client's susceptibility for acquiring an infection.
- 2. The complexity of care is increasing.** Clients can receive infusion therapy, tracheostomy care, ventilator support, dialysis and other invasive procedures in their own home. While very little surveillance data are available, outbreaks have been reported from home infusion-therapy programs. When building a surveillance program in home health care, we should focus our efforts on high-risk infections such as urinary tract, bloodstream, pneumonia, and skin and soft-tissue infections.
- 3. Visiting nurses, personal support workers, homemakers and therapists can become "traveling germs."** The home health-care worker visits a number of clients each day and if proper IPAC practices are not followed, germs can be inadvertently transported from one home to another.

Risa Cashmore, RN, BSc, CIC, CCHN(c), is the Infection Control Consultant for the Mississauga Halton Infection Control Network.

Anne Bialachowski, RN, MS(c), CIC, is the Infection Control Network Coordinator for the Central South Region of Ontario.

Educate your Clients

It is important to teach your clients about hand hygiene so they can protect themselves, their families and friends. A fact sheet developed by the Provincial Infectious Diseases Advisory Committee (PIDAC) of the Ontario Ministry of Health and Long-Term Care describes the proper way to perform hand hygiene. The sheet is available at www.health.gov.on.ca/english/providers/program/infectious/pidac/pidac_fs.html.



Therefore, we must wash our hands at the beginning and end of each visit as well as after any activities where our hands may become soiled. Cleaning our hands thoroughly and frequently is the most important strategy to prevent germs from “travelling” from home to home.

Clients need to know we are washing our hands to protect them from infections. When you book your first visit, ask your client if he or she can provide you with pump soap and paper towels. If these items are not available, use a clean tea towel and liquid dish soap. Avoid using a client’s used towels or bar soap as these have been shown to carry infection-causing germs. Another alternative—and the preferred method of hand hygiene for health care—is to use an alcohol-based hand rub containing 60 to 90 per cent alcohol. This product kills germs on hands and is usually available in a small container that can easily be carried in a pocket for portability and accessibility.

Be sure to clean and disinfect any multi-use equipment after use. This includes thermometers, blood pressure cuffs, stethoscopes and glucometers.

4. We can be exposed to infection as part of our role. In order to protect ourselves from acquiring an occupational infection, we should have proper IPAC education. Also, we should

- a. always use routine practices. In addition to hand hygiene, these practices include the use of personal protective equipment (PPE) such as gowns, gloves, masks and face protection at appropriate times. A fact sheet on routine practices is available at www.health.gov.on.ca/english/providers/program/infectious/pidac/pidac_fs.html.
- b. know our immune status. Receiving annual influenza immunization helps to protect our clients, ourselves and our families. Provider agencies should have documented evidence of staff immunizations such as measles, mumps, rubella (MMR); tetanus, diphtheria and polio (TDP); hepatitis B, and a history of childhood communicable diseases such as chickenpox.
- c. handle sharps safely. Sharps should never be used unless a puncture-resistant sharps container is available close by. It’s a good idea to always carry

*If proper IPAC practices are not followed,
germs can be inadvertently transported
from one home to another.*

.....

a small sharps container. If clients have their own container, ensure they know that many local drug stores offer a container exchange program. Also, know your local or regional policy and the location of hazardous waste disposal centres.

- d. screen clients for febrile respiratory illnesses. PPE should always be carried in a bag or vehicle. A large plastic zip bag can be used to store a gown, gloves, surgical mask and eye protection. Clients should always be asked if they have a fever and new cough or shortness of breath when a professional books the visit or arrives at the door. If the client answers “yes” to the above questions, then PPE will need to be used. (Refer to the PIDAC Febrile Respiratory Illness Best Practice Document for more information at www.health.gov.on.ca/english/providers/program/infectious/diseases/best_prac/bp_fri_092805.pdf.)

Find Resources

Numerous IPAC resources are available in each province. For example, in Ontario, local Regional Infection Control Networks are a good source of information (www.ricn.on.ca). In addition, many national and international resources can be accessed from the Community and Hospital Infection Control Association-Canada’s Web site (www.chica.org).

The Canadian Council on Health Services Accreditation is keenly aware of the importance of home health-care agencies’ IPAC practices. In 2008, new stringent expectations will be developed for all home-care agencies. Expect to hear more about these in the near future.

Protect Yourself

In the meantime, remember to protect yourself, your clients and others in your community. Don’t become a germ carrier! Wash your hands, and keep things clean. 🙌

Reprinted from *Rehab & Community Care Medicine*, Volume 16, Issue 3. BCS Communications Ltd.

CAWC Scholarships Provide Opportunity and Improve Wound Care

The Canadian Association of Wound Care (CAWC) is dedicated to the advancement of wound care in Canada. One of the activities the CAWC co-ordinates on behalf of itself and its partners in wound care is the awarding of educational and research scholarships worth up to \$2,500 each, which serve to support educational and research initiatives to promote best practice and improve patient care within the wound-care community.

Winners of the 2007 scholarships:

The Dr. Warren L. Rottman Education Scholarship sponsored by 3M Canada Inc.: Rebecca Rose Cottrill

The Mölnlycke Health Care Education Scholarship sponsored by Mölnlycke Health Care: Susan Travanut

The Cathy Harley Educational Grant in Memory of Aldora Harder and Cathy Foster sponsored by the CAWC: Mary Elizabeth Beresford

The Elise Sorensen RN Memorial Scholarship sponsored by Coloplast: Eileen Maria Emmott

The T.J. Smith Global Wound Academy Award sponsored by Smith and Nephew: Ashleigh Middleton

ConvaTec Scholarship for Advancing Wound-care Education sponsored by ConvaTec: Diane Patricia Markle

Scholarship winners are required to submit a report to the CAWC outlining the activities that have taken place within the framework of the scholarship and demonstrating the impact the scholarship has had on both the

recipient and on wound care. These reports demonstrate the variety of activities undertaken by the winners and show the value of the scholarships to the recipients, their colleagues, and ultimately, their patients. Below are excerpts from the 2006 winner reports:

TJ Smith Global Wound Academy Award: Krista Lee Baldwin

The award was used to attend the International Interdisciplinary Wound Care Course (IIWCC). My personal goals were to elicit change in my current practice setting, to incorporate best practices into my practice setting, and to disseminate knowledge to my colleagues and my client-care team.

Networking and collaborating with a variety of colleagues from around the world was a phenomenal, empowering experience. As one of two occupational therapists who were enrolled, I was also presented with opportunities to communicate the role of occupational therapy in wound management with my classmates and obtain a better appreciation of the pivotal role that each team member can provide to enhance client care.

I was provided with an opportunity to integrate further principles of adult learning and adjust clinical guidelines to align with current best practices and influence policy development. As a result of the knowledge gained by completing this course, best practice guidelines were adapted for a long-term care corporation in Nova Scotia.

Dr. Warren L. Rottman Education Scholarship sponsored by 3M Canada Inc.: Denis Okan

In 2004, I finished a three-year undergraduate degree in Health Sciences at McMaster University in Hamilton, Ontario. I then began medical school at Memorial University.

In addition to my studies at Memorial, this scholarship allowed me to attend the CAWC conference in Ottawa in November 2006. There, I had the opportunity to present a case study entitled "So what if you're blue? Oral colloidal silver and argyria are out: Safe dressings are in." The CAWC conference was an important experience that allowed me to network and communicate with professionals from across Canada who deal with chronic wound care on a regular basis.

ConvaTec Scholarship for Advancing Wound Care Education sponsored by ConvaTec: Doug Baron

I was able to purchase a laptop computer and cover some expenses to assist me in completing the International Interprofessional Wound Care Course (IIWCC).

The final selective or practical portion was a project related to my current practice (paediatric burns). . . .

My new laptop has enabled me to work on my modules and my selective wherever I needed to. My selective project involved creating a quick reference guide (QRG) including clinical practice guidelines for the assessment and treatment of partial thickness burns and management of blisters. The QRG was well received by my physiotherapy colleagues at the Alberta Children's Hospital, and I hope to expand its use to other care providers in the hospital (emergency) and perhaps throughout the Calgary Health Region.

The Mölnlycke Health Care Educational Scholarship: Lisa Maria Cuschieri

I chose to further take part in this integral educational movement by embarking upon a Master's level program in tissue repair and wound healing at the University of Cardiff, Wales.

I'm often asked why I chose a Master's program. Firstly, it seemed like a logical next step, as I am continually looking for opportunity to advance my realm of knowledge. But more importantly I believe education, particularly in health care, is the key to opening many doors, not just for the learner but for all those involved, including the patient, colleagues, and in health-care delivery. This is important, as advanced wound care is not an area taught in university medical or nursing programs. Hence, the need for leaders to disseminate knowledge, and to identify when and where change is required.

Having completed the didactic portion of the Master's program I have a renewed vision in my evaluations of everyday practice, research and delivery of care. . . . Thank you [CAWC and Mölnlycke] for assisting me to further my education so that I might in turn open doors or help provide leadership for others.

Cathy Harley Educational Grant in Memory of Aldora Harder and Cathy Foster: Elizabeth Anne Girling

This educational scholarship has enabled me to participate in the University of Toronto's International Interprofessional Wound Care Course 2006-2007. Financial barriers were eliminated and I was able to study "worry-free."

Successfully completing the IIWCC course has given me the knowledge and self-confidence to continue to pursue and participate in evidence-based skin- and wound-care management educational opportunities and projects. I was asked to be one of the presenters at the Calgary Health Region (CHR) Home Care Skin and Wound Assessment and Treatment Team (SWAT) Fall Education Day . . . and for the SWAT Educational program, "Pressure Management Module-Level One". . . . I have also undertaken a leadership role within the CHR Home Care SWAT Occupational Therapy (OT) Team and have the energy to push forward with new ideas for program development, implementation and education. Inservicing staff on SWAT OT information at Home Care OT meetings and Team meetings has increased colleagues' awareness of the SWAT OT role, which has not only increased the number of SWAT referrals I now receive but has also created an interest in others to become more involved. Clients and caregivers have also benefited from my new knowledge and passion for skin- and wound-care management. Utilizing client-centred best practice, client adherence to plan of care has improved.

Heather L. Orsted Scholarship for Team Development sponsored by the CAWC: Joy Dunbar, Elizabeth Girling, Celine Feagen, Iveta Heffernan, Carol Fossheim

Throughout the course and our work together on our team selective project, we have come to realize the value of colleagues that share the same enthusiasm. We

continued on page 74

If There's a Wound, There's a Way



From the
Organizers of
the World Union
Congress 2008

Innovation in the effective prevention and treatment of wounds is happening all the time, in countries around the world, initiated by specialists just like you. And with every new step forward we are closer to finding ways to manage the escalating health-care crisis caused by inadequately treated wounds.

However, without a co-ordinated effort, we simply cannot expect to advance wound-care practices and improve patient outcomes on a global scale. We need to find ways to stimulate discussion, share ideas, and transfer the knowledge and skills we have to create international standards for wound care.

Founded eight years ago, The World Union of Wound Healing Societies (WUWHS) was created to enhance the life of people with wounds worldwide by contributing to the improvement of wound-care standards for patients and of health-care professionals' performance. Over time the organization has spearheaded a number of initiatives to achieve this goal, such as the development and dissemination of educational training materials and resources designed to meet the local needs of developed, developing, and emerging health-care systems.

But much work still needs to be done. And you can

help by supporting the ongoing efforts of the WUWHS with your participation in the World Union Congress 2008 being held this June in Toronto, Ontario, Canada.

Unique to this wound-care conference, Congress 2008 will focus exclusively on the presentation of wound-care evidence and the transfer of knowledge, skills, and attitudes for improved patient outcomes. Building on the success that evidence-based medicine has demonstrated in clinical practice, Congress 2008 will take a pioneering approach to the evaluation of wound-care evidence—from guidelines to pre-clinical data—in the context of efficacy, efficiency, and effectiveness to form a framework for best clinical practice that can be applied to invigorate your wound-care practice.

In addition, you will hear and meet international opinion leaders, take in the world's largest wound-care trade exhibition, and learn about comprehensive therapeutic strategies and how they can be translated into better wound care.

With a stimulating pre-conference day, three plenary sessions featuring internationally respected speakers, and 10 concurrent streams with more than 100 educational sessions, this cutting-edge program is not to be missed!

Register today at www.worldunion2008.com. ☺

Scholarships Provide Opportunity and Improve Wound Care *continued from page 73*

shared questions, thoughts, issues that pertain to our work environments, clinical skills, critical thinking, and client-centred concerns. . . . Some of the positive things about working together as a team:

- Increased respect for an interdisciplinary focus for complex skin and wound clients.
- Increased knowledge base and understanding of each discipline's roles and how their expertise enhances a client-centred approach to care.

- The team atmosphere provided an open environment to share ideas, ask questions, share our passion and daily challenges, and realize that we are not alone!
- Working with team members from all agencies and backgrounds fostered creativity. This nurtured a professional and collaborative atmosphere for meetings and the development of a truly transdisciplinary communication tool (which was the goal for our selective project). ☺

Canadian Nurses Involved in Diabetes Prevention Program in Mexico

BY

José Contreras-Ruiz,
Tiffany Barker,
Isao Salinas-Hojyo,
Fabián Muciño,
Francisco
Gonzalez-Peña,
Patricia
Pichardo-Velazquez,
Heather L. Orsted

Prevention programs are now the focus of public health programs in most developed countries because they have proved to be cost-effective and have helped to avoid complications that are always more expensive to correct—and cause higher morbidity.

Unfortunately, the reality in developing countries is that prevention programs are scarce, and health-care authorities tend not to believe in them because of the time it takes to see results. Mexico is no exception, and most hospitals and health-care centres still believe that having a foot ulcer in a patient with diabetes means amputation. This makes up for the alarming number of amputations carried out each year in Mexico.

Diabetes mellitus affects eight to 12 per cent of the population in Mexico, and the age group most affected is between 20 and 69 years.¹ This means four to six million people are affected by the disease, of which only 200,000 to 300,000 are believed to be under proper control. Thirty per cent of those affected are unaware they have the disease. This of course, causes a delay in diagnosis that ultimately results in more complications.

By the year 2025, Mexico will rank seventh in diabetes incidence worldwide and first in Latin America. Diabetes is now the primary cause of male and female hospital mortality in Mexico.²

The CAWC has always been concerned about aiding less fortunate countries, and two members have recently tackled this issue by offering their help in developing a prevention program for patients with diabetes focused on education. Both Heather Orsted and Tiffany Barker are working with Mexican wound-care leaders in developing a training program for community health-care professionals to provide education for patients with diabetes.

This program was initially developed for the government of the northern state of Zacatecas, but due to the authorities' lack of interest, the focus has shifted to the central state of Guanajuato instead.

The proposed program is meant to educate and train both health-care workers and patients with diabetes in the prevention, diagnosis, monitoring and management of foot problems in the municipality of Celaya, Guanajuato, Mexico. This type of program has been shown to reduce between 49 and 85 per cent of amputations.

The project will be divided into three phases. In the first phase, a group of health-care professionals will be empowered and trained to become leaders and advocates in the prevention and management of diabetic foot ulcers.

In the second phase, the theory and skills that the health professionals have been taught will be put into practice through the establishment of health-care teams dedicated to the prevention and management of diabetic foot ulcers as part of diabetic care services in Celaya. Measurement of the program's efficacy will be through the reporting of the number of amputations before and after the implementation in the main referral hospital in the municipality. This should create awareness of the usefulness of such a program, which will lead to the third phase.

In the third phase, which is contingent on satisfactory outcomes of the first and second phases, the program will be implemented in other municipalities with the goal of state-wide dissemination.

We believe this program is a terrific example of how the CAWC has accomplished their objective of encouraging co-operation between the CAWC and other inter-

continued on page 81

An Interview with **Andrew Hoar**

The Role of Pedorthists in Wound Management

INTERVIEW BY Catherine Harley, Associate Editor, *Wound Care Canada*



Andrew Hoar

Andrew Hoar, CPed(C), is with the QEII Health Sciences Centre, Nova Scotia Rehabilitation Centre, in Halifax, Nova Scotia.

Q What is your profession? What education does it require?

I am a Certified Pedorthist (Canada) and member of The College of Pedorthics of Canada. I'm trained in the assessment, design, manufacture, fit and modification of foot appliances and footwear. I provide devices and footwear to assist in the accommodation of foot deformities, re-alignment of anatomical structures, redistribution of external and internal forces, improvement of balance, control of biomechanical function, accommodation of circulatory special requirements, and the enhancement of the actions of limbs compromised as a result of an accident, congenital deformity, neural condition, or disease.

The educational requirements include a post-secondary degree in a related discipline such as, but not exclusively, kinesiology, plus completion of a two-year internship, or a Diploma in

Pedorthics from the University of Western Ontario.

Q What does your current job entail? How does it relate to wound care?

My position as a pedorthist at the QEII Health Sciences Centre, Orthotic and Prosthetic Department, entails providing foot-related devices as prescribed by a physician. My responsibilities include that of an attending clinician to a large out-patient practice and to the amputee, physical medicine, rheumatology, and leg ulcer clinics.

Q What role do you play as part of a multidisciplinary wound-care team?

My role in the multidisciplinary Leg Ulcer Clinic, as a pedorthist, is to fit and modify pressure off-loading devices, complete gait analysis, assess and fit footwear, fabricate custom foot orthotics and provide patient education

as related to feet and footwear.

Q What inspires you to come to work every day?

The individual challenges associated with each patient's needs and the opportunity to work with the patient to improve their foot health.

Q What types of wounds do you most commonly see?

Forty per cent of my practice is related to diabetic foot ulcerations. I also see far too many pressure ulcers on heels.

Q In your view, is there enough emphasis put on the prevention of lower extremity wounds within Canada?

No, there is not enough emphasis placed on prevention. The cost of prevention versus the cost of treatment is disproportionate. As we know, the best

form of treatment is prevention. The cost of hospitalization for a foot ulcer is far more than education, footwear and orthotics.

Q What is your biggest challenge in wound care?

My biggest challenge is the patient volume due to the post-ulceration continued service, which aims to avoid re-ulceration. Many studies show that proper footwear, when available and worn, can prevent re-ulceration in 60-85 per cent of patients with previous ulcers.

Q Do you have any key recommendations for health-care professionals who are caring for patients with diabetic foot ulcers?

Standard footwear and off-the-shelf orthotics are not appropriate devices for the treatment of wounds. Off-loading devices should be employed until wound

closure is achieved, at which point footwear and custom orthotics should be utilized to maintain good foot health. The EVA foam covers on diabetic foot orthotics should be replaced every four to six months due to the compression of the material to ensure maximum cushioning. This replacement consult also provides an opportunity to review the device's effectiveness.



What role do you play in patient education?

A pedorthist's role is to educate the patient regarding foot care, orthotics and footwear (including design selection, fit, size, and other foot-related appliances such as socks), and stretching and exercise programs for the feet. Education on the risk factors related to the diabetic foot is also essential.



Which Web sites do you use the most?

With regard to wound-care management, the CAWC Web site is my most common source of information.



What continuing education do you find essential to your professional growth and development?

Biomechanical research, foot-wear development, orthotic material and design development, as well as advancing personal knowledge of diabetes and wound care. I am looking forward to attending the World Union of Wound Healing Societies meeting in Toronto from June 4 to 8, 2008.



Do you have any last comments?

To learn more about pedorthics or to locate a pedorthist in your area, go to www.pedorthic.ca. See you at the CAWC meeting in Halifax! 🍷



One Problem – One Voice

Third Congress of the

World Union of Wound Healing Societies

June 4 – 8, 2008 · Toronto, Canada

Hosted and Accredited by
University of Toronto



REGISTER NOW!

Don't miss the most important wound care conference of 2008. This congress is for all levels of experience, expertise and interest. Featuring a faculty of key opinion leaders from around the world, over 100 sessions and 800 posters. For complete information visit our Web site.

For detailed information and updates please visit
www.worldunion2008.com

Canadian Association of Wound Care News

2008 is the biggest year for wound care that Canada has ever seen, and the CAWC is using the opportunity to expand and connect to the wound-care community in a way that will move wound care forward like never before. Join the CAWC this year as our S-series and special theme meetings take us on a unique coast-to-coast-and-everywhere-in-between tour. If virtual travel is more your style, the Internet will have lots on offer too. No matter where you live, or what your interest in wound care is, there is something for you this year!

CAWC 2008 Theme Meetings “Bringing the World’s Best to You”

Because of the CAWC’s commitment as a hosting society of the World Union of Wound Healing Societies (WUWHS) congress, the CAWC is foregoing its annual conference. However, we wanted to continue to produce a great program in our usual fall time slot and have created our most exciting and unique educational event to date. This year, the CAWC is presenting two “theme meetings,” which will be smaller meetings with a maximum of 350 delegates each that will bring the latest knowledge from the Toronto WUWHS congress in June to Canadian wound healers. The meetings will be held in two of Canada’s most beautiful locations: Victoria, BC, October 24-26, 2008, and Halifax, NS, November 7-9, 2008. The meetings have a unique agenda and format with lots of great choices that have been derived from recent needs assessments, requests, feedback and, of course, the hottest information from the World Union.

To get this information, the CAWC will be deploying a team of specialists at the WUWHS congress to monitor all sessions and compile the most important, new and leading-edge information from around the world. We will then create comprehensive sessions based on the best of the WUWHS congress and deliver it to Canadian wound healers at the 2008 theme meetings. We will also be inviting the top poster presenters from the WUWHS to display their work at the theme meetings.

The heart of the agenda will be four smaller-group interactive sessions focused on venous leg ulcers, pressure ulcers, diabetic foot ulcers, and the patient visit, including dressing selection.

The agenda has been specially designed so that all delegates will be able to attend each of these smaller-group sessions. In addition, there will be a comprehensive plenary session on wound bed prepa-

ration as well as a broad range of concurrent sessions.

Regardless of your level of expertise, these theme meetings offer a range of interactive sessions, didactic sessions and satellite symposia as well as great social and networking events, Canada’s premier annual wound-care trade show and the top posters from the World Union—all in a smaller, more intimate and interactive format than our regular national conference.

Enrollment is limited, so pick one of the meetings, mark the date on your calendar, and visit the CAWC Web site for details. Complete information and online registration will be posted on www.cawc.net by April 1. Registration fees are only \$275 for CAWC members and \$325 for non-members.

Great meetings, in great places, at a great price. See you there!

continued on page 80

Key Features

- workbook for each participant
- core sessions on key topics: diabetic foot ulcers, venous leg ulcers, pressure ulcers, plus the patient visit, including dressing selection
- smaller-group, case-based interactive learning
- sessions on hot topics from the WUWHS congress linked to the evidence base on the WUWHS Web site
- excellent networking and social activities
- the top posters from WUWHS congress
- product information and education at the wound-care trade show
- taking place in two of Canada’s top destinations

CAWC 2008 Theme Meetings

“Bringing The World’s Best to You”

➤ **October 24–26 in Victoria, BC**

➤ **November 7–9 in Halifax, NS**

What is happening with the annual CAWC conference this year?

As a hosting society of the World Union (WUWHS) congress taking place in Toronto in 2008, the Canadian Association of Wound Care will be foregoing its 2008 national conference and instead will offer two very special theme meetings. These three-day meetings will incorporate all of the best CAWC conference features, including a great day of satellite symposia, Canada’s premier wound-care trade show, social and networking events, and will feature the hot information and latest knowledge from the June 2008 World Union congress.

What will the agenda include?

The agenda will be based on four very special, interactive, smaller-group sessions predicated on the latest and greatest from the World Union proceedings, including a distillation of the newest information regarding pressure ulcers, diabetic foot ulcers, wound bed preparation and venous stasis ulcers. Concurrent sessions will focus on the hot topics and information requested in recent CAWC needs assessments.

Where will it take place?

The meetings will be held in two of Canada’s most beautiful and desirable destinations: **Victoria, October 24–26, 2008** and **Halifax, November 7–9, 2008**.

Who should attend?

Regardless of your level of expertise, these theme meetings will offer a range of interactive sessions and leading-edge information that will enhance any practice.

How do I find out more?

Complete information and online registration will be posted on www.cawc.net by April 1st.

Register Now!

The proceedings at each event will be identical and attendance will be limited to 350 delegates each, so mark your calendars, pick your location and register now! 2008 registration fees have been reduced to \$275 for CAWC members and \$325 for non-members.



Great meetings, in great places, at a great price!

Canadian Association
of Wound Care



Association canadienne
du soin des plaies

www.cawc.net

World of WWW Getting Wider

The CAWC connects to the wound-care community via the Internet to members and other professionals in the wound-care field through regular e-mail blasts and two separate Web sites: www.cawc.net and www.preventpressureulcers.ca. Here's what's new:

PUAP Web Site: The PUAP site is relatively new, and it contains information for clinicians, patients who might be at risk for developing a pressure ulcer, and people caring for those at risk. In addition to being a source of information that will help your practice, the site is a good tool for patients and their families.

CAWC Web Site: For the CAWC site, launched in 2001, the time has come for some renovation. During 2008, the CAWC team will be updating the look, organization and content of the www.cawc.net site.

Directories: In fact, the CAWC Web site has already been updated by the addition of two exciting new directories: a private one for

CAWC members and one that's open to the public that contains information on clinics.

Clinic Directory: The new clinic directory will be an important tool for improving patient outcomes, as many patients don't know where to turn when they have a wound that won't heal. Many non-wound-care specialists need information on where to refer such patients as well. The clinic directory will contain location information as well as listings of the type of services offered, accessibility, referral information, contact details and more. Please visit the members-only section of the CAWC Web site to input your clinic information. As the directory will be available in a public area of the Web site, we'll need permission from your clinic director to post the information. Help us connect you to the people who most need your help!

CAWC Member Directory: The CAWC is expanding the member directory, a great membership benefit, and making it easier

for you to input information and to access information on other members in your field of interest or geographical location.

For new or existing members who are renewing their membership we ask you to fill out fields containing the relevant information for the directory. Please take the time to complete the entire form. You can go back any time and add or change information, so if you renewed before January 2008, please take a few minutes to update your account. You can choose to opt out of the directory any time if you don't want the information made available to other members. To join, renew or update your account go to www.cawc.net/open/membership/information.html. To access the member directory go to the members-only section of the CAWC Web site at www.cawc.net and click on the member directory link. You'll be able to see the entire listing or use the search feature to select a particular person or group of persons. The directory is a great way to keep in touch with your colleagues around the country.

Pressure Ulcer Awareness Program: Final Pilot Figures Confirm Program's Positive Effect on Care and the Bottom Line

In an earlier issue of *Wound Care Canada* (Volume 5, Number 1, Spring 2007), we outlined some of the preliminary findings of the CAWC's Pressure Ulcer Awareness Program from the sites who participated in the pilot program. These findings included positive changes in practice, knowledge, and facility policy. Recently, the final figures from the pilot program came in, with all facilities showing improvement in the more quantifiable areas of the program, like prevalence and incidence rates. Visit the Web site at www.preventpressureulcers.ca for the details.

Improvements in prevalence and incidence figures weren't the only positive changes reported. Fruan Tabamo, PUAP Champion from Maimonides Geriatric Centre, a long-term care facility in Montreal, said, "Maimonides was able to reduce the cost associated with the treatment

of pressure sores...We were able to significantly reduce the cost of dressings from \$90,000 to \$55,000 following the introduction of the PUAP program." Yes, that's over 40 per cent savings in dressings alone!

The program is now running in acute care and long-term care facilities across the country, with more being signed up every month. In Ontario, the Ministry of Health and Long-Term Care is piloting the program in 20 LTC facilities with an eye to expanding into all LTC facilities in the province.

Two PUAP staffers, Kimberly Stevenson

(National Team Leader) and Rose Raizman (Cohort Team Leader), oversee the program and act as facilitators and coaches for the facility site champions.

With the great results that have been demonstrated so far, it is certain that more facilities will get on board. You can help by getting the process started in your facility. For more information on the program, please visit the PUAP Web site at www.preventpressureulcers.ca or contact Kimberly Stevenson at stevenson@preventpressureulcers.ca. She can help you get the PUAP in your facility. Don't wait. Do it today!

CAWC Bylaws Posted on Web Site

Occasionally over the years, the CAWC has made changes to the organization's bylaws. The consolidated bylaws are now available for viewing on the Web site by any interested members. Visit www.cawc.net and click on the "About the CAWC" button.



S-Series: The Premier Wound-care Education Program in Canada

The S-Series continues to be one of the most popular wound-care programs in the country. Each year, the CAWC presents the three-part educational series in three Canadian cities. The program is based on the four Canadian Best Practice Recommendations for wound management, and provides a sound basis in wound management theory and practice.

If you are looking for a solid grounding in wound-care fundamentals register today for the S1 and S2. If you've already participated in the S-Series, encourage your colleagues who need basic wound-care knowledge to attend either an S-Series or one of this year's theme meetings.

And don't forget about the S3. This "Reflective Learning & Practice Portfolio" provides a framework to help you further identify the knowledge and/or skills required to improve your wound-care practice. If you want to move your career forward, this tool is just what you need!

The 2008 Canadian Wound-care Calendar: A Snapshot of Events

CAWC S-series

Thunder Bay, ON: March 14-15

Edmonton, AB: April 4-5

Quebec City, QC: April 11-12 (presented in French)

Third Congress of the World Union of Wound Healing Societies

Toronto, ON, June 4-8

Special 2008 Theme Meetings:

Bringing the World's Best to You

Victoria, BC: October 24-26

Halifax, NS: November 7-9

Practical Considerations for the Enhancement of Nutrition and Hydration in Patients

continued from page 55

ments are required but not affordable, suggest adding dry milk powder into milk, cereal, pudding, casseroles, cream soups and other foods. Some patients may already be consuming a one-calorie-per-mL liquid nutrition supplement. These supplements often come in an enhanced form with extra calories and protein in the same volume; suggest a switch to an enhanced formula. Some people may be eating "comfort foods" such as hot cereals, cream soups and mashed potatoes. Recipes are available that use nutrient-dense supplements to enhance these savoury comfort foods.

Consider alternate means of nutrition/hydration. Supplemental tube feeding may be considered a valuable tool when other strategies have been attempted yet have failed to meet an individual's nutrition and

hydration needs. If deemed appropriate by the health-care team, the option of enteral nutrition support should be discussed with the patient and/or the designated substitute decision-maker. If a patient is able to eat orally, tube feeding does not preclude oral intake. Tube feeding can be run overnight so it does not interfere with recreation or therapy schedules. The provision of supplemental overnight tube feeding may reduce a patient's stress related to the need to eat optimally when barriers exist. Tube feeding does not need to be permanent; it may be discontinued when a patient is able to meet his or her needs orally or when there is a change in health status. Quality of life issues should be paramount in an individual's care plan.

These are only some of the many strategies to consider when attempting to optimize a

patient's nutrition and hydration status. It is important to implement creative and practical ideas that are individualized to the needs of each patient to improve intake and the quality of the meal experience. ☺

References

1. Carrier N, Ouellet D, West GE. Nursing home food services linked with risk of malnutrition. *Canadian Journal of Dietetic Practice and Research*. 2007; 68(1):14-20.
2. Harris CL, Fraser C. Malnutrition in the institutionalized elderly: The effects on wound healing. *Ostomy/Wound Management*. 2004;50(10):54-63.
3. Keller HH. Practical guidelines for staff management of undernutrition in a long-term care population. *Nursing Home Medicine*. 1994;2(7):40-49.
4. Welch P, Porter J, Endres J. Efficacy of medication pass supplement program in long-term care compared to a traditional system. *J Nutr Elder*. 2003;22(3):19-28.
5. Westergren A. Eating difficulties, need for assisted eating, nutritional status and pressure ulcers in patients admitted for stroke rehabilitation. *Journal of Clinical Nursing*. 2001;10:257-269.

Canadian Nurses Involved in Diabetes Prevention Program in Mexico

continued from page 75

national, national and regional associations and groups involved in wound care. Now that Mexico has a holistic interdisciplinary association, the AMCIHAC, or am-see-chahk (see article on page 11), this type of networking

will be facilitated, and co-operation between both nations encouraged. ☺

References

1. Federación Mexicana de Diabetes, AC. Los números de la diabetes. Información para medios de comunicación

[2]. March 7 2006. Available online at www.fmdibabetes.com/www/noticias/noticias.asp?id=2006030621275. Accessed January 23, 2008.

2. Secretaría de Salud. *Boletín de información estadística* No. 24. 2004. Available online at http://sinais.salud.gob.mx/sicuentas/publicaciones/bie_vol_iv.html.

Articles of Interest

Literature Review

National Pressure Ulcer Advisory Panel's Updated Pressure Ulcer Staging System

Authors: Black J, Baharestani MM, Cuddigan J, Dornier B, Edsberg L, Langemo D, Posthauer ME, Ratliff C, Taler G, and The National Pressure Ulcer Advisory Panel

Publication:
Advances in Skin & Wound Care. 2007;20(5):269-274

Reviewer:
Christine Pearson, RN, IIWCC

The National Pressure Ulcer Advisory Panel (NPUAP) in the United States has updated its definition of a pressure ulcer and stages of pressure ulcers. In this article, the authors explore the purpose and history (back to 1955) of pressure ulcer staging systems and discuss the problems found with using the systems. The etiology of deep tissue injury (DTI) has been added to the NPUAP Pressure Ulcer Staging System. The authors explain what deep tissue injury is and the long process they went through in deciding to add it to the staging system. The article includes a listing of the definitions and explanations of pressure ulcers and of all the stages (DTI, Stage I, Stage II, Stage III, Stage IV, and Unstageable Pressure Ulcers). The authors are planning to validate this staging system.

Preventing Diabetic Foot Ulcer Recurrence in High-Risk Patients

Authors: Lavery LA, Higgins KR, Lanctot DR, Constantinides GP, Zamorano RG, Athanasiou KA and Mauli Agrawal C

Publication:
Diabetes Care. 2007;30(1):14-20

Reviewer:
Rebecca Cottrill, BFA, BScN, RN, MSCH(c)

This study divided into three treatment arms 173 persons with diabetes between the ages of 18 and 80 with a history of ulceration and ankle-brachial indices of 0.70 or above. Each study participant received diabetic foot education, regular foot care, and therapeutic footwear and ongoing assessment of the footwear by a podiatrist.

In the Standard Treatment arm, patients had their feet examined by a physician every eight weeks and were instructed to call the study nurse if they had concerns about their feet between visits. In the Structured Foot Examination arm, patients were instructed to examine their feet twice a day, with a mirror, for any irregularities, record their findings and call the study nurse if they had concerns about their feet. In the Enhanced Treatment arm, patients were given an infrared

thermometer and instructed to monitor and record temperatures on their great toes; first, third and fifth metatarsal heads; midfoot, and heel. If they monitored an area of difference greater than 4° F (2.2° C), they were instructed to call the study nurse, who would book an appointment with the physician.

Patients in the Standard Treatment group and the Structured Foot Examination group did not demonstrate significant differences between each other: approximately 30 per cent of patients in each of these groups called the study nurse and approximately 30 per cent of patients developed ulceration. In the Enhanced Treatment group, 52.5 per cent of patients called the study nurse and 8.5 per cent of patients went on to develop an ulcer. The study notes that of the patients who developed an ulcer in the Enhanced Treatment group, 80 per cent of them were not adherent to the therapy. Also, once patients noticed a temperature difference between their feet, they decreased their activity significantly.

The study was based on the premise that inflammation is a sign of tissue damage and can be monitored through temperature. This study shows that daily self-

monitoring with an infrared thermometer may decrease foot ulceration. One wonders if daily self-monitoring with infrared thermometry should be standard for all at-risk patients with diabetes. But there are significant challenges to the reality of this monitoring. Some patients dropped out of this study because the protocol was just too demanding. A patient would need to be highly motivated to participate in this kind of prevention. Also, mobility may inhibit this kind of prevention. Patients in this study were given goose-neck thermometers to ease self-monitoring, but for some elderly patients or for those with severe arthritis, self-monitoring may be impossible. Cost may also be a prohibitive factor. An infrared thermometer can cost \$600, which would most likely need to be absorbed by the patient.

This study cites the infrared thermometer as an effective and useful tool in the prevention of foot ulceration for the patient with diabetes. But there are many challenges that prevent this tool from being used as standard care. Perhaps with further research and attention, this tool will become more accessible to future patients who are at risk of diabetic foot ulceration. ☺

VALCO

mediven

MEDIVEN ULCER KIT

THE STRATEGY FOR
THERAPEUTIC SUCCESS
IN INTEGRATIVE CARE
OF ACUTE LEG ULCERS

Mediven® Ulcer Kit,
2 components: Mediven
Ulcer conceived for permanent
compression for night and
day treatment during the acute
phase. The silver bonded to the
yarn provides an effective
antibacterial and antimycotic
effect. Mediven Ulcer Plus, pro-
motes and reinforces
compression during the
patient active phase of the day.
Mediven Ulcer Kit safety,
compliance and efficiency.

PRODUCTS FOR FULL LEG, LOWER LEG & ARM

As an alternative to bandages or
compression stockings, clinically proven
CircAid® Products provide nonelastic,
easily adjustable, gradient compression
therapy for the treatment of ulcers,
Venous Disease & Lymphedema.

CircAid®
MEDICAL + PRODUCTS



Flowtron Hydroven Intermittent COMPRESSION SYSTEM:

NEW STANDARDS IN THE TREATMENT OF VENOUS
AND LYMPHATIC DISORDERS

Flowtron Hydroven 3 and Flowtron Hydroven 12 provide
clinically effective non-invasive dynamic compression to the
limbs to treat a wide variety of vascular and lymphatic
conditions. Our Unique Flowtron Hydroven 12 offers a variety
of cycles such as Gradient sequential, Wave Therapy and
LymphAssist. LymphAssist provides a sequence of pressures
proximal to distal similar to MLD treatment.

THE HUNTLEIGH DOPPLERS:

YOUR DIAGNOSTIC TOOL TO SAFE
COMPRESSION THERAPY

The Huntleigh Vascular Pocket dopplers
are based on over 20 years experience
in this field, the latest generation offers
even greater performance, quality and value.

New improvements include:

- New probe design with 50% greater sensitivity
- New EZ8 wide beam probe for easy vessel detection
- Increased audio performance and efficient battery management



PRODUCTS **VALCO** PRODUCTS

MANUF./DISTR. J. VAILLANCOURT CORP./LTÉE/LTD
597 DUVERNAY ST, VERCHÈRES QC CANADA J0L 2R0

TEL.: 1 800 361.3153 FAX: 1 888 583.6827

WWW.VALCO.CA

Targeting bacteria and protecting the skin.

Two advanced technologies. One antimicrobial dressing.

Only Mepilex® Ag combines the best of two superior technologies – the antimicrobial action of ionic silver with the benefits of Safetac® soft silicone technology.

- Inactivates pathogens within 30 minutes¹ of application and maintains sustained release action for up to 7 days²
- Safetac® soft silicone protects the peri-wound skin, reduces the risk of maceration and minimizes trauma and pain at dressing change^{3,4,5}
- Hydrophilic polyurethane foam in conjunction with a breathable outer film for optimal fluid handling
- Optimal odour control

For more information contact your Mölnlycke Health Care representative at 1-800-494-5134.

^{1,2} Data on file.

³ Dykes, P.J., Heggie, R., and Hill, S.A. Effects of adhesive dressings on the stratum corneum of the skin. *Journal of Wound Care*, Vol. 10, No. 2, February 2001.

⁴ Dykes, P.J. and Heggie, R. The link between the peel force of adhesive dressings and subjective discomfort in volunteer subjects. *Journal of Wound Care*, Vol 12, No 7, July 2003.

⁵ Williams C. *British Journal of Nursing*, Vol 4, No 1, 1995.

