

Occasional contributions



UPDATE FROM THE EUROPEAN WOUND MANAGEMENT ASSOCIATION (EWMA) CONFERENCE – “Patients, Rights, Wounds” in BREMEN, GERMANY 11-13 MAY 2016

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An early European summer greeted a small contingent of Australians who had made the long journey to Northern Germany for the 20th European Wound Management Association (EWMA) Conference which was held in Bremen from 11 to the 13 May 2016. For the majority, it was their first time attending an EWMA Conference – this year broke all records, with nearly 7000 delegates. As the grateful recipient of an AWMA (SA) scholarship (conference registration support) I was one of two South Australians to attend, and this article will outline some key learnings and papers of interest observed at the conference

KEY LEARNINGS & PAPERS OF INTEREST

The keynote presentation by Marie Ennis O’Connor opened the conference and posed this question to delegates: *Do we respect and understand patient rights?* Various Charters, Declarations and Bills of Rights were presented as an overview to support the vital focus of the right of the patient as an active participant in their wound management. In chronic wound management the concept of a “meeting of experts,” was introduced, where not only does the wound health professional have knowledge, but so too does the patient, having experienced a number of treatments and knowing what does not work for them. Do we acknowledge this expertise? Active participation, information sharing, and a focus on Health Literacy is vital for the patients’ understanding and collaboration between the “experts.” This helps ensure our patients are able to make proper decisions on the basis of understandable health information – this is the crux of health literacy, and is vital for concordance.

Another focus of the conference was that of the “incurable wound,” a paper presented by Dr Bozidor Voljc (MD). The incurable wound is one in which the wound is palliated due to lack of healing capacity, which may be due to various issues

including both the patient's health status (e.g. inoperable arterial insufficiency or malignancy) and their decision not to follow advised care regimes. The incurable wound is identified as a part of the patient's life, a symbiosis between the patient and their wound, seen as either a life partner or an enemy through the statement, "I will not irritate you and you will not bother me." It is all dependent upon the patient's relationship with their wound and clinicians can assist to normalise this care trajectory with support and education.

An interesting new therapy on the horizon for Australia (due in late 2016/early 2017) was presented. Viable Cryo-preserved Mesenchymal Stem Cell therapy and its application to prepared chronic wounds was explored. Dr Daniel Davis delivered a paper on the epithelial and stromal layers of the amnion and chorion sections of placental membrane and the outcomes of both a blinded RCT (Lavery et. al, 2014) and a complex wound case series. The unique ability of the product to provide site specific cell regeneration appeared remarkable, particularly in the case series presented which included complex diabetic foot ulcers, with exposed tendon and bone, healing within weeks.

A final notable paper for inclusion here was given by Australian Suzanne Kapp (PhD candidate) who presented on engaging patients in wound management and optimising their involvement. Her research focused on self-treatment of chronic wounds and of interest were the reasons why people self-treat their chronic wounds. These reasons include; wanting to be independent, treating at a time that suits them, dissatisfaction with Health Professional's (HP) management, perceptions of little benefit from HP care, adverse effects or fear of recommended treatment, and a lack of trust in clinicians. With this noted I came away from this conference with 3 top learnings:

1. The patient with a chronic wound is an expert in their wound.
2. As a clinician we can offer more for the incurable wound than just a dressing regime; education, normalisation and reassurance are paramount in living with an incurable wound.
3. Forming a therapeutic relationship including trust is paramount in working together with the chronically wounded person – they must leave the clinic with confidence and optimism.

It begs the question - how often do our patients/clients feel confident and optimistic post care? We owe it to our chronically wounded patients/clients to try our best in this arena.

DOCUMENTS LAUNCHED & PROMOTED AT EWMA 2016

(these documents can be downloaded at the following relevant websites:

www.woundsinternational.com and www.woundsuk.com

- Wounds International – Best Practice Statement Optimising Patient Involvement in Wound Management
- Wounds International – Quick Guide to the Management of Leg Ulcers in Practice
- Wounds International – Quick Guide to Using Collagen Dressings in non-healing wounds
- Wounds International – Quick Guide to Managing Peristomal skin complications
- Wounds UK – Quick Guide - Management of Hyperkeratosis of the lower limb

HINTS FOR ATTENDING FUTURE EWMA CONFERENCES

- Apply for scholarships (not many members apply so have a go!)
- Many conferences are e-based, so e-posters (go early as they rotate through) and your mobile phone is essential as the conference program app is useful for sessions.
- Scan your conference lanyard badge each morning near the main desk, so you can collect CPD points and gain a conference attendance certificate (they do not automatically send it – you have to get it printed at the main desk on the last day).
- Lunch and morning/afternoon teas are not included in overseas conferences, so avoid the lines at the paid food stands and get along each day to a company run symposium, which usually supplies a lunch food bag (good variety and plenty of it).
- Ensure extra space in your luggage for new consensus documents and other small freebies (the pens were extra special!)
- Headsets for multilingual interpreted sessions need to be collected and returned daily.



From left to right: Paul Philcox (Hampstead Rehabilitation Centre), Tabatha Rando (Wound Innovation CRC), Donna Angel (Royal Perth Hospital), Terry Swanson (Wound Healing Institute of Australia).

New Research

Lizanne is an Intensive Care Registered Nurse and Critical Care researcher, with a background in Tissue Viability. Her research passion and publications centre on acute holistic wound management and prevention.

Metro North Hospital and Health Service
The Prince Charles Hospital

Walking away from ECMO: Predictive factors that may reduce lower limb complications

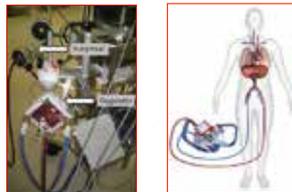
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Background

- > Extracorporeal membrane oxygenation (ECMO) is a cardiopulmonary support device increasing in popularity within Intensive Care Units worldwide.
- > ECMO is prolonged cardiopulmonary bypass used in the intensive care to facilitate the treatment of patients with severe heart and/or lung disease.
- > There are two types of ECMO – venoarterial (VA) and venovenous (VV). Both provide respiratory support, but only VA ECMO provides hemodynamic support.
- > Lower limb vascular complications from ECMO, such as pressure injuries, limb ischemia, compartment syndrome and amputation are common complications with 31.9% of patients requiring treatment and increased hospital stay purely related to these complications.



Purpose

In general discussions with experts in ECMO, all had observed foot complications yet there were few scientific publications despite its increasing utilisation in the critically ill. Hence this retrospective analysis was to document for the first time the incidence in a single centre and build a hypothesis for future prospective multi centre studies using the multi disciplinary teams in our NHMRC centre of research excellence.

This retrospective preliminary study reviewed adult ECMO patients from 2010-2014 at the Prince Charles Hospital ICU to assess a correlation between Toe Brachial Index pressures (TBI) and plasma Creatine Kinase (CK) level as predictive factors of lower limb vascular compromise. These values are already utilised in routine assessments of vascular patients however there is no evidence to suggest these assessments should be utilised in the ECMO cohort.

Why CK and TBI?

- > Creatine Kinase is an enzyme found in muscle, the brain and heart. This enzyme is used to detect severe muscle inflammation and breakdown.
- > Ischemic limb research has suggested CK levels have a positive predictive value of greater than 50% in assessing the need for amputation.
- > Toe-Brachial Index (TBI) is the ratio between toe pressure and the highest of two brachial pressures.
- > Multiple studies have proven TBI to be a strong marker of reduced perfusion to lower limbs.
- > TBI is considered to be superior to ankle-brachial index as it eliminates the effect of atherosclerotic plaques which would exist in patients with peripheral artery disease and provides a more accurate representation of flow to smaller distal vessels.

Method

- > Single site, retrospective, sample of convenience study.
- > The study sample was drawn from all ECMO patients cared from at the Prince Charles Hospital Intensive Care Unit between 2010-2014, who meet the inclusion criteria of adults >18 years of age.
- > 40 patients met the inclusion criteria. 11 patients were randomly selected as a preliminary group to assess feasibility.

Limitation

- > The sample size of the preliminary study was not designed to detect statistically significant correlation.
- > Conducting a retrospective analysis results in a reliance on the clinical note data. This reliance may impact on achievability to obtain all required data.

Discussion

- > Appears to be a correlation between trends in TBI, neurovascular changes and lower limb complications.
- > Appears to be no correlation between trends in CK, neurovascular changes and lower limb complications.

Results

- > 6/11 (54%) patients developed lower limb complications, which were defined as a heel pressure injury, skin necrosis or amputation. Mottling of the foot was not included.
- > 1/11 (9%) required an amputation.
- > Results suggest there is no correlation between plasma CK levels and lower limb complications.
- > A positive trend in TBI can be observed in patients who develop lower limb complication.



Conclusion

- > The preliminary data confirms this is a feasible study that should be performed prospectively to confirm correlation.
- > No definitive predictive assessment has yet to be identified. However this data suggests regular TBI assessments may be beneficial.

ECMO is being used more and more frequently and pedal complications are a key determinate of quality of life and functional outcome that has been ignored until now. Prospective multicentre studies focusing on limb perfusion will improve our understanding on why limb complications occur so readily in the ECMO cohort and allow survivors of ECMO to return to full functionality post discharge from ICU.

Acknowledgements: The study team would like to acknowledge the support provided to them by the Allied Health (Podiatry) team at The Prince Charles Hospital, Metro North Hospital and Health Service.

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Please email any comments or suggestions regarding this report to: newsletter@awma.com.au



Journal Watch

Elfi Ashcroft
Co-Editor, DeepesTissues

Some stimulating Sunday afternoon reading!

“Reliability assessment of an innovative wound score”

Strauss MB, Moon H, Busch JA, Jones CK, Nhan L, Miller S & Le P-NJ (2016)
Reliability Assessment of an Innovative Wound Score. *Wounds*, 28(6):206-213.

Abstract

The authors describe an innovative wound score and demonstrate its versatility for scoring a variety of wound types in addition to diabetic foot ulcers (DFUs). To further test its merits, they determined its interobserver reliability in a prospective series of patients. The Wound Score system the authors created integrates the most important features of 4 predominantly used wound scoring systems. It utilizes a logical 0 to 10 format based on 5 assessments each graded from 2 (best) to 0 (worst). The versatility and reliability of the Wound Score were studied in a prospective series of 94 patients with lower extremity wounds. The Wound Score was quick to determine, applicable to a variety of wound types and locations, and highly objective for grading the severity of each of the 5 assessments. The Wound Score categorized wound types as “healthy,” “problem,” or “futile” for evaluation and management. Diabetes was present in 75.9%, with 70% of the DFUs scoring in the “problem” wound range. Interobserver reliability was high ($r = 0.81$). The objectivity, versatility, and reliability of the Wound Score system facilitates making decisions about the management of wounds, whether DFUs or not, and provides quantification for comparative effectiveness research for wound management.

“Applying the chronic care model to support ostomy self-management implications for oncology nursing practice”

Ercolano E, Grant M, McCorkle R, Tallman NJ, Cobb MD, Wendel C & Krouse R (2016) Applying the Chronic Care Model to Support Ostomy Self-management: Implications for Oncology Nursing Practice. *Clinical Journal of Oncology Nursing*, 20(3):269-274.

<http://click.mail.medscape.com/?qs=9378fe4dfe9843240bb303a4a91d70ec1de7f64a83f25cae1d321466cf2f74ba1c97059745655175>

Abstract

Background: Living with an ostomy requires daily site and equipment care, lifestyle changes, emotional management, and social role adjustments. The Chronic Care Ostomy Self-Management Training Program (CCOSMTP) offers an ostomy self-management curriculum, emphasizing problem solving, self-efficacy, cognitive reframing, and goal setting.

Objectives: The qualitative method of content analysis was employed to categorize self-reported goals of ostomates identified during a nurse-led feasibility trial testing the CCOSMTP.

Methods: Thirty-eight ostomates identified goals at three CCOSMTP sessions. The goals were classified according to the City of Hope Health-Related Quality of Life Model, a validated multidimensional framework, describing physical, psychological, social, and spiritual ostomy-related effects. Nurse experts coded the goals independently and then collaborated to reach 100% consensus on the goals' classification.

Findings: A total of 118 goals were identified by 38 participants. Eighty-seven goals were physical, related to the care of the skin, placement of the pouch or bag, and management of leaks; 26 were social goals, which addressed engagement in social or recreational roles and daily activities; and 5 were psychological goals, which were related to confidence and controlling negative thinking. Although the goals of survivors of cancer with an ostomy are variable, physical goals are most common in self-management training.

“Adipose-derived stem cells added to platelet-rich plasma for chronic skin ulcer therapy”

Raposo E, Bertozzi, N, Bonomini S, Bernuzzi G, Formentini A, Grignaffini E & Grieco, MP (2016) Adipose-Derived Stem Cells Added to Platelet-Rich Plasma for Chronic Skin Ulcer Therapy. *Wounds*, 28(4):126-131.

Abstract

Introduction. Adipose-derived stem cells (ASCs) hold great promise for regenerative medicine applications due to their ability to promote the healing process through in situ differentiation and secretion of paracrine factor. The aim of this paper is to present a clinical adjunct for chronic skin wound therapy based on ASCs added to platelet-rich plasma (PRP), to obtain an enhanced PRP (e-PRP).

Materials and Methods. For 18 months, 24 control-group patients with 31 chronic skin ulcers were treated with standard wound care, while 16 experimental-group patients with 21 chronic skin ulcers were treated with standard wound care and 1 e-PRP injection. The patients were randomly assigned to the control or experimental group. Outpatients had weekly follow-up visits where they were subjected to standard treatment and the wound healing process was assessed.

Results. At the end of the study, the control and experimental groups had similar healing rates but wound closure rates were significantly different ($P = 0.0257$): $0.0890 \text{ cm}^2 \times \text{day}$ and $0.2287 \text{ cm}^2 \times \text{day}$ respectively, resulting in a faster recovery for the group treated with e-PRP. No side effects were reported.

Conclusion. In the authors' experience, e-PRP significantly enhanced wound closure rates when compared to standard wound care, without causing any serious complications. This finding highlights e-PRP as a valuable resource for chronic wound treatment.

“Generation of induced pluripotent stem cells from diabetic foot ulcer fibroblasts using a non-integrative Sendai virus”

Gerami-Naini B, Smith A, Maione AG, Kashpur O, Carpinito G, Veves A, Mooney DJ & Garlick JA (2016) Generation of induced pluripotent stem cells from diabetic foot ulcer fibroblasts using a non-integrative Sendai virus. *Cellular Reprogramming*. June 2016, published online ahead of print. doi:10.1089/cell.2015.0087.

Abstract

Diabetic foot ulcers (DFUs) are nonhealing chronic wounds that are a serious complication of diabetes. Since induced pluripotent stem cells (iPSCs) may offer a potent source of autologous cells to heal these wounds, we studied if repair-deficient fibroblasts, derived from DFU patients and age- and site-matched control fibroblasts, could be reprogrammed to iPSCs. To establish this, we used Sendai virus to successfully reprogram six primary fibroblast cell lines derived from ulcerated skin of two DFU patients (DFU8, DFU25), nonulcerated foot skin from two diabetic patients (DFF24, DFF9), and healthy foot skin from two nondiabetic patients (NFF12, NFF14). We confirmed reprogramming to a pluripotent state through three independent criteria: immunofluorescent staining for SSEA-4 and TRA-1-81, formation of embryoid bodies with differentiation potential to all three embryonic germ layers *in vitro*, and formation of teratomas *in vivo*. All iPSC lines showed normal karyotypes and typical, nonmethylated CpG sites for *OCT4* and *NANOG*. iPSCs derived from DFUs were similar to those derived from site-matched nonulcerated skin from both diabetic and nondiabetic patients. These results have established for the first time that multiple, DFU-derived fibroblast cell lines can be reprogrammed with efficiencies similar to control fibroblasts, thus demonstrating their utility for future regenerative therapy of DFUs.

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