

Presented By: Dr William J Ennis DO, MBA, MMM; Professor of Surgery University of Illinois at Chicago

**Abstract**

With the aim to improve the outcomes for spinal cord-injured patients undergoing surgery for pressure ulcers, a structured treatment programme regulating pre- and postoperative care and rehabilitation was introduced in 2002 in Stockholm. Fifty-one consecutive patients operated on between 2002 and 2007 were included in a 10-year follow-up to evaluate the programme regarding initial healing results and long-term ulcer and health status. At one month postoperatively, 49 out of 51 (96%) patients were completely healed. Five patients (5/44, 11%) developed recurrent or new ulcers within 3 years of surgery. Two patients were re-operated on (2/44, 5%). Between 3 and 10 years after surgery, 9 patients (9/33, 27%) had a history of recurrent ulcers, and 6 (6/33, 18%) had a history of new ulcers, a total of 15 patients (15/33, 45%). Of these, three needed re-operation (3/33, 9%). The health status values using a visual analogue rating scale were 70 (median) at 3 and 10 years compared with 30 (median) preoperatively. The good initial healing, the low ulcer recurrence rate and the raise in health status indicate the value of a structured treatment programme, especially for the first few postoperative years.
2. A treatment algorithm to identify therapeutic approaches for leg ulcers in patients with sickle cell disease.


Presented By: Dr Igor Altman DO, MBA; Assistant Professor of Surgery, University of Illinois at Chicago

Abstract

Sickle cell leg ulcers (SCLUs) are a common complication of sickle cell disease (SCD). Patients who develop ulcers appear to have a more severe haemolysis-associated vasculopathy than individuals who do not develop them, and manifest other complications such as priapism and pulmonary hypertension.

SCLUs are slow to heal and often recur, affecting both the emotional and physical well-being of patients. Here we summarise what is known about the pathophysiology of SCLUs, describe available treatment options and propose a treatment algorithm.


Presented By: Dr Karen Gellada MD; Fellow, Wound Healing and Tissue Repair, University of Illinois at Chicago

**Abstract**

Innovations in technology are used in managing chronic wounds. Despite the wide range of technologies available, healing of chronic wounds remains variable. In this paper, the authors offer an evidence based approach to the use of technology for diagnosis and management based on the concept of standardised care.
Articles For General Review


Abstract

Management of enterocutaneous fistula represents one of the most protracted and difficult problems in colorectal surgery with substantial morbidity and mortality rates. This article summarizes the current classification systems and successful management protocols, provides an in-depth review of fluid resuscitation, sepsis control, nutrition management, medication management of output quantity, wound care, nonoperative intervention measures, operative timeline, and considerations, and discusses special considerations such as inflammatory bowel disease and enteroatmospheric fistula.
5. The role of radical surgery in the management of CEAP C5/6 and lipodermatosclerosis.

Authors: Martis, G. and R. Laczik. Phlebology, 2016

Abstract

AIM: Analysis of the radical removing of the dermatosclerotic tissues and ulcer(s) with perforator veins dissection as well as local wound and standard compression treatment of CEAP C5/6 stage in a prospective comparative cohort study. Primary endpoint is to compare the results of the one-year follow-up regarding quality of life, vein clinical severity score, and ulcer healing process. Secondary endpoint is the precise presentation of the surgical technique. Tertiary endpoint is to demonstrate the photo-documented results of the postoperative wound treatment protocol.

METHOD: Clinical and statistical comparison of radical surgery versus solely wound care and compression in a cohort of 15 patients in each group (Groups 1, 2). In Group 1, radical removing of the dermatosclerotic pannicule and leg ulcer, perforator vein dissection, great saphenous vein, or small saphenous vein was performed. Quality of life, pain intensity, vein clinical severity score and patients’ load capacity were compared. The tissue oxygen saturation changes were monitored via near infra-red spectroscopy.

RESULTS: Both groups were statistically comparable. Wound healing in the operated group was 100% versus 60% in the second one, the difference was significant, \( p = 0.006 \). The quality of life: 45.33 versus 36.8, \( p < 0.001 \), intensity of leg restless and pain: 2.28 versus 5.3, \( p < 0.001 \), changes of vein clinical severity score: 5.27 versus 20.93, \( p < 0.001 \), changes of tO2sat: 19.00 versus 6.07 in the upper third of the leg \( p < 0.001 \), proved significantly better in group 1 compared to 2. Load capacity was significantly better in group 1 than 2 at the end of the study. The average wound healing time was 113 days in group 1.

CONCLUSION: The radical surgery provides significantly better results, considering quality of life, vein clinical severity score, load capacity than the conservative treatment in this study.
6. Scarless wound healing: finding the right cells and signals.


Abstract

From the moment we are born, every injury to the skin has the potential to form a scar, many of which can impair form and/or function. As such, scar management constitutes a billion-dollar industry. However, effectively promoting scarless wound healing remains an elusive goal. The complex interactions of wound healing contribute to our inability to recapitulate scarless wound repair as it occurs in nature, such as in fetal skin and the oral mucosa. However, many new advances have occurred in recent years, some of which have translated scientific findings from bench to bedside. In vivo lineage tracing has helped establish a variety of novel cellular culprits that may act as key drivers of the fibrotic response. These newly characterized cell populations present further targets for therapeutic intervention, some of which have previously demonstrated promising results in animal models. Here, we discuss several recent studies that identify exciting approaches for diminishing scar formation. Particular attention will also be paid to the canonical Wnt/β-catenin signaling pathway, which plays an important role in both embryogenesis and tissue repair. New insights into the differential effects of Wnt signaling on heterogeneous fibroblast and keratinocyte populations within the skin further demonstrate methods by which wound healing can be redirected to a more fetal scarless phenotype. Graphical abstract Recent approaches to reducing scar formation. Representation showing novel scientific approaches for decreasing scar formation, including the targeting of pro-fibrotic cell populations based on surface molecule expression (e.g. DPP4+ fibroblasts, ADAM12+ pericytes). Modulation of cellular mechanotransduction pathways are another means to reduce scar formation, both at the molecular level or, macroscopically with dressings designed to offload tension, at cutaneous wound sites (ADAM12 a disintegrin and metalloprotease 12, DPP4 dipeptidyl peptidase-4, FAK focal adhesion kinase).
7. Macrophages: A Review of Their Role in Wound Healing and Their Therapeutic Use.


Abstract

Macrophages are mononuclear phagocytes established during embryogenesis and derived from the yolk sac or the fetal liver but also recruited from the blood and bone marrow under proliferative inflammatory conditions (such as tissue repair). Most importantly, they take on distinct phenotypes and functions crucial to healing upon localization in the wound. The objective of this review is to summarize recent findings in regard to the cellular mechanisms of macrophages and chronic wounds. Advances in the potential use of macrophage therapy have arisen based, in part, on the fact that early recruitment of macrophages is critical to wound healing. Higher quality evidence is needed to support the use of macrophage therapy for chronic wound types, as is a better understanding of the signaling related to macrophage polarization, activation of macrophages, and their effect of mechanisms of repair. An evaluation of the currently available research on mechanism of action may lead to a better understanding of the signaling processes of the many macrophage phenotypes, as well as their roles and outcomes in wound healing, which could then guide the development and eventual widespread use of macrophage therapies. This article is protected by copyright. All rights reserved.