A research roundup of recent papers relevant to wound care

This section brings together information found online and published in other journals about wound healing research. The aim is to provide an overview, rather than a detailed critique, of the papers selected.

EFFECT OF NEGATIVE PRESSURE WOUND THERAPY VS STANDARD WOUND MANAGEMENT ON 12-MONTH DISABILITY AMONG ADULTS WITH SEVERE OPEN FRACTURE OF THE LOWER LIMB — THE WOLLF RANDOMIZED CLINICAL TRIAL

Costa ML, Achten J, Bruce J et al (2018) *JAMA* 319(22): 2280–8

This randomised controlled trial (RCT) sought to assess the disability, rate of deep infection, and quality of life in patients with severe open fracture of the lower limb treated with negative pressure wound therapy (NPWT) versus standard dressings applied to the open wound after the first surgical debridement. Open fractures of the lower limb occur when a broken bone penetrates the skin. There can be major complications from these fractures, which can be life-changing. This muticentre randomised trial performed in UK Major trauma centres recruited 460 patients aged 16 or over between 2010–2015, outcome data was collected until November 2016. Patients who presented more than 72 hours after injury were excluded as were those unable to independently complete the questionnaires. NPWT ($n = 226$) in which an open-cell solid foam or gauze was placed over the surface of the wound and connected to a suction pump, creating a partial vacuum over the dressing, versus standard dressings not involving application of negative pressure ($n = 234$). Disability Rating Index score (range, 0 [no disability] to 100 [completely disabled]) at 12 months was the primary outcome measure, with a minimal clinically important difference of 8 points. Secondary outcomes were complications including deep infection and quality of life (score ranged from 1 [best possible] to −0.59 [worst possible]; minimal clinically important difference, 0.08) collected at 3, 6, 9, and 12 months. Of the 460 patients randomised (mean age, 45.3 years; 74% men), 88% (374/427) completed the trial. There were no statistically significant differences in the patients' Disability Rating Index score at 12 months (mean score, 45.5 in the NPWT group versus 42.4 in the standard dressing group; mean difference, −3.9 [95% CI, −8.9 to 1.2]; $p = .13$), in the number of deep surgical site infections (16 [7.1%] in the NPWT group vs 19 [8.1%] in the standard dressing group; difference, 1.0% [95% CI, −4.2% to 6.3%]; P = .64), or in quality of life between groups (difference in EuroQol 5-dimensions questionnaire, 0.02 [95% CI, −0.05 to 0.08]; Short Form–12 Physical Component Score, 0.5 [95% CI, −3.1 to 4.1] and Mental Health Component Score, −0.4 [95% CI, −2.2 to 1.4]).

Implications for Practice

In patients with severe open fracture of the lower limb, use of NPWT compared with standard wound dressing did not improve self-rated disability at 12 months. The deep infection and self-reported quality of life parameters were better in the NPWT group however the difference was not statistically significant. The findings do not support this treatment for severe open fractures. WUK

TOPICAL CANNABIS TO TREAT WOUND PAIN

Maida V, Corban J (2017) *J Pain Symptom Manage* 54(5): 732–6

Any practitioner working in the field of wound care knows only too well the impact wound associated pain can have on their client's quality of life. It triggers social isolation, reduced mobility, sleep deprivation to name but a few of the associated consequences. Wound pain is prevalent, yet it remains an area of significant unmet need within health care. The authors of this paper suggest that whilst systemically

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administered opioids are the mainstay of treatment, that in the light of recent publications which cast opioids in a negative light given their high side effect profile, inhibition of wound healing, and association with frequently fatal accidental overdose, that studies into alternative treatments are warranted and long overdue. The authors suggest that the ideal modalities to relieve wound pain relief are topical, have a lack systemic side effects, are non-invasive, self-administered, and display rapid onset of analgesia. They report that extracts derived from the cannabis plant have been applied to wounds for thousands of years. The discovery of the human endocannabinoid system and its dominant presence throughout the skin provides a valid and logical scientific platform to consider the use of topical cannabinoids for wounds. The paper presents the results of a three patient prospective case series with pyoderma gangrenosum that were treated with topical medical cannabis compounded in nongenetically modified organic sunflower oil. The results suggest that clinically significant analgesia, associated with reduced opioid utilisation in all three cases.

Implications for Practice

The authors conclude that topical medical cannabis has the potential to improve pain management in patients suffering from wounds of all classes. Whilst there undoubtedly needs to be more studies, the introduction of legally available products makes this not only possible but decriminalises its use and enables further UK studies. WUK

BEING MORTAL — ILLNESS, MEDICINE, AND WHAT MATTERS IN THE END

Gwande A (2015) Profile Books — Welcome Collection, London

This powerful and moving book is a must read for any healthcare professional managing frail elderly patients. It urges healthcare professionals to challenge their thinking, suggesting that we are realistic in our suggested treatments to help people live the best life they can by acknowledging that death is an inevitable part of life. The author explores what it is to get old today, social norms, beliefs and values associated with aging. Perhaps surprisingly he advocates that some medical interventions are unwarranted, in that just because we can do something doesn't make it the right thing to do. He provides rationale and uses pertinent examples in order that the reader challenges their own perceptions and perhaps for the first time thinks seriously about their own death. He urges us to help patients make informed decisions about medical treatments, favouring optimisation of health as opposed to interventions. He describes himself as one of the late comers to the world of realistic medicine, none the less his book is accessible to all, sharing lessons that show medicine in a new light, highlighting its limitations and consequences if we medicalise dying to the extent that we lose sight of the simple fact that we all age and will eventually die.

Implications for Practice

The sad fact is that more NHS money is spent on the last six months of people's lives than any other stage, with unhappier results. Atul Gwande argues for a shift away from the medicalisation of mortality towards common sense and kindness. Less intervention, more conversation. Fewer hospital procedures and more hospice-type care, where people are made comfortable and allowed to get on with enjoying life. WUK