Use of a Soft Silicone Wound Contact Layer* to Prevent Procedural Pain at Dressing Changes

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Clinical Problem:

Procedural pain during wound dressing changes are well documented.[1] Procedural pain often requires a two-pronged approach using both pharmacological and non-pharmacological management. Patient often report dressing change procedural pain as the most intense of their wound pain experience.[2] While silicone dressings have been used to reduce wound trauma in the wound bed and surrounding skin, properties vary among the variety of silicone dressings[3], impacting outcomes. Reduction in procedural pain has been reported regarding silicone dressings during dressing changes but primarily in the European literature[1-3] with the US literature focusing on peri-wound trauma effects of silicone dressings and under-appreciating its other qualities.

Treatment Approach:

A soft silicone wound contact layer was applied to the wound bed of patients who rated prior non-soft silicone wound contact layer dressing change procedural pain greater than 8. The patients' usual dressing, aimed at providing optimal wound bed moisture, was then applied immediately over the soft silicone wound contact layer. Usual dressings included: alginates, DACC, NPWT, hypertonic saline, non-adherent dressings, and foams, with and without the use of secondary dressings as indicated. Pain assessments were performed prior to and after dressing changes with the soft silicone wound contact layer.

Clinician/Patient Outcomes:

Patient satisfaction with the use of a soft silicone wound contact layer was very high, with pain reduction over 75%. No pharmacological management was needed by any of the patients for dressing changes. The large fenestrations in the soft silicone wound contact layer allowed for the therapeutic use of the patients' usual dressing. Visit time/cost was reduced as pharmacological intervention was not needed. Wound management goals and healing trajectories were not inhibited by the use of the soft silicone wound contact layer.

Conclusion:

Using a soft silicone wound contact layer can reduce pain during dressing changes without affecting the goals of wound management, while positively impacting patient satisfaction and reducing pharmacological intervention. Additional evaluation comparing specific silicone dressings qualities and its impact are warranted.

*Silflex® Soft Silicone Wound Contact Layer. Distributed by DUKAL Corporation. Manufactured by Advancis Medical

1. World Union of Wound Healing Societies. Principles of best practice: Minimizing pain at wound dressing-related procedures. A consensus document. London: MEP Ltd. 2004.
Available at: http://www.woundsinternational.com/made-easy/view/soft-silicones-made-easy. Accessed: June 18, 2017.
2. Salawiej K, Upton D. Painful dressing changes for chronic wounds: assessment and management. BJN. 2012. Nov 8-21;21(20):20, 22, 24-5.
3. Meuleneire F, Rückriegel H. Soft silicones made easy. Wounds Intl. 2013;(5):1-6. Available at: http://www.woundsinternational.com/made-easy/view/soft-silicones-made-easy. Accessed: June 18, 2017.

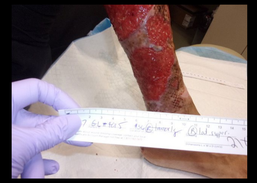
Costs associated with poster presentation have been provided to the author.

Case 1:

Female, 39 Years Old

This 39 year old female patient presented with extremely painful chronically non-healing wounds caused by pyoderma gangrenosum. Past medical history includes Wagners Vasculitis and Lupus.

The patient used a cocktail of medications for pain relief which consisted of MS Contin every 12 hours, Percocet every 4-6 hours, topical lidocaine and EMLA cream with each dressing change. Prior to the use of the soft silicone wound contact layer her dressing consisted of enzymatic debriding agents, petrolatum dressing gauze, silver alginates and more. When her dressing switched to the soft silicone wound contact layer her use of Percocet decreased and she stopped the use of her topical analgesics. As a result of the change to the soft silicone wound contact layer the removal time of her dressings decreased from 50 minutes to 10 minutes and the patient received an overall relief of pain from a 10 out 10 to a 5 out of 10.



Case 2:

Male, 61 Years Old

This 61 Year old male patient was evaluated at the wound care center for a non-healing painful ulceration to his right foot. Past medical history includes spinal muscular atrophy, Lymphedema and frequent cellulitis.

Prior to using the soft silicone wound contact layer, the patient required extensive time soaking in topical analgesics and extra time with the removal of his dressing due to the fragility of his skin and preservation of his new epithelialization. Dressings used prior to the soft silicone wound contact layer included petrolatum dressing gauze, alginates and other ointments. Upon the use of the soft silicone wound contact layer the patient was able to stop using topical analgesics and soaks for the removal of his dressings. The non-adherent nature of the soft silicone wound contact layer also allowed the new epithelialization to remain intact. As a direct result he reported his pain had decreased from 10 out of 10 to 3 out of 10.

Case 3:

Female, 60 Years Old

This 60-year-old female patient presented to the wound care center with chronic non healing wounds of left lower extremity. Past medical history included chronic pain, venous insufficiency and cellulitis.

Dressings used prior to the application of the soft silicone wound contact layer included alginates, absorptive pads, petrolatum dressing gauze, antibacterial dressings and more. The patient was medicating before all wound care visits and in between dressing changes. At each dressing change the patient would also soak in topical analgesics to have the wound cleansed. After application of the soft silicone wound contact layer the patient stopped using systemic pain medication and also decreased the use of her topical analgesics. Most notably the time to remove her dressing decreased from 40 minutes to 10 minutes and her pain upon removing her dressing decreased from 8 out of 10 to 2 out of 10.