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JOINT EVENT

7th International Conference on

Advances in Skin, Wound Care and Tissue Science

&

11th International Conference on **Epidemiology & Public HealthSurgery**

September 25-26, 2019   Copenhagen, Denmark

The use of fish-skin grafts with Omega3 fatty acids in traumatic wounds

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Introduction: Kerecis Omega3 Wound is a fish-skin graft that is homologous to human skin[1] and is used for tissue regeneration.[2] Kerecis Omega3 Wound is FDA indicated for multiple clinical applications.[3]Because there is no risk of a viral-disease transfer from Atlantic cod to humans, the fish skin needs only mild processing for medical use and maintains its natural structure and elements, including Omega3 fatty acids.[3,4] When grafted onto damaged human tissue such as a burn or a wound, the fish-skin graft recruits the body's own cells, supporting the body's own ability to regenerate. [5-7]

Patient History and Treatment: 66 yo female with history of large dog scratch to the lower leg. Pain level was a 9. Wound exhibits a moderate amount of slough and devitalized tissue at the base. There is undermining from 9:00 to 1:00 with deep tracking at 3:00 that measures 4.2 cm deep (Figure 1). Patient was initially treated with 2 weeks of negative pressure wound therapy and serial debridements Once the majority of the wound base was beefy and granular Kerecis was applied. The wound still had an area of tracking that measured 1.1 cm in depth (Figure 2). Fish-skin graft applied to the wound (Figure 3). Wound appearance after one month. Beefy, red granular base. New evidence of epithelial tissue around wound edges. Less depth to lateral margin at 0.4 cm. Pain scale is now a 2 (Figure 4)

Results: Size reduction of wound was over 50% after two months and 2 applications of fish-skin grafts. Pain level went from 9 to 2.

Conclusion: Fish-skin grafts can be used to improve healing in traumatic wounds. The pain reducing properties of the fish-skin due to the presence of Omega3 fatty acids was noted.

1. Initial presentation

2 weeks.

Fig. 3. Application of fish-skin graft at 2 weeks.

Fig. 4. Wound appearance after 1 month and two applications of fish-skin graft.

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Recent Publications:

1. Rakers, S. et al. 'Fish matters': the relevance of fish skin biology to investigative dermatology. Exp. Dermatol. 19, 313–324 (2010).

2. Baldursson, B. T. et al. Healing rate and autoimmune safety of full-thickness wounds treated with fish skin acellular dermal matrix versus porcine small-intestine submucosa: a noninferiority study. Int. J. Low. Extrem. Wounds 14, (2015).

3. Magnusson, S. et al. Decellularized fish skin: characteristics that support tissue repair. Laeknabladid 101, 567–573 (2015).

4. Magnusson, S., Baldursson, B. T., Kjartansson, H., Rolfsson, O. & Sigurjonsson, G. F. Regenerative and Antibacterial Properties of Acellular Fish Skin Grafts and Human Amnion/Chorion Membrane: Implications for Tissue Preservation in Combat Casualty Care. Mil. Med. 182, 383–388 (2017).

5. Kirsner, R. S. et al. Double-Blind, Prospective, Randomized Clinical Trial on 170 Acute Wounds Shows Significantly Faster Healing Rate with Intact Fish Skin Compared to Human Amniotic Membrane. Natl. Am. Podiatr. Med. Assoc. Annu. Sci. Meet. (2018).

Biography

Kimberly Gondos is a Certified Wound, Ostomy RN with over 13 years of experience in nursing and over 8 years of experience in the specialty field of wound care and hyperbaric medicine. She is affiliated with Prime Healthcare Services as Regional Corporate Manager of 8 wound care centers. She earned her BSN from LaSalle University in 2006, became Wound Care certified in 2012, Ostomy certified in 2014, and earned her Master's degree in Nursing Leadership in 2016.

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