FOCUS: SCAR

Interview with Mischa Wiegand, MD Specialist surgeon and specialist for hand surgery



BACKGROUND

A scar is an area of fibrous tissue that replaces normal skin after an injury. Scars result from the biological process of wound repair in the skin. Scar tissue is composed of the same protein (collagen) as the tissue it replaces, but the fiber composition of the protein is different. Instead of the normal, random basket weave formation of the collagen fibers, in fibrosis, the collagen cross-links and forms a pronounced alignment in a single direction¹.

With the exception of very minor lesions, every wound results in some degree of scarring.

The tissue quality of a scar is of lower quality if compared to original skin. The scar quality (functionality and appearance) can be positively influenced during the healing phase but the formation of a scar cannot be completely prevented². The Swiss wound healing product ① **PRIMARY WOUND DRESSING** consists of a specially formulated combination of Neem Oil and St. John's Wort Oil. ① supports the healing phase of the wound as well as the scarring process.

The effectiveness of ① has been proven³⁻⁹. In 2017, the plant-based wound-healing product has received full reimbursement in Switzerland and the UK.

Mischa Wiegand, MD, has tested ① with a special focus on the effect of ① on scarring in more than 50 patients. His main finding is that ① reduces the maturation phase of the scar significantly.

INTERVIEW WITH MISCHA WIEGAND, MD



Dr. med. Mischa Wiegand

Specialist surgeon Specialist for hand surgery

How important are scars and scar care in your daily work?

Dr. Wiegand: Scars are my daily business. A wound that heals fast, with a quick reduction of pain and a high quality scarring are crucial in order to prevent a limitation of functionality. This is of special importance in hand surgery.

Is there a need for more effective therapies or products in scar care?

Dr. Wiegand: Scar care today is dominated by silicone-based products or massage oils. The moisturizing effect of the silicone film and massaging of the scar positively support the healing process. Unfortunately, the typical scar care products can only be applied once the wound has completely healed. Ideally, the scarring process could be supported/influenced already in the early post-surgical phase.

You have treated more than 50 patients with ①. Are you satisfied with the result?

Dr. Wiegand: The results are very satisfying. I observed not only a significant reduction of pain, and post-surgical inflammation, but also a reduction of hardened scar tissue, which resulted in much better mobility. On average, the time for scar maturation was 50% faster compared to my clinical experience with other therapies. The significance of reduction was surprising.

What is the feedback from patients, whose wounds/scars were treated with ①?

Dr. Wiegand: The patient feedback is in-line with my observations. The patients also tell me that the simple application is a big benefit of the product. The fact that the patients can use 1 to improve the wound healing AND to support the scarring process simplifies the post-surgical treatment even further.



"Patient, 14 days following a ring tendon surgery, right hand. Patient is pain free and able to mobilize the hand almost completely. The condition of the scar 14 days post surgery already is far into the maturation phase. I typically see such a condition only after 30 days."

The product ① is primarily a wound-healing product and can hence be applied at the beginning of the wound healing/scaring phase. Typical products for scar care are only applied after the wound is healed. Can the positive clinical effect when using ① be explained by the fact that the product is used early in the scarring phase?

Dr. Wiegand: Definitely. If inflammation, pain and tissue tension can be tackled early, we can expect a superior development of the scar tissue and the patient can start to mobilize the affected area earlier, which results in a very positive overall outcome.

Do you know of other reasons why ① has a positive effect on the functional and cosmetic result of the scar formation?

Dr. Wiegand: ① contains specific plant-based fatty acids. It is known that these specific fatty acids are effective in scar management. These fatty acids can

change the collagen organization and inhibit post-inflammatory mediators^{10, 11}. In addition it is assumed that they serve in the normalization of stratum corneum integrity and development when added to the pool of free fatty acids in the epidermis¹².



"Patient with a "Loge de Guyon" decompression, 14 days post surgery. No relevant scar hardening and only a minor reddening of the skin. The patient is able to move the wrist completely. Scars on the wrist are often problematic. When using ① the results are very satisfying."

In which situations do you use 1 as a surgeon?

Dr. Wiegand: I use (1) on all post-surgical wounds starting on day 2 after surgery.

LITERATURE

- Herrmann K, Trinkkeller U. Dermatologie und Medizinische Kosmetik: Leitfaden für die Kosmetische Praxis Springer-Verlag, 2007, 141.
- 2 Lippert H. Wundatlas Kompendium der komplexen Wundbehandlung, Georg Thieme Verlag, Stuttgart, 2006, 31.
- 3 Hunziker T, Hafner J, Streit M, Lauchli S. Plant-derived wound spray for acute and chronic skin wounds. Wund Management 2012: 06; 270-274.
- 4 Läuchli S, Hafner J., Wehrmann C., French L.E., Hunziker T. Post-surgical scalp wounds with exposed bone treated with a plant-derived wound therapeutic. J of Wound Care. 2012; 21:5,228-233.
- 5 Mainetti S, Carnevali F. An experience with paediatric burn wounds treated with a plant-derived wound therapeutic. Journal of Wound Care 2013; 22, 681 – 689.

- 6 Eggenberger K. A simple wound care protocol for a nursing home – German version published: Eggenberge K. Ein einfaches Wundkonzept für die Langzeitpflege. NOVAcura 2013; 03, 42-43.
- 7 Herzig W, Lenz A. A simple, effective and economical protocol for the treatment of acute and chronic wounds. Results from a 12-months observational study. Abstract EWMA
- 8 Läuchli S, Vannotti S., Hafner J. A plant-derived wound therapeutic for cost-effective treatment of post-surgical scalp wounds with exposed bone. Forsch Komplementmed. 2014; 21:88-93.
- 9 Lenz A., Herrmann B., Illien U., Diener U., Herzig W. Pilonidal sinus wounds: secondary intention healing with a plant-based wound therapeutic. WundManagement 2015;9 (2) 48-53

- 10 Olaitan, P., Chen, I., Norris, J., Feinn, R., Oluwatosin, O. and Reichenberger, E. Inhibitory activities of omega-3 Fatty acids and traditional african remedies on keloid fibroblasts. Wounds 23, 97–106 (2011).
- 11 Sandulache, V., Parekh, A., Li-Korotky, H., Dohar, J. and Hebda, P. Prostaglandin E2 inhibition of keloid fibroblast migration, con- traction, and transforming growth factor (TGF)-beta1-induced collagen synthesis. Wound Repair Regen. 15, 122–133 (2007).
- 12 Kunii, T., Hirao, T., Kikuchi, K. et al. Stra- tum corneum lipid profile and maturation pattern of corneocytes in the outermost layer of fresh scars: the presence of immature corneocytes plays a much more important role in the barrier dys- function than do changes in intercellular lipids. Br. J. Dermatol. 149, 749–756 (2003).