

CLINICAL EFFICACY OF A MONOFILAMENT FIBER DEBRIDEMENT PRODUCT EVALUATED IN PATIENTS WITH SKIN LESIONS, SCALES, RHAGADES AND HYPERKERATOSIS

A van den Wijngaard¹, RN, Wound and Compression Specialist, A. Andriessen², PA, PhD

¹Lohmann & Rauscher, Almere, The Netherlands

²Andriessen Consultants, Malden and UMC St Radboud, Nijmegen, The Netherlands. aneke.a@tiscali.nl

Introduction:

The clinical evaluation looked at debridement efficacy of a mono filament* fibre (DB) product (Fig. 1) when used in patients with skin lesions, erythema, scales, fissures, rhagades and hyperkeratosis.¹⁻³

Material and methods:

Case ascertainment was used, looking at debridement efficacy, time for the procedure, safety of use, patient comfort and users' satisfaction. For debridement the study product* was wetted with saline or polyhexanide and moved over the area for 2-4 minutes, after which the usual dressing regime was applied. Clinical outcome was scored by a trained clinician. Before and after photographs were assessed by one and the same clinician, who was blinded for the treatment given.

Results:

Debridement was shown to be effective in 93.2 % of the DB sessions ($p < 0.01$), while the product remained intact in 95.2 % of sessions. The average time for the session was 2.50 minutes, significantly shorter than with current methods ($p < 0.000$). Visible debris and scales were successfully removed with the debridement product (Fig. 4). Patients reported no pain or discomfort during the debridement procedure.

Case 1:

The 80-year old lady with secondary lymphedema in her right leg had a history of hysterectomy and lymph-node extirpation from her right groin. She presented with significant oedema, hyperkeratosis, scaling and fissures in her right leg and CVI of her left leg. The multiple lesions that were present produced copious exudate. Treatment consisted of debridement with DB* and applying a **tubular compression system (only the first layer: 10 mm Hg). After a single debridement session both the skin and the ulcers were almost completely clean. After two weeks of treatment, patient reported pain was reduced (VAS 3) (Fig: 2a – 2g).

Case 2:

The 61-year old male had chronic lymphedema and ulcers on both legs, which had been present for over three years. He has several comorbidities such as emphysema and respiratory failure. The patient presented with significant oedema, hyperkeratosis, scaling and fissures to both legs. Treatment consisted of a debridement with DB* and the application of light compression (10 mmHg) with a tubular** short stretch compression system, using only the white layer. After one debridement session both skin and ulcers were almost completely clean. After 3 weeks of treatment, oedema and inflammation had significantly decreased. The patient further reported a significant reduction of pain. (Fig: 3a - 3f)

Conclusion :

The results indicated the potential of the monofilament* fibre product to not only provide effective wound debridement, but also to remove scales, fissures, rhagades and hyperkeratosis. This is particularly important in the treatment of patients with lymphedema and venous leg ulcers as well as those with diabetic foot ulcers.

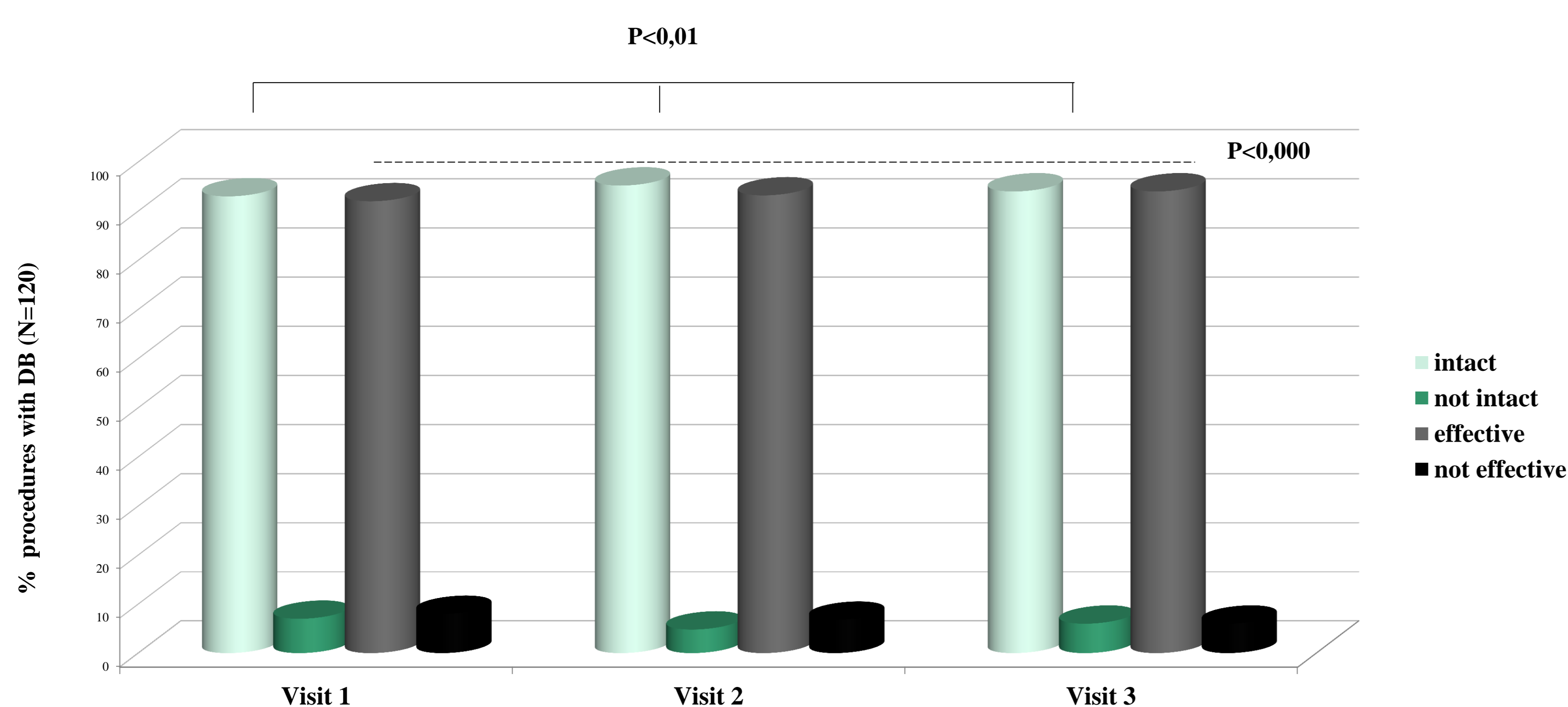


Fig 4: Efficacy of debridement procedures with DB*

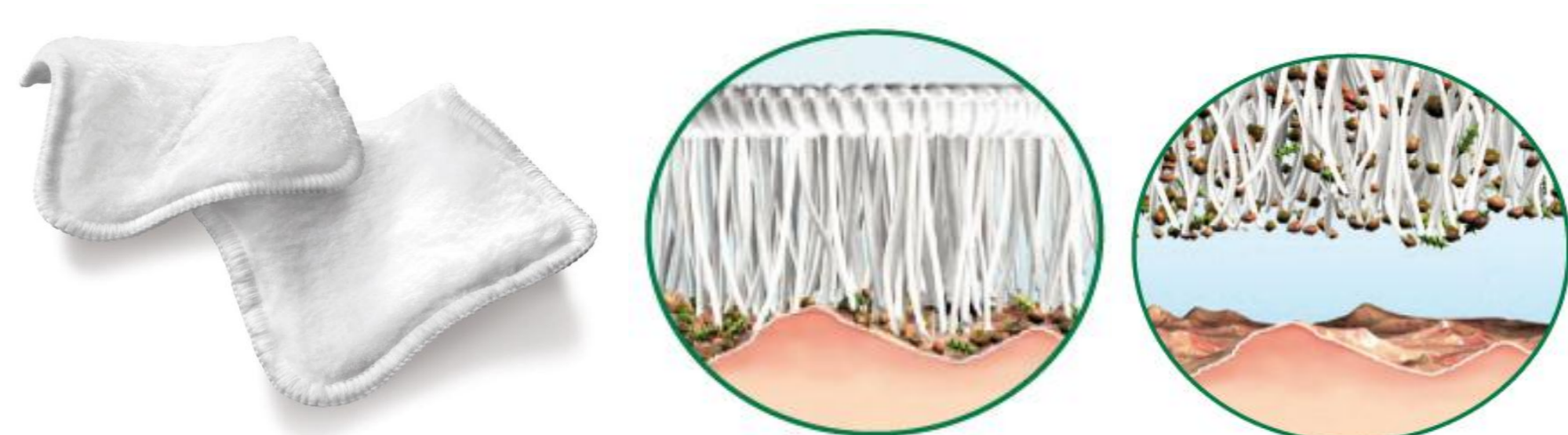


Fig. 1: Debridement with DB* a mono-filament fiber product

Case 1:



Fig. 2a - Fig. 2c: Situation before debridement



Fig. 2d - Fig. 2e: After one debridement session. The bio-cellulose dressing is in situ.



Fig. 2f - Fig. 2g: Secondary foam dressing and compression.

Case 2:



Fig. 3a - Fig. 3b: Left leg before the debridement session



Fig. 3c - Fig. 3d: Left leg after 1 debridement session



Fig. 3e - Fig. 3f: Situation after three debridement sessions

References:

- Haemerle G, Duelli H, Abel M, Strohal R. Br J Nurs. 2011 Mar 24-Apr 14;20(6):S35-6, S38, S40-2.
- S. Bahr, N. Mustafi, P. Hättig, A. Piatkowski, G. Mosti, K. Reimann, M. Abel, V. Dini, J. Restelli, Z. Babadagi-Hardt, F. Abbritti, T. Eberlein, T. Wild, K. Bandl, M. Schmitz. J Wound Care. 2011 May ;20 (5):250-6 21647070