

TWO YEARS OF EXPERIENCE WITH A NEW PRODUCT BASED ON ALOE VERA FOR HYDRATION OF BURN SCARS



AUTHORS: S. Monstrey, MD, PhD, A. Pirayesh, MD, E. Lambrecht, RN
S. Lauwaert, RN, J. Verbelen, RN, MN, H. Hoeksema, RC



INSTITUTE: Department of Plastic & Reconstructive Surgery - Burn Centre,
University Hospital Gent, De Pintelaan 185, 9000 Gent, Belgium



Fig. 1

Introduction: In humans deep dermal burns unfortunately do not heal by regeneration of the damaged skin but by the formation of scar tissue (Fig.1). While the prevention of hypertrophic scars (Fig. 2) with pressure garments and silicone inlays has been widely studied, very little evidence has been published on the optimal skin care after burns. The different structure of scar tissue with the absence of sweat and sebaceous glands results in drier, less elastic and itchy skin. Treatment of these annoying skin problems is of utmost importance for the burn patient. An inquiry in the major European burn centres revealed a plethora of creams and ointments that are used for scar treatment after burns but without any standard therapy. Aruba Aloe Balm (Formula F-BC-096) containing 45% of pure, freshly processed Aruba Aloe Vera gel (Fig. 4) obtained directly from the plant (Fig. 3) was used during the last two years for about 50% of our burn patients. We evaluated the presence of residual defects, elasticity of the skin, subjective feeling of the patient especially itching and ease of use, and the final aesthetic outcome.



Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6

Methods: All treated patients children and adults had skin grafts or burns with a conservative healing time of > 18 days. Patients underwent a treatment regimen with pressure and silicone garments. Patients were asked to moisten the scars with a thin layer of the product 3 times a day. In order to avoid biased results the Balm (Formula F-BC-096) was delivered in blanc white tubes (Fig. 8) and patients were not aware of the composition of the product. Follow up visits including clinical assessment and digital photography of the scar were done on a regular basis for at least one year as usual in our centre. For some patients in which a control product for comparison was used measurements for skin elasticity (*Dermalab*) (Fig. 6) and colour (*DermaSpectrometer*) (Fig. 5) were performed.

Case 1 : Scar formation after surgery

Start with Alhydran®



3 months with Alhydran®



5 months with Alhydran®



Case 2 : Scald

1 day post burn



Start with Alhydran®



1 year with Alhydran®



Results: No allergic reactions related to the product were noticed. In general the aesthetic outcome of patients treated with the Balm (Formula F-BC-096) was better than in patients treated with other moisturizers as scored in the Vancouver Scar Scale. However these are subjective findings, they were confirmed by objective measurements of the Dermalab and DermaSpectrometer in patients where additionally a control product was used. All patients preferred the test product above other products we always used before in our centre. In more than 90% of the patients itching was reduced as they needed less medication and were more comfortable during the day and especially children had a more quiet sleep. Combination possibilities with pressure garments and silicone sheets are outstanding.

Conclusion: After a survey throughout the burn centres of Europe we noticed that there is definitely no standard for hydration of scars and the use of these moisturizers. After two years of excellent results using this new product we think now there is the possibility to set this standard. Till 2007 this product was not distributed outside the Caribbean. In an attempt to make this product available for all patients in Europe a new brand name **Alhydran®** (Fig.7) was chosen for distribution. A prospective, randomized, double blinded, controlled clinical trial of the **Aruba Aloe Balm (Formula F-BC-096)** in the treatment of split thickness donor sites after wound closure is already registered at www.ClinicalTrials.gov and is recruiting patients.



Fig. 7



Fig. 8