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**Technological Advancements in the
Management of Hypertrophic Scar
with Silicone and Pressure Modalities.**

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Technological Advancements in the Management of Hypertrophic Scars with Silicone and Pressure Modalities.¹

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Hypertrophic scars continue to be a common consequence for individuals who suffer a burn injury or other significant trauma to the epidermis. Effective rehabilitation and management of these scars requires a comprehensive approach to healing that incorporates the use of durable silicone materials and modulated pressure therapy to enhance both functional and cosmetic outcomes.¹ At the 2009 John A. Boswick Burn and Wound Care symposium, a poster presentation was given on the clinical rehabilitation experiences utilizing a variety of scar management materials all constructed with a proprietary silicone technology platform (Silon[®]) that allow for enhanced combinations of silicone and pressure to address the demands of hypertrophic scars over the entire body surface.

Pressure therapy has long been a mainstay in the management of hypertrophic scars and more recently, the advances in silicone materials have significantly enhanced the ability of the rehabilitation professional to successfully address diverse hypertrophic scar sequelae.^{1,3} Although the exact mechanism of action still remains elusive, clinical intervention provides significant evidence that the use of these materials reduce the adverse effects of immature scars.^{1,2} More over, evidence has shown that this technology has been able to significantly improve the scar management contact provided by a facial orthosis when compared to a non-silicone lined orthosis.⁴ The objectives of this presentation are to examine the recent history and theory related to pressure and silicone treatments and how they impact hypertrophic burn scar behavior and to discuss technological advancements in silicone materials (Silon[®]) and how these improvements have assisted in the management of difficult scar deformities, particularly those affecting the face and hands.^{2,3} Case presentations will be provided that demonstrate effective minimization of long-term hypertrophic scars and increased functional recovery through the clinical use of these materials as part of a comprehensive scar management practice.

References

1. Van den Kerckhove, E et al. Silicone in the Rehabilitation of Burns: A Review and Overview. *Burns*. 2001; 27:205-214.
2. Mustoe, TA. Evolution of Silicone Therapy and Mechanism of Action in Scar Management. *Aesthetic Plastic Surgery*. 2008; 32:82-92.
3. Bradford BA et al. Silicone Thermoplastic Sheeting for Treatment of Facial Scars: An Improved Technique. *Journal of Prosthodontics*. 1999;8(2):138-141.
4. Allely, RR et al. Laser Doppler Imaging of Cutaneous Blood Flow Through Transparent Face Masks: A Necessary Preamble to Computer-Controlled Rapid Prototyping Fabrication with Submillimeter Precision. *Journal of Burn Care and Research*. 2008; 29(1):42-48.

¹ [abstract] In: Proceedings of the John A. Boswick Burn and Wound Care Symposium; 2009 Feb 16-20; Maui, HI p.83