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**The Use Of A Low Temperature
Silicone Impregnate Splinting Material
In The Management of Anterior
Neck Burn Scar Hypertrophy**

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The Use of a Low Temperature Silicone Impregnated Splinting Material in the Management of Anterior Neck Burn Scar Hypertrophy.¹

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Introduction: Burns to the neck region are often one of the most challenging splinting areas for therapists to effectively manage and inhibit burn scar contracture. Due to the unique mobility of the neck in terms of multiple planes of motion coupled with the presence of delicate underlying structures responsible for swallowing, breathing and circulation, providing a well fitting and effective scar splint can be a daunting task. Additionally, in casting for the fabrication of the device, the change in position (i.e. upright vs. supine) can impact the position of the device as a consequence of gravity and impact the goodness of fit of the splint. As such, the clinician often needs a material that can be readily modified, can be fabricated directly on the patient and combine the therapeutic effects of pressure and silicone in one application to meet the needs of this difficult anatomical region.

Methods: At the 15th congress of the International Society for Burn Injuries, a poster was presented on clinical experiences where patients were treated utilizing a splint comprised of ½ sheet of a silicone impregnated low temperature splinting material (Silon-LTS[®]) and ½ sheet of plain thermoplastic splinting material which was used to fabricate an anterior neck splint. Areas evaluated with the use of this splinting material included: mold ability; ease of direct fabrication; edging/finishing; rigidity, ease of modification and comparison of scar pliability in these two treatment conditions. Range of motion was monitored and this splint was modified to maintain increases in ROM and scar assessment was also evaluated by both patient and clinician.

Results: Splinting management was readily enhanced with the Silon-LTS[®] material. Clinicians found the material easy to work with and easy to mold directly on the patient – which aided in the ability to modify the device more readily in the upright position. Compliance with combination therapy was enhanced and overall scar pliability was improved with the silicone impregnated thermoplastics material with both patient and clinician pre and post assessments.

Conclusions: The silicone impregnated low temperature splinting material (Silon-LTS[®]) is shown to be an effective choice in the management of anterior neck splinting and limiting scar hypertrophy and contracture with a therapeutic splinting program. The durability of this material to be reheated for multiple adjustments and modifications without losing contour or silicone sheeting makes this a cost effective splint choice as well. This new material provides the treating clinician with another viable alternative in the treatment of burn scar contracture splinting and will be a material of choice where the therapeutic combination of pressure and silicone are needed for challenging areas of high potential for scar contracture.

¹ [abstract] In: Proceedings of the 15th Meeting of the International Society for Burn Injuries (ISBI) June 21-25, 2010 Istanbul, Turkey P-172 p.308.

THE USE OF A LOW TEMPERATURE SILICONE IMPREGNATED SPLINTING MATERIAL IN THE MANAGEMENT OF ANTERIOR NECK BURN SCAR HYPERTROPHY



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Introduction:

Burns to the neck region are often one of the most challenging splinting areas for therapists to effectively manage and inhibit burn scar contracture. Due to the unique mobility of the neck in terms of multiple planes of motion coupled with the presence of delicate underlying structures responsible for swallowing, breathing and circulation, providing a well fitting and effective scar splint can be a daunting task. Additionally, in casting for the fabrication of the device, the change in position (i.e. upright vs. supine) can impact the position of the device as a consequence of gravity and impact the goodness of fit of the splint. As such, the clinician often needs a material that can be readily modified, can be fabricated directly on the patient and combine the therapeutic effects of pressure and silicone in one application to meet the needs of this difficult anatomical region.



Patient with Silon-LTS® neck splint in place

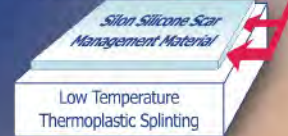
Methods:

Patients were treated utilizing a splint comprised of ½ sheet of a silicone impregnated low temperature splinting material (Silon-LTS®) and ½ sheet of plain thermoplastic splinting material which was used to fabricate an anterior neck splint. Areas evaluated with the use of this splinting material included: mold ability; ease of direct fabrication; edging/finishing; rigidity, ease of modification and comparison of scar pliability in these two treatment conditions. Range of motion was monitored and this splint was modified to maintain increases in ROM and scar assessment was also evaluated by both patient and clinician.

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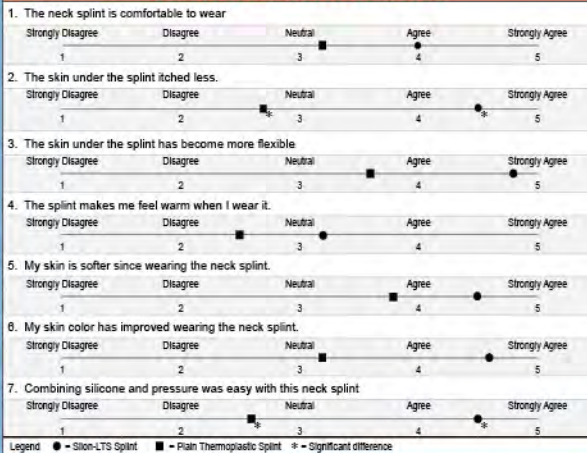
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Permanently Bonded

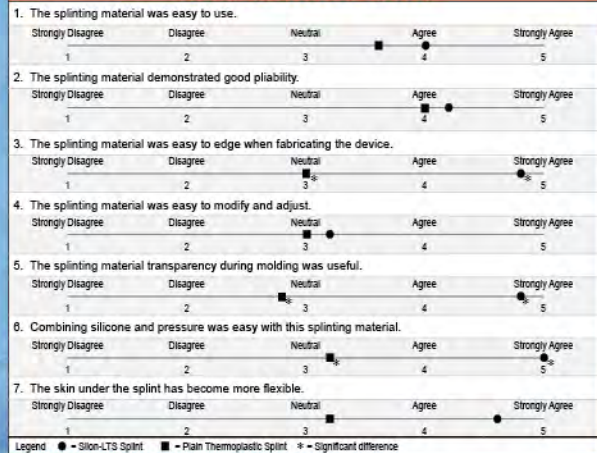


Silon-LTS Composite

PATIENT SELF-ASSESSMENT RESULTS



CLINICAL ASSESSMENT OUTCOME



Final range of motion and scar outcome results



Molding of Silon-LTS® material to neck demonstrating transparency during forming

Conclusions:

The silicone impregnated low temperature splinting material (Silon-LTS®) is shown to be an effective choice in the management of anterior neck splinting and limiting scar hypertrophy and contracture with a therapeutic splinting program. The durability of this material to be reheated for multiple adjustments and modifications without losing contour or silicone sheeting makes this a cost effective splint choice as well. This new material provides the treating clinician with another viable alternative in the treatment of burn scar contracture splinting and will be a material of choice where the therapeutic combination of pressure and silicone are needed for challenging areas of high potential for scar contracture.