A COHESIVE COMPRESSIVE SILICONE BANDAGE VS. SILICONE GEL SHEETS IN THE TREATMENT OF BURN SCARS: FINAL RESULTS OF A RANDOMISED COMPARATIVE STUDY. (060)

*Moortgat P.¹, Anthonissen M.¹,², Meirte J.¹,³, Lafaire C.¹,⁴, De Cuyper L.¹,⁴, Maertens K.¹,⁵

¹ OSCARE, Organisation for Burns, Scar After-care and Research, Antwerp, Belgium
² KU Leuven, Faculty of Kinesiology and Rehabilitation Sciences, Leuven, Belgium
³ University of Antwerp, Rehabilitation Sciences and Physiotherapy, Antwerp, Belgium
⁴ ZNA Stuivenberg, Burn Center, Antwerp, Belgium
⁵ Vrije Universiteit Brussel, Department of Clinical and Lifespan Psychology, Brussels, Belgium

Introduction: Silicone Gel Sheets (SGS) are widely used in the after-care treatment of burn scars, sometimes combined with pressure garments to increase the effectiveness in treating hypertrophic scars. Therefore a cohesive silicone bandage, combining compression and occlusion, was recently developed to treat burn scars on arms, fingers and lower legs. The main objective of this report is to investigate whether this cohesive silicone bandage can outperform SGS in treating scars. This report is part of a larger comparative study.

Methods: The assessment tools used were a Minolta Chromameter® for redness, the DermaLab®USB open chamber evaporimeter for trans-epidermal water loss, the Cutometer® for elasticity and the Patient and Observer Scar Assessment Scale (POSAS) for clinical assessment.

All patients were randomly assigned to a group and treated with pressure garments and moisturisers as prescribed by the treating physician. The intervention group consisted of 28 patients who were additionally treated with the cohesive silicone bandage. The control group consisted of 27 patients who were additionally treated with SGS. The patients were tested at baseline, after one month, three months and six months.

Results: Both groups showed significant improvement in the patient parameters of the POSAS for colour (p<.02), elasticity (p<.0005), texture (p=.032) and global score (p<.01). The intervention group additionally showed a significant improvement for itch (p<.02) and thickness (p<.01). Both groups improved significantly in the observer parameters of the POSAS for vascularity (p<.02), thickness (p<.01), texture (p<.01), elasticity (p<.001) and global score (p<.01). In both groups we observed a significant improvement over time for redness (p<.01) measured by the colorimeter. In the intervention group we observed a statistically significant improvement over time for elasticity, measured with the Cutometer® (p<.0005) and for trans-epidermal water loss (p<.01) while no significant improvement could be detected in the control group.

After comparing both groups, there was a statistically significant difference between the groups in favour of the intervention group for the global score of the POSAS, clinically assessed by the observer (p=.042) and for elasticity measured by the Cutometer® (p=.026).

Conclusion: The cohesive compressive silicone bandage seems to outperform the silicone gel sheet for the global score of the POSAS assessed by the observer and for elasticity measured by the Cutometer®. This might be due to the ability to combine occlusion and pressure with this cohesive silicone bandage, which makes it a valuable addition to occlusion therapy for burn scars on arms, fingers and lower legs.