Introduction

Specialist Clinicians (specifically Occupational Therapists, Physiotherapists and Specialist Nurses) have long been involved in the determining the most appropriate and current interventions to manage hypertrophic and keloid scars. Pressure Garments have been the mainstay in the therapist's choice in treatment options since the early 1970's and continues to be the standard therapy and first line treatment for almost all aspects of problem hypertrophic scarbing and burn injury. Silicone sheets have been used since the early 1990s and continue to be a useful mechanism in the effective management of problem scars and a prominent choice among all clinical disciplines to manage scars.

Advancements in both the manufacturing and technology industries have been able to provide clinicians with unique combinations of garment materials with a silicone bonded textile as well as specific made to measure and gradient pressure garments that accommodate the unique needs of the patient in order to achieve an optimum aesthetic and functional outcome. These advancements have also provided more durable and long lasting treatment options to manage patients' scars. However, a review of the most common treatment interventions and consensus among clinicians preference was lacking in the literature.

A brief questionnaire was piloted in 2007 with two Occupational Therapists within Plastics / Burns Units in the UK. A response rate of 65% was attained and related data is presented graphically (Fig 1):

Demographics

Table 1:

<table>
<thead>
<tr>
<th>Survey Type</th>
<th>Survey Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Survey</td>
<td>69</td>
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<tr>
<td>Survey Size</td>
<td>45</td>
</tr>
<tr>
<td>Response Rate</td>
<td>65%</td>
</tr>
<tr>
<td>Surveys Not Included</td>
<td>4 (x received out of time scale, 2 x insufficient data)</td>
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Table 2:

<table>
<thead>
<tr>
<th>Clinic Type</th>
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<td>Burns &amp; Plastics</td>
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<td>Out Patient Clinic</td>
<td>9</td>
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<tr>
<td>Burns Unit</td>
<td>25</td>
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Table 3:

<table>
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<th>Clinical Centre Type</th>
<th>Clinical Centre Size</th>
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<tbody>
<tr>
<td>National Centres</td>
<td>12</td>
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<tr>
<td>Regional Centres</td>
<td>13</td>
</tr>
<tr>
<td>Satellite Units</td>
<td>18</td>
</tr>
<tr>
<td>Private Hospitals</td>
<td>2</td>
</tr>
</tbody>
</table>

From the group of designated scar management professionals, 96% reported that they used some type of silicone sheeting and 98% reported using pressure garments to treat problem scarring. This was followed by topical silicone gel, silicone elastomer, padding and silicone bonding (Fig 4).

Clinical effectiveness with these particular treatment modalities shows the best outcomes are achieved with silicone gel sheet and pressure garments with all clinicians reporting having used this treatment modality. The use of silicone textile insert material (Silon-TEX) in pressure garments was marginal at 55%, however more half of the Clinicians (64%) could not comment as they had not used it their clinical treatment or were unaware of it (Fig 5).

Jobskin Ltd was the most commonly used provider of custom made pressure garments at these burns/plastics units providing 84% of the garments provided, followed by 16% NHS hospital trusts handling their own in-house production (Fig 6). Clinicians reported favoring commercial manufacturers for quality of garment, service provision and durability of garment. Of the hospitals producing ‘In-House’ who returned a survey reported their reasons were based upon their belief in cost effectiveness and convenience. Of the other scar management modalities utilised, Tubigrip and Interim Care is the most common off the shelf treatment option. Clinicians choice based on selecting a readily available product to allow immediate commencement of treatment (Fig 7).

Figure 3: Standardised assessment verses non standardised

Conclusions

The data findings support the hypothesis that the most common option in the management of hypertrophic and keloid scars used by today's clinicians employs combination therapy (98%) involving an adjunct in the form of silicone sheeting and pressure garments. Interestingly to note that less than half of the clinicians polled used a silicone textile insert (47%) in their pressure garments to achieve their optimal combination therapy treatment (Fig 8). However, this group also reported that almost half (44%) observed that patient compliance increased with the use of pressure garments incorporating silicone textile in comparison to other combination treatments (Fig 9).

This use of combination therapy directly incorporated into the garment essentially eliminates many of the current difficulties associated with topical silicone gel sheets used under garments such as loss of the material, material not staying put on articulating joints and digits, and the material requiring multiple replacements prior to the replacement of the garment during a specified treatment cycle (averaging 4-6 sheets or upwards of 9-12 tubes of material per 3 month garment wear).

Specific follow up will be undertaken with this preliminary data at a select sampling of 3 three centres over a 12 month period examining the impact of the technological advancements in the treatment of hypertrophic and keloid scars employing this combination therapy.

Further investigation is warranted to advance standardised treatment options for problem scarbing and to examine the impact of combination therapy employing pressure garments with silicone textiles on patient compliance and scar management efficacy.

References

• Van den Kerckhove, E; Stappaerts, K; Boeckx, W; Van den Hof, B; Van der Kelen, A & De Cubber, J. (2001) Silicones in the Rehabilitation of Burns: A
• Van den Kerckhove, E; Stappaerts, K; Boeckx, W; Van den Hof, B; Van der Kelen, A & De Cubber, J. (2001) Silicones in the Rehabilitation of Burns: A
• Van den Kerckhove, E; Stappaerts, K; Boeckx, W; Van den Hof, B; Van der Kelen, A & De Cubber, J. (2001) Silicones in the Rehabilitation of Burns: A
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