

Cosmetic quality of scars improves independent of age of scar

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Introduction and methodology:

A clinical study was undertaken involving 36 subjects with scars from surgical procedures, keyhole operations and minor cuts to measure the improvement of scars following a twice daily application of a cosmetic oil product for 8 weeks. Subjects were subdivided into three different groups depending on the age of their scar: <1 year, 1-2 years, 2-3 years. Scar improvement was measured by means of the POSAS methodology. Scars were judged by a single trained assessor and the subject on Days 1, 15, 29 and 57.

Results:

Figure 1 shows a continuous and major improvement in POSAS, PSAS and OSAS over the two-months study period throughout the panel.

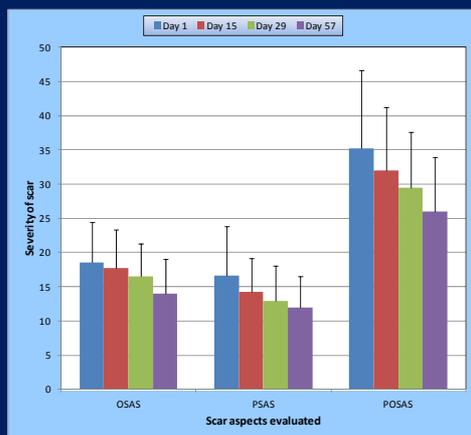


Fig. 1. The twice-daily application of a cosmetic oil statistically significantly improves scar condition as assessed by OSAS, PSAS and POSAS for all possible time-point comparisons ($p = 0.002$ and smaller).

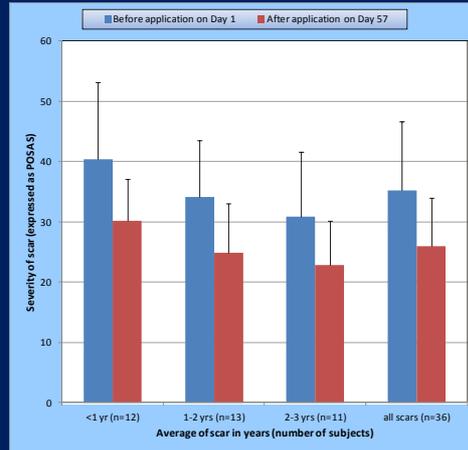


Fig. 2. Severity of scars expressed as POSAS at the start and end of study separated out by age. From the pre-treatment values it can be seen that scars generally improve with time, but that a twice daily application of a cosmetic oil for eight weeks resulted in the same improvement as the passing of 18 months.

This raised the question if the age of scar had an influence on scar improvement. Younger scars had higher baseline POSAS scores than older scars at baseline (40.33, 34.15 and 30.91 for the <1, 1-2 and 2-3 yrs age of scar groups, respectively). After 8 weeks of twice daily application of a cosmetic oil, the POSAS scores were reduced by 10.17, 9.31 and 8.09 for the <1, 1-2 and 2-3 yrs age of scar groups, respectively (see Figure 2).

Discussion:

Although the absolute improvement declined in the older scars, they still improved despite their age. Interestingly, the relative improvement in efficacy for the cosmetic oil was constant irrespective of the age of the scar and approximately 26% in this study.

To investigate whether this improvement was indeed independent of age of scar, individual improvements of POSAS were analysed as shown in Figure 3. Improvements were plotted for all subjects individually and colour-coded by age of scar. No colour clusters could be observed in any of the plots shown, visualising that scar improvement is indeed independent with age, which was also confirmed by statistical analysis.

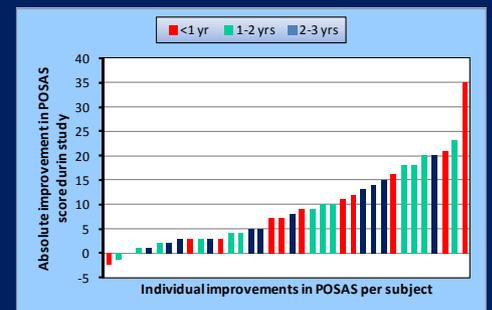


Figure 3 Individual improvements in POSAS colour-coded by the age of scar reveals that improvement is independent of age of scar.

Conclusions:

These observations led to the following conclusions: (1)The cosmetic quality of untreated scars improved measurably as scars get older as demonstrated by their lower average POSAS scores; (2)Even on older scars, the application of a cosmetic oil product significantly improved the cosmetic quality of scars: the improvement was less in absolute terms as scars mature but remained constant in relative terms.