

Non-ablative laser treatment of surgical and acne-induced scars

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Figure 1: Basal cell carcinoma left cheek.



Figure 2: After excision of the tumour, basal and lateral margins were still affected.



Figure 3: After re-excision, tumour free margins were reached.

Scars tell stories of life – almost everyone has at least one. The disappearance of postoperative scars is important to many of our patients. This is particularly indicated for aesthetically dominant areas such as the face, neck and décolleté, but also where there is a known tendency to hypertrophic scar formation, as well as scars that heal under tension (at joints). Nowadays, it is considered standard to start laser therapy of scars at an early stage instead of waiting for the scars to heal. In the early stages we have the optimal chance to perfectly influence the appearance of scars.

The Nordlys™ multifunctional platform from Candela with its modular Selective Waveband Technology® (SWT®) handpieces, the Nd:YAG laser and the two fractional, non-ablative handpieces, the Frax 1940™ and Frax 1550™, allows safe and effective scar therapy.

In the case of fresh, red-livid scars, we start treatment two weeks after surgery with the SWT PR530 handpiece at intervals of four weeks. An accelerated fading of the redness is achieved. Teleangiectasias in the course of the scar, which are particularly typical of scars that tend to hypertrophy, are closed. We observe reduced scar activity with a lower risk of keloid tendency.

In the same session following the SWT treatment, we treat the scar and its surroundings with a circumference of approximately 1cm with the Frax 1550. Depending on the length of the scar and the sensitivity to pain, we perform this under topical anaesthetic cream. Thanks to the thermal columns applied in fractional mode, improved vascularisation is achieved in the scar area and dermal remodelling is supported. Depending on the type of scar, these treatments are carried out with the Frax 1550 alone or in combination with the



Figure 4: Three sessions Frax 1550, two passes 4mm, 50mJ, then one pass 10mm.



Figure 5: Four weeks after three Frax 1550 sessions.

PR 530 at intervals of four weeks. In our experience, silicone gels that patients apply daily between intervals and consistent sun protection are additionally supportive.

In the case of rather coarse to hypertrophic scars, we additionally combine therapy with intralesional triamcinolone injections, which support rapid flattening and flexibility of the scar. Thanks to the rapid visible improvement in the appearance of the scars, patient satisfaction is very high.

In our practice, we treat many teenagers with severe inflammatory acne on the face, which has often left scarred residues on the cheeks, chin and forehead. In addition to systemic isotretinoin therapy, laser treatment is part of our standard treatment. The treatment of the inflammatory lesions with PR 530 causes them to fade quickly. The effect is not only anti-erythematous, but also antibacterial and anti-inflammatory. Because of the deep inflammation, the skin around them often looks very loose, sunken and bowl-shaped scarred. And this is exactly what the Frax 1550 is excellent for, to induce collagen remodelling and to work on the skin texture. Contrary to the former doctrine of waiting until the acne has stopped before treating the scars, we treat all affected areas from the beginning and achieve excellent results in the skin texture.

The compliance of our young acne patients is very high despite discomfort of the treatment, which is reduced with topical anaesthetic cream. Inflammatory lesions disappear within a few days and the skin's appearance improves rapidly. The Nordlys system not only accelerates the healing of acne, but also provides a beautiful, smooth, firm skin appearance after the end of the therapy.

Case 1

A 59-year-old female patient presented with a pale, slightly shiny, rather inconspicuous thickening in the left medial cheek area, which had already been excised 20 years ago and had recently enlarged somewhat (Figure 1). Surgical excision confirmed the suspicion of a sclerodermiform basal cell carcinoma with perineural growth, tumour thickness 1.5mm (Figure 2). The tumour was completely excised and the histological control of the incision margin confirmed that the area was free of tumour (Figure 3).

At just 10 days after surgery we started the scar treatment with Frax 1550 handpiece (Figure 4), 50mJ, 4mm, two passes, scar surrounding with 50mJ, 10mm, one pass. Figure 5 demonstrates the condition four weeks after three Frax 1550 treatments.



Figure 6: Monotherapy with 20mg isotretinoin daily.



Figure 7: Result four weeks after treatment with PR 530 handpiece, 7j/cm², double pulse.

Case 2

A 17-year-old male patient presented with severe inflammatory acne and many bowl-shaped acne scars (Figure 6). He had been on monotherapy with 20mg isotretinoin daily for four months without topical acne treatment. Pre-treatment advisors strictly cautioned him against laser treatments under isotretinoin therapy.

We initially treated him with PR 530 7J, double pulse in the cheek area. There was a very rapid improvement of the erythema and inflammatory lesions. Four weeks later we started the combination of PR 530 with Frax 1550, 50mJ, 10mm, three passes (Figure 7). It was recommended that he had three to four sessions at four-week intervals.

Conclusions

Postoperative scars can be treated very efficiently with the non-ablative Frax 1550. An early postoperative therapy start has a favourable effect on scar healing and the

aesthetic result. In acne treatment, Selective Waveband Technology with the PR 530 handpiece and Frax 1550 are an integral part of the therapy from the beginning. Thanks to the anti-inflammatory and antibacterial effect of the SWT in combination with the dermal remodelling by the Frax 1550, we achieve not only the healing of the acne but also a scar-free skin appearance.

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