

## skinthings

Dr Adrian Lim

coordinated by Dr Stephen Shumack

# Acne scar treatment

Treatments for acne scarring have improved dramatically over recent years.

A 42-YEAR-OLD Asian male presents with moderate acne scarring and requests treatment. The scarring is present on the areas of the face that were previously affected by acne, the cheeks, temples and forehead. How can this man be helped?

## THE PROBLEM

Acne scarring is a difficult management problem. The nature of the scars varies, ranging from shallow, deep, sharp-edged (boxcar), slope-edged (rolling), ice-pick and atrophic to hypertrophic.

Consequently, there are many treatment options addressing the various subtypes of scarring.

## PHYSICAL THERAPY OPTIONS

- Fillers (e.g. hyaluronic acid, autologous fat etc)
- Manual/roller – dermabrasion
- Ablative resurfacing
- Non-ablative resurfacing
- Fractional resurfacing
- Special procedures, e.g. subcision, punch release of boxcar scars, trichloroacetic acid (TCA) ablation of ice-pick scars.

Fillers can give significant short-term improvement for selected well-defined and atrophic scars (usually months). The lack of permanence and therefore cost of recurrent treatments make this option less popular.

Ablative resurfacing using

CO<sub>2</sub> and erbium has largely replaced manual dermabrasion for scar correction. Patients can expect around 50% improvement in the scars from two to three ablative laser resurfacing treatment sessions.

In recent years, the post-procedure downtime (10-14 days) and morbidity (erythema, hyper/hypopigmentation) have limited the demand for traditional full (contiguous) laser resurfacing.

Non-ablative lasers (e.g. the 1450 nm diode, 1320 nm Nd: YAG) may stimulate mild collagen deposition in the acne scars. Multiple treatment sessions are required for only modest improvement.

The recent introduction of a fractional non-ablative laser (1550 nm erbium, Fraxel) has further improved acne scar management. Fractional lasers resurface only a portion of the skin surface (5%-50%), leaving normal intervening skin.

The advantages are minimal downtime with higher efficacy when compared to traditional full (contiguous) resurfacing. High cost and multiple treatment sessions (up to 10) are limitations of non-ablative fractional resurfacing.

Most recently, an ablative erbium fractional resurfacing laser (Sciton ProFractional) has been introduced for acne scars – and may produce more noticeable results in less treatment sessions. A similar fractional CO<sub>2</sub> laser will also be available soon.

Other resurfacing technologies – such as nitrogen plasma non-ablative resurfacing (Rhytec) and a novel 2790 nm non-ablative resurfacing

laser (Cutera) – remain to be assessed for their role in acne scar correction.

## MANAGEMENT

All acne scar patients require a thorough pre-treatment assessment to reach a fully informed treatment plan. The patient has to be off systemic isotretinoin (Roaccutane) for at least six months prior to laser resurfacing.

It is also crucial to manage patient expectations and to outline the approximate number of treatment sessions that may be necessary to reach the proposed endpoint.

In this case, three treatment sessions of fractional erbium resurfacing (Sciton ProFractional) at monthly intervals was proposed, for a 50% improvement. It was important from this patient's perspective that any post-operative morbidity be kept to a minimum. Figures 1-3 show the immediate response to treatment and at 30 minutes and 48 hours later.

The patient was extremely pleased with the improvement after the first treatment, especially as he was able to return to work the next day. Darker-skinned patients will also need to use sun-protection and prophylactic skin bleaching to prevent post-laser, post-inflammatory hyperpigmentation that may result from the laser procedure.

*The author, Dr Adrian Lim, is a fellow of the Australasian College of Dermatologists*

*Dr Stephen Shumack is the Honorary Secretary of the Australasian College of Dermatologists*

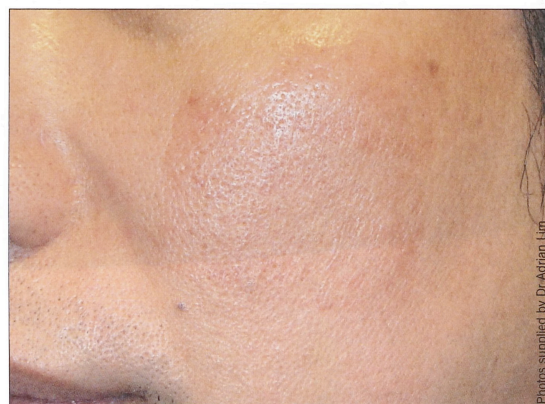


Figure 1 (top). The immediate response to treatment.

Figure 2 (middle). The response 30 minutes later.

Figure 3 (bottom). The response 48 hours later.