



# Case Study: Rejuvenating Male Skin

Pharmacist prescriber Rukhsana Khan and Dr Rita Poddar present a case study on male skin resurfacing using a chemical peel

**Chemical peels are a popular treatment used for skin rejuvenation and can offer successful results for a range of aesthetic concerns.**

In this article we detail the treatment of a 49-year-old male patient (Patient A), who presented to our clinic with a 20-year history of acute and chronic rosacea, extensive acne scarring since his teenage years, uneven skin tone, fine lines and wrinkles, and thread veins (Figures 1, 3, 5). To achieve an overall improvement to Patient A's skin, a deep trichloroacetic (TCA) chemical peel treatment was used. The patient never had any dermal fillers or botulinum toxin procedures performed before, during or after the treatment.

## The consultation

At the first consultation Patient A was examined using a standardised skin classification system,<sup>11</sup> observing colour of the skin, sebum/oil/sebaceous gland activity, skin thickness, skin elasticity and fragility,



Figure 1: Patient before treatment – patient presented with acne scarring, enlarged pores, rosacea, poor texture and uneven skin tone.



Figure 2: Patient after treatment with TCA peel for skin resurfacing

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and epidermis and dermal skin health. In addition, we performed a clinical examination of Patient A's acne scarring, thread veins and pore appearance, before discussing with him the treatment options available at our clinic, which included both chemical peels and laser treatment. We then advised Patient A of what each procedure entails, the cost, the results that might be achieved, as well as the side effects and potential complications involved in both. Ensuring that the patient has a thorough understanding of their treatment options helps them decide which they will be most comfortable with and reduces the chance of dissatisfaction following treatment, which is beneficial to both the patient and the practitioner. As recommended by the General Medical Council, it is important to give the patient a cooling-off period before they undergo any non-surgical or surgical procedure, so Patient A was advised to carefully consider the options before treatment begun and consent forms were signed.<sup>14</sup>

## Treatment selection

The patient's clinical indications justified the use of a deep chemical peel to correct his skin concerns. The acne scarring and textural damage involved both the epidermis and dermis, so to correct this a peeling agent with the ability to reach the intermediate reticular dermis was required. A 26% TCA controlled depth peel was recommended and, as detailed above, Patient A was thoroughly informed of what the treatment would entail. The use of a TCA-based chemical peel is well documented as an effective and controllable peel solution, and is self neutralising.<sup>9</sup> When applied to the skin, TCA causes localised cell destruction, leading to exfoliation of the damaged layers of skin cells.<sup>10</sup> TCA has the benefit to be used as a stand alone or combination peel solution with other chemical peel solutions including lactic, glycolic and citric acid. TCA can further be used to perform very superficial peels using a 5% solution, while a peel to the stratum spinosum can be achieved using a 10% TCA solution. The papillary dermis is reached through using a 15% or 20% TCA solution, while the upper reticular and intermediate reticular dermis can be reached with a 26% or 30% TCA solution. Applying multiple layers of each of these percentage TCA solutions further increases penetration. This characteristic and particular properties of TCA allows for the solution to be absorbed and self-neutralised and further penetration of the solution is inhibited. Applying additional layers will allow the solution to then penetrate to the following layers, making it possible for the clinician to control the solution penetration to a required layer in the epidermis and dermis.<sup>9,10</sup>

## Skin preparation

To prepare the skin for the deep peel, Patient A was instructed to follow a 12-week skincare routine prior to treatment. The aim of adopting this routine was to optimise basal layer stem cell turnover (mitosis) to ensure the successful repair of the skin after the peel procedure,<sup>4</sup> to promote dermal collagen formation<sup>5</sup> and to prevent the occurrence of post-inflammatory hyperpigmentation (PIH) following the chemical peel.<sup>6</sup>

Home skincare routine:

- An exfoliating wash twice daily
- Exfoliating scrub treatment on alternate days
- Oil reduction and prevention treatment once daily
- Glycolic and lactic acid complex exfoliator twice daily
- A skin bleaching and pigment correcting cream containing 4% hydroquinone
- Additional skin lightening and blending cream containing 4%



FIGURE 3: Patient before treatment presenting with thin epidermis/dermis, wrinkles and lines



FIGURE 4: Patient A six weeks after TCA peel displaying epidermal/dermal correction and wrinkle and line reduction

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- hydroquinone to be used with tretinoin twice daily
- Tretinoin 0.1% to optimise mitosis and skin cell turnover twice daily
- A sunscreen and primer with SPF 30 in the morning
- An at-home peel cream can be applied during the skin preparation period to escalate exfoliation
- A calming and hydrating treatment cream to use during the day when the skin feels very dry or when required

Our chosen skincare range was the ZO Skin Health and MD products, however other products that have similar properties can be used instead. We would advise that whichever products a practitioner chooses to use, they get thorough training in their properties, mechanism of action and use to ensure that they offer the safest and most successful treatments to patients. During the 12-week preparation period, clinical signs of redness, dry and exfoliating skin are an eminent part of the skin rejuvenation process, with the increased cell turnover and effects of the tretinoin taking place.<sup>8</sup> Patient A was consulted with every four weeks in clinic and images were taken to monitor his progress and ensure optimal preparation of his skin before the peel was achieved. The patient noted that while the preparation phase was, at first, time consuming and took commitment, it soon became an easy morning and evening routine.

## Treatment

The skin preparation phase was stopped five days prior to the procedure to allow the epidermal barrier function and layers of skin cells optimal health and function. Local anaesthetic facial nerve blocks were used to ensure a fairly comfortable experience for Patient A, who explained that he experienced an intense heat sensation with very little pain and discomfort. A 26% TCA controlled depth chemical peel was performed, observing specific clinical depth signs during the procedure to ensure a successful outcome post procedure. The peel was applied following the

manufacturer's instructions and in compliance with optimal training in procedure technique for a safe treatment.<sup>9</sup> As mentioned, TCA is self-neutralised so the peel does not have to be washed off or neutralised. The peel aimed to reach the intermediate reticular dermis in specific areas of concern to optimise clinical outcome, by activating dermal fibroblast reaction to induce active collagen and elastin production to tighten the skin and correct deep acne scars.<sup>3,6,7</sup>

## Side effects and potential complications

All resurfacing treatments, including ablative, non-ablative and deep chemical peels are associated with substantial down time of five to 11 days for the epidermis to recover.<sup>9,10,11</sup> In this case the recovery time was nine days. Complications associated with chemical peels can include post-inflammatory hyper and hypopigmentation, infection and, rarely, scarring (only if the deep dermal layers were involved).<sup>13</sup>



FIGURE 5: Patient A before treatment



FIGURE 6: Patient A six weeks after treatment

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## Recovery

Peeling following TCA treatment generally takes nine to 11 days for this specific peel solution as per the manufacturer's advice<sup>3,9,11</sup> and patients can expect extensive peeling over the first three to seven days after the peel, with some mild redness, pain and discomfort experienced in the first three days. As long as preparation of the skin was well executed, according to the guidelines prescribed for this particular peel, the procedure has a low complication and risk profile due to the fact that the stratum basale cell turnover has been optimised using tretinoin.<sup>14</sup> The preparation before the procedure aims to minimise redness, optimise quick skin recovery and prevent rebound pigmentation risks. It is important that aftercare is structured and followed through by the patient, under supervision of the practitioner. Patient A's aftercare advice included the continued use of post-procedure skincare products for six weeks. The patient started a standardised maintenance skincare programme after this period.

## Results

Patient A's results were immediately visible with significant and visible improvement to his concerns. Specific improvement of acne scarring, rosacea, textural damage, enlarged pores, lines and wrinkles were documented (Figures 2, 4, 6). To further optimise results, an ablative or non-ablative laser resurfacing procedure can be performed directly after applying the last coating of this specific TCA-based peel. In addition, the clinical results achieved in this case could be further enhanced by a repeat of the same TCA peel or similar after 9-12 months.<sup>8</sup>

## Conclusion

This case study supports the findings of similar studies that TCA as a peeling solution can be effective for the treatment of extensive acne scarring, rosacea, structural epidermal and dermal skin damage, large pores and to improve general skin health and aesthetic appearance.<sup>3,7,8,9,10</sup> The use of a trusted skin classification system and skin conditioning creams for a specific period of time is essential to reduce any possible complications associated with chemical peel procedures.<sup>10,12,13</sup> In line with the Health Education England (HEE) recommendations for practitioners to perform aesthetic treatments in a safe, professional and accountable way, we advise that practitioners have Level 6 and 7 qualifications and receive certification to perform advanced skin rejuvenation treatments using TCA peels.<sup>12</sup>



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**Dr Rita Poddar** is a dental surgeon, multiple clinic owner and an aesthetic practitioner. She has a special interest in non-surgical antiageing, cosmetic dermatology skincare and performing TCA peels.

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