A COMBINATION PROTOCOL *for advanced photoageing with concurrent actinic keratosis*

Dr Tina Bani explores combines Radiofrequency Microneedling and Fractional Thulium Laser to treat photoageing with concurrent actinic keratosis for a 70-year old female patient

Patient: 70-year-old female
Concern: Facial skin ageing, pigmentation, skin laxity and actinic keratosis
Treatment: RF Microneedling with exosomes and polynucleotide injections
Timeline: 8 months

DR TINA BANI



Dr Tina Bani is a GP with 10 years' experience specialising in aesthetic medicine. Alongside her aesthetic practice, she continues to work as an NHS GP, bringing a medical approach to skin health, ageing and overall wellbeing. Dr Tina graduated from the University of Liverpool Medical School in 2013 before specialising in General Practice. She later completed an MSc in Aesthetic Medicine and Skin Ageing at the University of Manchester. She is the founder and medical director of Skiin, a doctor-led medical aesthetics and skin health clinic in Manchester's Northern Quarter, where she leads a team of four.

INTRODUCTION

A 70-year-old female presented seeking treatment for advanced facial skin ageing, pigmentation and skin laxity. She had worked as a physical education teacher throughout her career and reported spending approximately 40 years outdoors on a daily basis with prolonged ultraviolet (UV) exposure.

During this period, she had not routinely used sunscreen or adopted regular photoprotective measures.

She was Fitzpatrick skin phototype I, placing her at high risk of cumulative UV-induced skin damage. Although otherwise fit and well, clinical examination demonstrated signs of accelerated cutaneous ageing that were disproportionate to her chronological age.

CLINICAL CONCERNS

Assessment revealed extensive photodamage characterised by diffuse dyschromia, solar lentigines, coarse skin texture, static rhytids and mild-to-moderate skin laxity affecting the face. Overall photoaging was consistent with Glogau Type IV. In addition, a well-defined hyperkeratotic lesion was identified on the left forehead, clinically consistent with an Olsen Grade II actinic keratosis (AK).

The patient was counselled regarding the cumulative effects of chronic UV exposure and the importance of ongoing photoprotection. A broad-spectrum SPF50 sunscreen was recommended together with strict sun avoidance strategies, including the use of protective clothing and hats during outdoor activities. Given the presence of an actinic keratosis, she was referred to her dermatologist for assessment.

MULTIMODAL TREATMENT APPROACH

Following clinical review, the diagnosis was confirmed and approval was provided to proceed with treatment using the Lutronic LaseMD Ultra fractional thulium laser. The LaseMD Ultra has United States Food and Drug Administration (FDA) clearance for the treatment of actinic keratoses.

A multimodal treatment approach was selected to address the patient's concurrent concerns of advanced photoageing, skin laxity and actinic keratosis.

Device stacking was chosen to maximise collagen remodelling while simultaneously improving epidermal photodamage.

Radiofrequency microneedling was performed using the Lynton Laser Focus Dual. Treatment parameters consisted of a needle depth of 0.8 mm with radiofrequency level 4 for the forehead, periorbital region, nose and neck, and 1.0 mm depth with radiofrequency level 5 for the cheeks to account for regional differences in skin thickness.

Immediately following radiofrequency microneedling, fractional thulium laser resurfacing was performed using the Lutronic LaseMD Ultra. Topical vitamin A was applied following laser treatment to enhance transepidermal delivery through the laser-generated microchannels.

The patient underwent a total of six LaseMD Ultra treatments at two-week intervals to target the actinic keratosis and diffuse photodamage. Alternate treatment sessions incorporated full