PHOTOTHERAPY, PHOTODYNAMIC THERAPY

TREATMENT OF DISSEMINATED SUPERFICIAL ACTINIC POROKERATOSIS: REPORT OF 2 SUCCESSFUL CASES USING PHOTODYNAMIC THERAPY AND PRE-TREATMENT WITH 5-FLUOROURACIL AND TAZAROTENE

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Background: Disseminated superficial actinic porokeratosis (DSAP), the most common clinical variant of porokeratosis, is characterized by widespread papules and annular plaques with a pathognomonic “railroad track” scaly border and an atrophic centre (Ross et al., 2016). Several treatments have been tried for DSAP with limited success. These include vitamin D3 analogues, 5-fluorouracil, retinoids, lasers, and light therapy (Skupsky, 2012; Aird et al., 2017). Photodynamic therapy (PDT) involves activation of a photosensitizer within keratinocytes by visible light spectrum to destroy precancerous and cancerous tissue. Monotherapy with PDT for DSAP has yielded mixed results.

Observation: Two otherwise healthy caucasian female patients presented with DSAP on the extremities and requested treatment for symptomatic and cosmetic purposes. Topical 5-fluorouracil 5% cream was applied once daily for three weeks and tazarotene 0.05% gel once daily for one week; both were applied prior to PDT. Light curettage was performed before a mean 3.5 hour incubation time for methyl aminolevulinate (MAL; METVIX), and subsequent activation with red light for nine minutes and 37 seconds at 37 joules (Aktilite). Both patients were treated twice with PDT one month apart: Patient #1 to the thighs and legs and patient #2 to the legs. In both patients, a reduction of approximately 50% of the number of DSAP papules and plaques was observed, and remaining areas were smooth to palpation after one-month follow-up. Both patients reported significant improvement of subjective pruritus and scaliness of the skin in the treated areas, with acceptable pain tolerance during the procedure.

Key Message: As demonstrated by our two patients, PDT in combination with pre-treatment application of topical 5-fluorouracil and tazarotene is a safe and effective treatment option for DSAP, which is often treatment refractory. This combination is also associated with good patient satisfaction. Prospective randomized control trials to confirm this observation are indicated.