Photochemotherapy plus Squaric Acid Dibutylester in Alopecia areata Treatment

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Sir,
The treatment in the extensive and long-lasting forms of alopecia areata is often frustrating. The association of more therapies for alopec-

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chlorobenzene) has already been tried for vitiligo [5], a disease associated with alopecia.
With 2% SADBE, we sensitized 3 women, suffering from alopecia universalis and aged 22, 39
and 63 years, and treated them with 0.6 mg/kg of 8-methoxypsoralen per os, 2 h before total
body exposure to the UVA of a PUVA 6000 Waldmann lamp, and with weekly applications of
SADBE on the left side of the head at a concentration sufficient to keep a mild level of erythema
(0.001, 0.5 and 0.01%, respectively) [6]. The application of SADBE was done at least 24 h
before and after PUVA treatment. Two or three sessions of PUVA were carried out weekly up to
a maximum of 60 sessions when the treatment was suspended for the evaluation of results.
The youngest woman with the common type of alopecia [7] responded best of all (better on the
right side with only PUVA, fig. 1, than on the left side with PUVA + SADBE, fig. 2). The
middle-aged woman, with the common type of alopecia [7], had a diffuse and scantly hair
regrowth on both sides without any difference. The oldest one, with the combined type of
alopecia [7], failed to respond.
In conclusion, the combination of the two treatments is not suitable, because it does not work
better than each therapy alone. Instead, in 1 case, the two associated therapies showed an
impaired efficacy, because of the inhibition of the SADBE action by PUVA or because of a
reduced PUVA efficacy due to SADBE.
The first hypothesis would be more understandable with a prevalence of the inhibitory effect of
PUVA. In effect this is known to contrast the induction and elicitation of allergic contact
dermatitis, because it impairs the Langerhans cells [8, 9] (even if some orders of suppressor cells
could be activated also independently from Langerhans cells [10]) and probably because it gives
a systemic immunosuppression [11], similarly to UVB irradiation [12], through a direct or
indirect (via interleukin-1) stimulation of prostaglandins (PGE2) with the effect of an efferent
lymphatic blockade [8].
However, in our case it is more likely that SADBE contrasts PUVA efficacy, but further
investigations are needed to clarify the underlying mechanisms.
References
Alopecia areata has already been experienced: thymopentin plus squaric acid dibutylester [1],
minoxidil plus anthralin [V.C. Fiedler, pers. commun.], on the basis that more drugs with
different mechanisms for promoting hair regrowth might display a synergistic effect and thereby provide enhanced cosmetic results. Therefore we combined photochemotherapy (PUVA) with squaric acid dibutylester (SADBE). The rationale is in the fact that PUVA blocks T helper lymphocytes [2], while SADBE is supposed to stimulate the T suppressor lymphocytes [3]. Furthermore, PUVA is reported to recall T suppressor lymphocytes into the alopecic area [3] similarly to topical immunomodulators [4]. Moreover, an association of PUVA and a topical allergen (dinitro-