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ORIGINAL ARTICLE

Five-year experience in the treatment of alopecia areata with DPC

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Abstract

Background The effectiveness of Diphencyprone (DPC) in alopecia areata (AA) was demonstrated in several studies with highly variable response rates ranging from 5% to 85%.

Objective The response rate and variable factors affecting the prognosis were studied focusing on long-term follow-up with or without maintenance therapy.

Methods A total of 135 cases of AA were treated with DPC. Patients were divided into five groups according to the area of scalp affected: Grade 1 AA: 25–49% scalp affection; Grade 2 AA: 50–74% scalp affection; Grade 3 AA: 75–99% scalp affection; alopecia totalis and alopecia universalis. An initial response was defined as appearance of new terminal hair within treated sites. Excellent response was defined as terminal hair covering >75% of the scalp. Relapse meant >25% hair loss. Maintenance therapy meant ongoing therapy once every 1–4 weeks after excellent response. Follow-up was performed to detect any relapse of AA.

Results Ninety-seven patients continued therapy for ≥3 months. After an initial 3 month lag, cumulative excellent response was seen in 15 patients (15.4%), 47 patients (48.5%), 51 patients (52.6%) and 55 patients (55.7%) after 6, 12, 18 and 24 months respectively in a mean median time of 12 months. The only patient variable affecting the prognosis was baseline extent of AA. Excellent response was seen in 100%, 77%, 54%, 50% and 41% in Grade 1, Grade 2, Grade 3, AA totalis and AA universalis patients respectively. Side-effects were few and tolerable. Hair fall >25% occurred in 17.9% of patients on maintenance and 57.1% of patients without maintenance therapy (*P*-value = 0.025).

Conclusion Diphencyprone is an effective and safe treatment of extensive AA. A long period of therapy is needed and will increase the percentage of responders especially in alopecia totalis and universalis. Maintenance therapy is recommended to reduce the risk of relapse.

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Keywords

alopecia areata, Diphencyprone, immunotherapy, long-term follow-up

Conflict of interest

None declared

Introduction

TOPICAL immunotherapy was first introduced as a treatment for alopecia areata (AA) in 1978 in two patients treated with dinitrochlorobenzene.[1] Squaric acid dibutylester[2–4] and diphencyprone[5–9] have since been used extensively as contact sensitizers for AA.

Diphencyprone (DPC) is a non-mutagenic chemical substance with a high sensitization potency, which does not react with other contact allergens.[10] Its effectiveness in AA has been demonstrated in several studies with highly variable response rates ranging from 5% to 85%,[11–16] which has led to considerable confusion surrounding its therapeutic value and efficacy. In this work, the response rate as well as the variable factors that affect the prognosis was studied. We also focused on long-term follow-up of this large group of patients with or without maintenance therapy to further assess the impact of maintenance therapy in avoiding high relapse rate mentioned in previously published data.

Patients and methods

One hundred and thirty-five cases of AA (78 males and 57 females) were treated with topical DPC between January 2003 and June 2008 in this open labelled clinical study. Inclusion criteria included >25% scalp involvement by AA and interruption of any topical or systemic AA therapy for at least 6 months. Exclusion