ALOPECIA TOTALIS TREATED WITH ORAL MINI-PULSE (OMP) THERAPY WITH BETAMETHASONE

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An 8-year-old girl having alopecia areata which progressed to alopecia totalis in 1½ years showed an incomplete regrowth of the hair when treated with our standard regime of 1 mg betamethasone per day orally in spite of the treatment having been continued for 8 months. She had also increased her body weight by 4 kg during this period. On instituting the OMP regime consisting of 5 mg betamethasone as a single oral dose with breakfast on two consecutive days per week, she showed complete regrowth of the hair over the entire scalp during the next 3 months, and there were no side effects. We recommend OMP as another choice for patients having alopecia areata especially in recalcitrant cases where the treatment has to be given for prolonged periods.

Key Words : Alopecia totalis, Betamethasone, Oral mini-pulse regime, Treatment

Introduction

A large variety of therapeutic modalities have been suggested for the treatment of alopecia areata which include, (1) topical immunotherapy with contact sensitizers such as dinitrochlorobenzene (DNCB), squaric acid dibutyl ester (SADBE) and diphenylcyclopropenone (DPCP); (2) systemic immunotherapy with inosiplex, thymopentin or cyclosporine; (3) contact irritant therapy with anthralin, nitrogen mustard or minoxidil; (4) photochemotherapy with PUVA; and (5) topical, intralesional or systemic corticosteroids.[1-3] Each of these modalities have their limitations, but most workers agree that systemic corticosteroids are the most effective mode of treatment.[1,4]

Different dermatologists have used different treatment schedules and recorded varied results. In our experience,[4] betamethasone used in dose of 1 mg per day for a child and 1.5 mg per day for an adult given as single oral dose after breakfast for a period of 2-3 months and progressively reduced over the next 3-6 months has been effective in almost all the patients unless the treatment has been delayed for too long. The side effects usually observed with this treatment schedule include weight gain, cushingoid features, acne, stria atrophicans and hirsutism, but even though every patient does not develop all the side effects and most of the side effects are reversible or inconsequential, many patients and some dermatologists hesitate to use corticosteroids for alopecia areata. Moreover, a small percentage of the patients are likely to have a relapse when the corticosteroids are withdrawn. Such patients require another course of treatment or a low dose of corticosteroids for a prolonged period leading to an increased tendency for having the side effects.

For the last few years, we have been experimenting with a new therapeutic regime called oral mini-pulse (OMP) therapy for reducing the side effects of corticosteroids. The OMP regime had been primarily designed by us for treating patients having fast-spreading/extensive vitiligo to achieve the therapeutic results with the minimum of side effects.[5] We are reporting

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a patient having alopecia areata who showed an inadequate response to the standard low daily dose regime, but developed a complete regrowth of hair on instituting the oral mini-pulse (OMP) regime.

Case Report

In February 1993, an 8-year old girl noticed a patch of alopecia on her scalp. The skin in this area was normal and there were no symptoms. During the next 1½ years the patch continued to increase in extent till all the hairs on the scalp were lost. She had not taken any treatment during this period.

When first seen by us in August 1994, the hair over the entire scalp had been lost (Fig.1) but those on the rest of the body including the eyebrows and the eyelashes were normal. Skin over the scalp showed no evidence of inflammation, scarring or atrophy. The patient was otherwise quite normal, there was no history of having taken any drugs and there was no evidence of any associated disease.

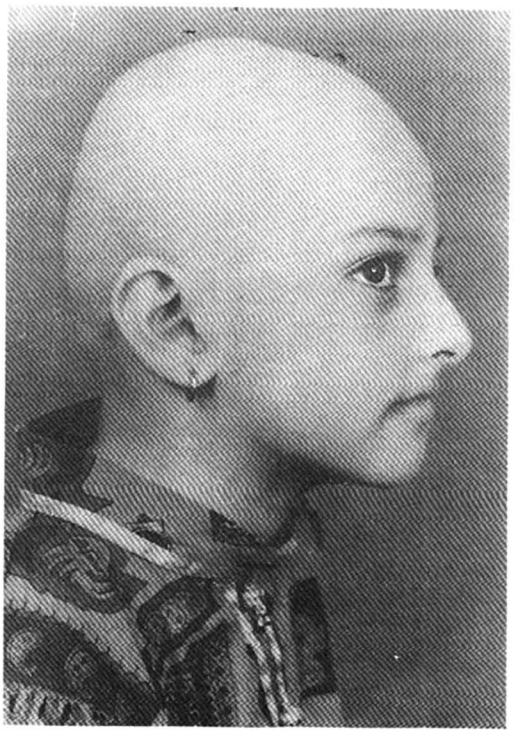

Fig. 1. Alopecia totalis before treatment.

We started her treatment with 1 mg of betamethasone given as a single oral dose after breakfast per day, but over the next 8 months, there was only a sparse regrowth of hair (Fig.2). Her body weight during this period had increased by 4 kg. In April 1995, we changed her treatment to the oral mini-pulse (OMP) regime giving her 5 mg (10 tablets of 0.5 mg each) of betamethasone as a single oral dose after breakfast on two consecutive days per week. During the next 3 months, there was a rapid growth of hair all over the scalp (Fig.3), but there were no

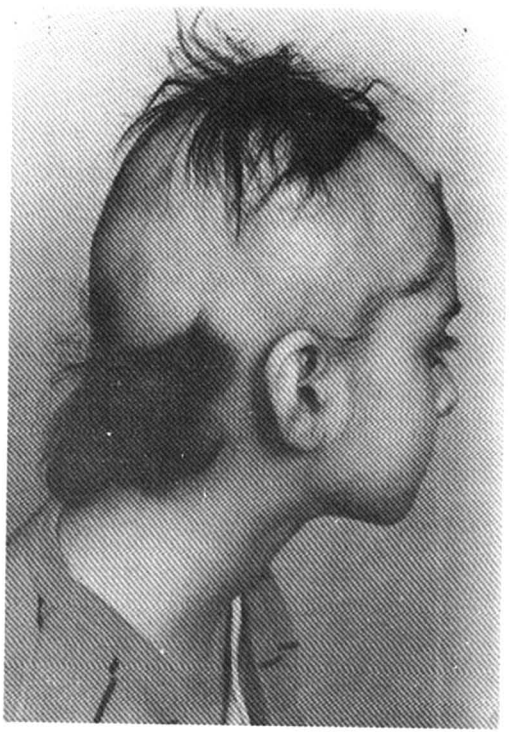

Fig. 2. Incomplete growth of hair following 1 mg betamethasone per day given for 8 months.

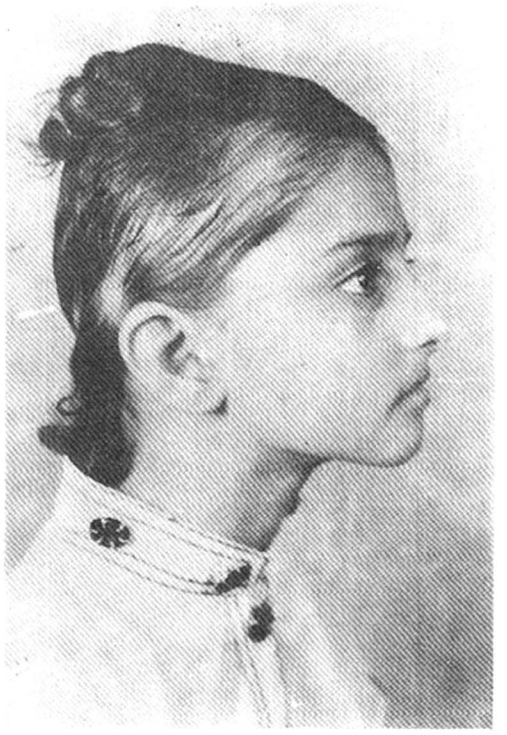

Fig. 3. Complete regrowth of hair following 5 mg betamethasone given on two consecutive days per week (OMP) for 3 months.

side effects commonly noticed with the daily dose regimes. The body weight was maintained, the height continued to increase and there was no evidence of hirsutism, striae atrophicans, acne or cushingoid obesity.

Discussion

Patients having alopecia areata can be broadly classified into two categories.[4] In the vast majority of the cases, the disease runs a self-limiting course. The disease in such cases starts with one or a few areas of hair loss from the scalp or any other hairy area of the body, the patches increase in extent during the first 2-4 weeks, but subsequently the patches become static and within the next 3-6 months the hairs start regrowing even without any treatment. In the second category of the patients, the disease runs a progressive course; these cases also start with only a few patches of hair loss but these areas continue to increase in number and extent and tend to change to alopecia totalis or universalis.

The stimulus for the loss of hair in the first category of patients is not known but it is obviously transitory and self-limiting, while in the second category of patients there is recent evidence that autoimmune mechanisms play a significant role.[6,7] In our patient, the progressive nature of alopeica areata during the first 1.5 years and extensive involvement of the scalp suggest that this patient belonged to the second category.

Treatment in a patient having alopecia areata is indicated only if the lesions continue to increase in size and/or number or if there is no regrowth of the hair spontaneously even after 3-6 months of the onset of alopecia.[4] With the low daily dose regime used by us, the lesions stop extending further as soon as the treatment is initiated and the hairs can be seen regrowing within 1-2 months. It is however necessary to continue this dose for at least 3 months because otherwise the hairs may start falling all over again. Once the growth of the hair is adequate, the dose of corticosteroids can be progressively reduced over the next 3-6 months. Most patients respond to this low daily dose regime used by us, but in this patient, the response to the daily dose regime was not adequate. On some previous occasions, we have used the dexamethasone pulse therapy as used for systemic sclerosis[8] for some patients having alopecia totalis/ universalis with a good clinical response and no side effects, but in this patient it was

decided to try the oral mini-pulse (OMP) regime as used for extensive/fast-spreading vitiligo. The improved response in this patient with almost no side effects suggests that the OMP regime can be another option for the treatment of patients having alopecia areata especially if the treatment has to be given over a prolonged period of time, or if the patient is bothered about the side effects.

We would however, like to reiterate that the patients having a mild form of alopecia areata in whom the duration of the lesions is less than 3 months should not be given any treatment, because in case the treatment is given, an unscrupulous practitioner is likely to erroneously attribute the spontaneous regrowth of hair to the therapeutic modality used by him. This is especially true when the patient is being treated by the practitioners of the non-scientific systems of medicine.

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