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COMPARATIVE EFFICACY OF TOPICAL ANTHRALIN AND INTRALESIONAL TRIAMCINOLONE IN THE TREATMENT OF ALOPECIA AREATA

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Efficacy of intralesional triamcinolone acetonide (10mg/ml) and topical anthralin 1.15% cream was compared in the treatment of alopecia areata. Study groups consisted of 37 patients for injection and 32 patients for cream. All of them belonged to Type I of Ikeda's classification. The study showed that triamcinolone induces more adequate response in terms of regrowth of hairs than anthralin. However, the relapse rate was higher with triamcinolone. No difference was noted in terms of complete regrowth of hairs on the lesional skin and side effects of drugs.

Key Words : Alopecia areata, Triamcinolone, Anthralin

Introduction

Alopecia areata (AA) is a vexing problem for treatment. A survey of literature of 20th century reveals good short term results with many therapies for AA.[1] Some of the drugs tried in the treatment of AA are steroids, topical irritants, contact allergens etc. A MEDLINE search of world literature since 1985 did not reveal any report on the comparative efficacy of intralesional triamcinolone and topical anthralin in the treatment of AA.

Materials and Methods

Hundred patients entered this random allocation trial with an informed consent. Fifty (39 male, 11 female) patients received anthralin 1.15% cream and fifty (38 male, 12 female) patients received intra-lesional triamcinolone acetonide 10mg/ml. Among them one female who received the injection and 11 male who received the cream were lost during follow up. Only those patients who had single lesion on the scalp, less than 6 months duration, first episode, without ophiasis, age group between 20-50 years, belonging to the Type I of Ikeda's classification, and not having tried any other forms of medication were selected for the study. All of them showed pathognomonic exclamation hair.

Injection was given intra-dermally to the lesional skin using tuberculin syringe and no.26 needle. The dose of injection did not exeed 20mg per visit. 0.1ml of 1:1 diluted preperation was injected for every 1cm area of the lesion. Injections were repeated once in every two weeks if there was inadequate response. Injections were stopped if it produced atrophy of lesional skin or if the response was adequate. Adequate response was defined for the purpose of this study as uniform eruption of hair from hair follicles in the lesional skin. Patchy or no eruption of hairs was considered inadequate response. Cream was applied with a wooden spatula to cover the entire lesion. It was retained overnight there. Patients were examined once in two weeks. They were instructed to apply the cream only on the bald areas, sparing newly erupting hairs.

In case of inadequate response the regimens were continued till 2 months. These patients were followed up and reviewed at 6 months and 12 months after adequate response or completion of treatment. Following side effects of drugs were looked for, injection: atrophy of the lesional skin and

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features of adrenal suppression; anthralin: irritant dermatitis, itching, oozing and ulceration. Patients were advised to stop the application of cream if it caused discomfort to them. Complete regrowth of hairs or grade 5 is defined as the density and texture of regrown hairs to be same as those of surrounding unaffected area.[2]

Results

Twelve patients who were on injection and 7 patients on cream had regrown hairs first from the centre and then from the periphery. They were eliminated from the study. Hence the study groups consisted of 37 (28 male, 9 female) patients for injection and 32 (25 male, 7 female) patients for cream group. Patients on both the groups were compared for complete regrowth of hairs, adequate response, side effects and relapse following treatment. The comparison and the p value are mentioned in the Tables I and II. Ninteen (51.4%) patients who received injections had at least some regrowth of hairs (less than grade 5). Atrophy of the lesional skin was the only side effect observed in the injection group which necessitated withdrawal of treatment in them. Side effects observed in anthralin group included itching and mild irritant dermatitis in 2 patients. However, these were tolerated by the patients.

Discussion

In this study 24.5% of patients with injection and 18.4% patients with cream had the onset of regrowth first from the centre and then from the periphery. Such a pattern in the regrowth is considered spontaneous by some.[3] To avoid any controversy, these 19 patients were not considered for comparison. Intralesional triamcinolone and topical anthralin are successfully used by many.[4,5] Here complete regrowth was equal in both injection and cream groups. The suggestion that injection imparts all or none effect upon abnormal hair follicles[4] was not observed in this study. 51.4% of patients in the injection group had shown hair regrowth between grades 1 to 4.[2] Injection was found superior to cream in terms of adequate response. It is known that triamcinolone requires 2-4 weeks to induce hairs growth from the surface[4] and 3-6 weeks for completion of regrowth.[6] Most patients on anthralin (0.5%) required 16 weeks for completion of hair regrowth in the study reported by Nelson and Vogel. They concluded that low dose anthralin is not effective. In most patients here, adequate response was observed by 8 weeks. This could be due to the higher strength of

Table I. Comparative treatment responses

Responses	Injection (%)	Cream (%)	P value
Complete regrowth	18 (48.6)	20 (62.5)	0.25
Adequate response to treatment	31 (83.8)	19 (59.4)	0.02

Table II. Side effects of the regimens

Responses		Injection (%)	Cream (%)	P value
Side effects		4 (10.3)	2 (6.3)	0.5
Relapse	6 months	13 (33.3)	4 (12.5)	0.03
	12 months	21 (53.8)	4 (12.5)	0.0001

anthralin used. Lesional atrophy and irritant dermatitis are the known side effects of triamcinolone and anthralin respectively.[1,5] Anthralin induced irritant contact dermatitis of lesional skin occurred in 2 patients. However, there was no statistical difference between the regimens. At the end of 6 months and 1 year patients who received injection had significantly high incidence of relapse than who applied cream. Relapse is a major limiting factor for intralesional therapy.[1]

In conclusion, this study shows that intralesional triamcinolone induces more adequate response in terms of regrowth of hairs than topical anthralin. However, the relapse rate is higher with triamcinolone. No difference was noted in terms of complete regrowth of hairs on the lesional skin and side effects of drugs.

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