The Efficacy of Intermittant Low-Dose Systemic Corticosteroid Therapy in Vitiligo

VİTİLİGO TEDAVİSİNDE DÜŞÜK DOZ, İNTERMİTAN, SİSTEMİK KORTİKOSTEROİD TEDAVİSİNİN ETKİNLİĞİ

Emel ERKEK*, Ahu BİROL*, Gülcan SAYLAM KURTİPEK*, Fatma TUNÇEZ*, Yeter BAĞCI*, Mukadder KOÇAK*

* Kırıkkale Universitiy School of Medicine Department of Dermatology, Kırıkkale, TURKEY

Summary

Objective: Vitiligo is an autoimmune, acquired, pigmentary anomaly of the skin, characterized by depigmented patches. The aim of the present study was to investigate the effect of low-dose systemic corticosteroids in the treatment of vitiligo.

Material and Methods: 16 patients with vitiligo were included in this study. Systemic prednisolone at a dose of 10-15 mg/day was administered for two consequtive days of week for 6 months.

Results: 14 patients had non-segmental [10 (62.5%) symmetric generalized – 4 (25 %) acrofacial)] and 2 (12.5%) patients had segmental vitiligo. After 6 months of treatment 6 (37.5%) patients showed follicular repigmentation, while 10 of them (62.5 %) did not respond to therapy. None of them showed complete healing.

Conclusion: Intermittant low dose systemic corticosteroid therapy is not an effective treatment option in vitiligo.

Key Words: Vitiligo, Corticosteroid

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Özet

Amaç: Vitiligo depigmente lezyonlar ile karakterize, akkiz, otoimmun bir hastalıktır. Çalısmanın amacı düşük doz, sistemik kortikosteroid tedavisinin vitiligo tedavisindeki rolünü araştırmaktır.

Gereç ve Yöntemler: Calışmamıza 16 hasta dahil edilmiştir. Sistemik prednizolon 10-15 mg/gün, haftanın 2 ardışık günü, 6 ay süre ile uygulanmıştır.

Bulgular: 14 hastada non-segmental [10 (62.5%) simetrik jeneralize- 4 (25%) akrofasyal) ve 2 (12.5%)] hastada segmental vitiligo tespit edildi. Altı aylık tedavi sonrasinda 6 (37.5%) hastada foliküler repigmentasyon, tespit edilirken 10 (62.5%) hastada tedaviye yanıt alınamadı. Hastaların hiçbirinde tam düzelme tespit edilmedi.

Sonuç: İntermitan, düşük doz sistemik kortikosteroid vitiligo tedavisinde etkili bulunmamıştır.

Anahtar Kelimeler: Vitiligo, Kortikosteroid

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Vitiligo is an acquired, pigmentary anomaly of the skin, characterized by depigmented patches (1,2). Autoimmunity is the possible mechanism in the ethiopathogenesis. It affects 1% of the population worldwide. Although it is a benign disorder, it can cause cosmetic, psychologic and social problems. Many therapeutic modalities including PUVA, UVB, systemic or topical corticosteroids, calcipotriol, Khellin and immunmodulator drugs including levamisol are currently being used but their effects are limited. Systemic corticosteroids may arrest the progression of vitiligo by suppressing the immune system but have many side effects (1). To avoid the side effects we used oral, intermittant, low dose, systemic corticosteroid therapy in patients with vitiligo.

Material and Methods

Sixteen patients presenting to Kırıkkale University School of Medicine Department of Dermatology were included in this prospective study. Before inclusion in the study a complete physical examination, laboratory investigation including complete blood count, serum electrolytes, chest X-ray, renal and hepatic function tests, screening for autoantibodies were performed for each patient. Exclusion criteria included contraindications to corticosteroid therapy such as diabetes mellitus,

peptic ulcer, acute or chronic infection and topical or systemic treatment for vitiligo within the last 3 months. The treatment schedule consisted of prednisolone 15 mg/day for 2 consecutive days for patients over 15 years of age and 10 mg for patients under 15 years of age. The dosage was kept the same for 6 months. Patients were seen monthly for the efficacy and side effects of the drug. Before starting treatment the patients were evaluated clinically and the duration, localisation and extent of the disease were recorded. The extent of the disease was estimated according to the `rule of 9`s. Clinically vitiligo was classified as segmental or non-segmental. Non-segmental type was further divided into either localized and generalized forms. Activity criteria was determined as enlargement of pre-existing lesions or/and appearance of new lesions within the preceding month. The clinical course of the lesions was described as complete healing, follicular repigmentation in the depigmented patches (partial healing), stationary and spreading lesions (no healing).

Statistical Analysis

The results of the study were statistically analyzed by using SPSS 10.0 program (Windows, Microsoft, USA). Correlation between age, duration of the disease and treatment response were analyzed by using non-parameteric Mann-Whitney U test..

Results

16 patients (6 men and 10 women) were evaluated. 9 of the patients (56.3%) had history of vitiligo in their families. Their ages ranged between 6 and 55 years (mean: 24.1 ± 12.7). The duration of the disease varied from 1 yr to 20 yrs. 14 patients had non-segmental [10 (62.5%) symmetric generalized – 4 (25 %) acrofacial)] and 2 (12.5%) patients had segmental vitiligo. The extent of cutaneous involvement ranged from 0-25% in 12 patients (75%) and 26-50% in 4 patients (25%). Thirteen (81.3%) patients had active whereas 3 (18.8%) of them had stabile disease (Table 1).

After 6 months of treatment 6 (37.5%) patients showed follicular repigmentation, while 10 of them (62.5 %) did not respond to therapy (Fig 1-2). None of them showed complete healing. None of the patients observed side effects. With non-parametric Mann-Whitney U test, the clinical response did not show statistically significant difference according to the patients` age (p:0.324), and also to the chronicity of the disease (p:0.455) (Table 1).

Discussion

Vitiligo is a common idiopathic pigmentary skin disorder for which there is no definite cure available. The choice for treatment varies with

Table 1. Results of systemic corticosteroid therapy in 16 patients with vitiligo

No	Type	Age/sex	% of patches	Disease activity	Duration of disease(months)	results
1	SG	14/M	0-25	P	18	NR
2	SG	39/F	26-50	P	48	PR
3	SG	34/F	26-50	S	48	PR
4	SG	55/M	0-25	P	20years	NR
5	SG	32/F	0-25	P	12	NR
6	AF	23/M	0-25	S	36	PR
7	SE	23/F	0-25	P	24	NR
8	SG	14/F	26-50	P	60	PR
9	AF	11/F	0-25	S	5	NR
10	SG	11/M	0-25	P	12	NR
11	SG	6/F	0-25	P	24	NR
12	S	22/F	26-50	P	12	PR
13	AF	15/F	0-25	P	12	PR
14	SG	24/F	26-50	P	10years	NR
15	AF	32/F	0-25	P	10years	NR
16	SG	32/M	0-25	P	36	NR

AF: Acral-Facial, SG:symmetrical-generalized, SE: Segmental, P:Progressive, S: Stabile, PR: Partial response, NR: No response

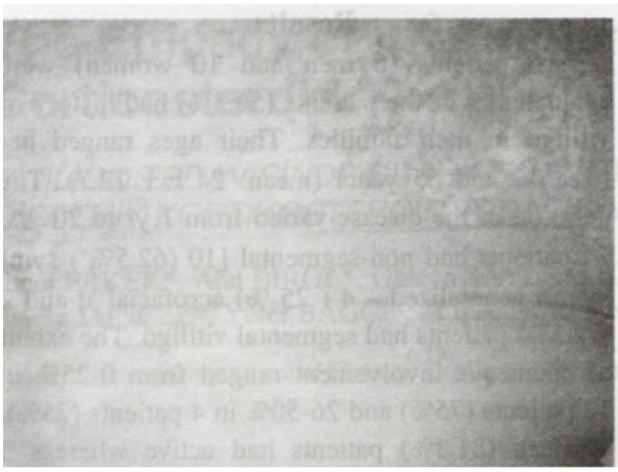

Figure 1. Patient (#2) before receiving treatment.

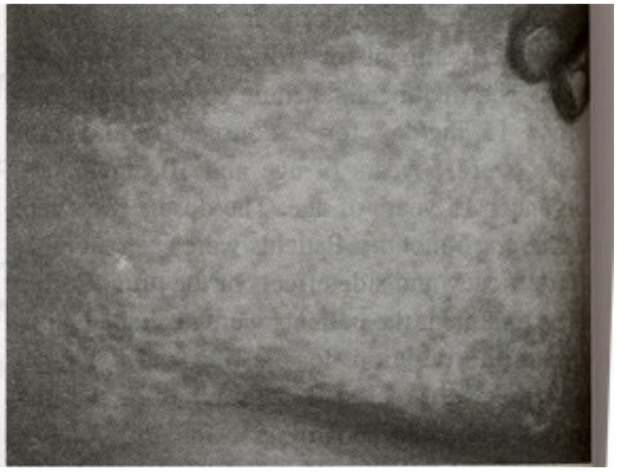

Figure 2. Patient after receiving systemic prednisolone treatment for 6 months.

certain patient and disease characteristics (3). Commonly used treatment alternatives consist of topical corticosteroid, PUVA, UVB. There are several clinical studies investigating the efficacy of topical steroids in vitiligo, however there are a few studies reporting the effect of oral corticosteroids (2). As the systemic administration had many side effects, oral intermittant low dose therapy has come into consideration. Radakovic et al reported the effect of oral dexamethasone in patients with vitiligo (4). After a mean of 18 weeks the disease was arrested in 88% of the patients who had active disease but in terms of repigmentation the response rate was poor. None responders were found as 72.4%, none of the patients had excellent repigmentation, repigmentation between 25-75% was noted in 17.2% (4). Radakovic et al also speculate that patients with dark skin show better repigmentation with PUVA and systemic corticosteroid therapy than those with fair skin (4). We did not observe such a response pattern in our study. Kim et al treated 81 patients with actively spreading vitiligo with low dose oral corticosteroid (0.3mg/ kg body weight). After four months of treatment 70.4% of the patients showed repigmentation, the arrest of progression of vitiligo was noted in 87.7% of the patients. Repigmentation observed in men was greater than that in women. Side effects were not serious and were reversible (5).

Imamura and Tagami treated 17 patients with generalized and 5 patients with localized vitiligo. Six out of 17 (35%) patients with generalized vitiligo showed 75% repigmentation in at least one of their vitiligo patches. Two with generalized and one with localized vitiligo experienced 25-75% repigmenation therapy failure was noted only in 6 patients (6).

Pasricha and Khaitan also documented the effects of systemic corticosteroid in vitiligo (7). They experienced 80% repigmentation and arrested progression of vitiligo in 89% of 40 patients with vitiligo (7).

In our study we did not observe excellent repigmentation in any of the patients. Follicular repigmentation was found in 37.5% and no response was observed in 62.5% which is consistent with Radakovic et al. In 4 (25%) patients with progressive vitiligo the disease was arrested after systemic corticosteroid therapy. No correlation was found between the clinical response and the patient`s age, sex, duration of vitiligo. The present study does not include a placebo treated control group for ethical reasons. Although the number of patients is limited, our results suggest that intermittant low dose systemic corticosteroid therapy per se is ineffective in vitiligo in terms of inducing repigmentation. It may prove useful in conjunction with other treatment modalities such as PUVA and may halt the progression of the disease.

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Yazışma Adresi: Dr. Emel ERKEK
Kırıkkale Üniversitesi Tıp Fakültesi
Dermatoloji AD, KIRIKKALE