mic pruritus in hemodialysis patients, and provided information on its clinical features and pathogenesis. The increase in serum calcium concentration in dialysis patients may have affected the level of epidermal calcium concentration. The altered calcium levels will weaken the barrier function of the skin, leading to increased transepidermal water loss, which may cause itching by drying the skin in dialysis patients.

CONFLICT OF INTEREST

The authors have nothing to disclose.

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Clinical Efficacy of Oral Cyclosporine on Intractable Hand Eczema: A Retrospective Review of 16 Cases

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Dear Editor:

Hand eczema, one of the most common dermatological conditions presents with various morphological forms of varying severity and etiology[1,2]. Chronic hand eczema is defined as hand eczema that shows a prolonged and relapsing course or is unresponsive to standard treatment us-

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ing emollients and topical corticosteroids[3]. It is estimated that 5%～7% of hand eczema patients show severe chronic hand eczema and 2%～4% are unresponsive to standard treatment[3]. Systemic therapy may be needed in severe, chronic, and refractory cases[4]. Cyclosporine has been studied at dosing levels of 3 mg/kg/day and 5 mg/kg/day for the treatment of severe chronic hand eczema[5,6]. Although patients showed improvement with treatment, frequent relapses were reported shortly after discontinuation of cyclosporine[5-7]. Our retrospective study involved a review of medical records and pictures obtained from patients, and evaluation of the clinical efficacy of oral cyclosporine for treatment of patients with chronic hand eczema refractory to conventional therapy.

Among patients who visited the Dermatology Clinic at the National Medical Center, Seoul, Korea between June 2013 and May 2015, we investigated 17 patients with chronic hand eczema that was refractory to conventional treatment. Inclusion criteria for the study were: patients with continuous symptoms over at least a year, patients without a satisfactory response to conventional treatment including systemic steroids, patients without contraindications to use of cyclosporine, patients without history of psoriasis including palmoplantar psoriasis, and those with a negative result on patch testing. Patients were categorized into 3 types based on the features of hand eczema: fissured, hyperkeratotic, and pompholyx type. This study was reviewed and approved by the Institutional Review Board of the National Medical Center (IRB no. H-1612-073-002). Treatment was initiated in all 17 patients with a starting dose of oral cyclosporine administered at 200 mg/day and a maintenance dose of 25～100 mg/day used after an initial response. The starting dose was maintained until the patient achieved at least ＞50% clearance of palmar lesions. Additionally, the use of topical corticosteroids and emollients was continued as usual. The Static Physician's Global Assessment (sPGA) scores and hand photographs were checked by clinicians for 4 weeks. Efficacy of systemic cyclosporine administration was evaluated using two assessment tools[7]. These were: 1) The sPGA score to evaluate the severity of hand eczema based on clinician-estimated intensity and assessment of area involved. 2) Photographical assessment using the hand eczema severity index (HECSI). The severity of hand eczema was assessed by two clinicians who performed a detailed study of clinical photographs and calculated a mean score. The primary goal of treatment was to achieve an sPGA score that was clear or almost clear. After achieving the primary goal, the need for a further maintenance period was determined based on patient compliance. Recurrence was defined as a return of the sPGA score to a baseline value. Adverse events associated with use of cyclosporine were evaluated at each follow-up.

Our study included 10 (58.8%) men and seven (41.2%) women with mean age of 49 years, and a mean disease duration of 2.4 years. Occupation wise, seven patients (41.2%) were homemakers, five patients (29.4%) were office worker, two patients (11.8%) were market workers, and one patient (5.9%) was a construction worker. The medication was discontinued in one patient after 5 days of treatment due to dizziness. We compared the result of

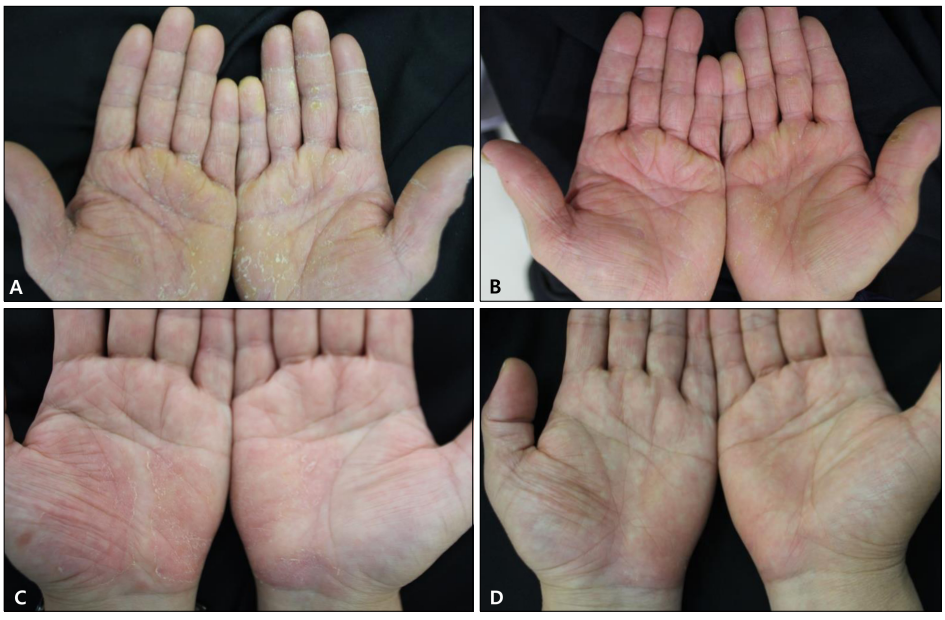

Fig. 1. Photographs taken at baseline (A, C) and at 4 weeks after treatments (B, D).

Table 1. Treatment response in 16 patients who completed medication

No.	Sex/Age	Subtype	Disease duration (yr)	At baseline		At 4 weeks		Period (wk) until sPGA 1	Dose/day (mg/d) until sPGA 1
				sPGA	HECSI	sPGA	HECSI		
1	F/33	FS	4	3	66	2	27	12	200
2	M/47	H	1	2	39	3	28	6	200
3	M/57	H	3	4	95	3	44	36	102.8
4	M/64	P	1	3	41	0	3	4	200
5	F/36	H	1	2	32	2	34	12	150
6	F/44	H	8	2	17	1	4	4	200
7	M/29	H	2	2	32	1	9	4	125
8	F/62	H	1	3	26	2	14	Unknown	Unknown
9	M/54	H	3	2	25	2	13	5	180
10	M/54	H	2	4	48	2	21	21	176.2
11	M/51	H	2	3	47	2	22	12	166.7
12	M/40	H	2	3	34	2	14	8	175
13	M/75	FS	5	4	111	4	44	Unknown	Unknown
14	M/46	H	3	2	17	1	5	4	200
15	F/39	H	1	3	25	2	14	5	160
16	F/50	H	2	3	40	2	24	5	140

sPGA: Static Physician's Global Assessment, HECSI: hand eczema severity index, F: female, M: male, FS: fissured, H: hyperkeratotic, P: pompholyx.

sPGA and HECSI before and after treatment for 4 weeks (Fig. 1). An sPGA score of 0 or 1 (clear or almost clear) was noted in four patients (25%) at week 4. There was 32.1% improvement in the sPGA from 2.8 to 1.9 indicating that the severity of the disease decreased from moderate to mild. HECSI showed prominent improvement by 53.9% after 4 weeks of treatment decreasing from 43.4 to 20. An sPGA score of 1 (almost clear) was achieved in 14 of 16 patients, and the mean treatment duration required to achieve this sPGA score of 1 was 9.9 weeks. After achieving an sPGA score of 1, eight patients discontinued medication use while six patients continued maintenance doses of cyclosporine for 1 to 10 weeks (Table 1). Recurrence was observed in four patients, and a mean remission period in these patients was 2.3 months. No patient reported severe adverse effects. Mild elevation in blood pressure was observed in four patients, which did show normalization following reduction/discontinuation of cyclosporine.

The first published report describing hand eczema treated with cyclosporine was a case of recalcitrant chronic vesicular hand eczema[6]. The patient showed remarkable improvement within 2 weeks of cyclosporine therapy administered as a daily dose of 5.0 mg/kg. Previous studies reporting the role of systemic cyclosporine treatment for hand eczema patients used simplified tools such as PGA for clinical assessment; therefore, its efficacy might have been under- or over-estimated based on a physician's subjective opinion. We attempted an objective and accurate assessment of clinical improvement using clinical photographs and detailed scales and evaluation by two physicians. In this study, based on the clinicians' evaluation, a satisfactory response was obtained after 4 weeks of treatment. We found that 14 of 16 patients achieved an sPGA score 0 or 1 and showed a variable remission period. Recurrence was observed in four patients during the follow up period, although three of these four had received maintenance doses. The small sample size was a limitation of our study. Because a small number of patients was evaluated, we could not determine the relevant factors influencing relapse of hand eczema including disease duration and subtypes. Patients showed no adverse effects necessitating withdrawal of the medication. A short remission period and a high recurrence rate were drawbacks associated with cyclosporine use in patients showing hand eczema. However, combination therapy using low-dose cyclosporine over a prolonged maintenance period and topical corticosteroids may be helpful. We propose that cyclosporine can be an effective and safe treatment option in cases of chronic hand eczema refractory to standard treatment.

CONFLICT OF INTEREST

The authors have nothing to disclose.

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Self-Reported Provoking Physical Factors in Patients with Chronic Urticaria: A Questionnaire Study

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Dear Editor:

Although chronic urticaria (CU) is classified as either chronic spontaneous urticaria (CSU) or chronic inducible urticaria (CIndU), CSU patients can be susceptible to provoking physical factors. Recent guidelines recommend that physicians identify and characterize the eliciting physical triggers of CU[1,2]. However, little is known about the frequency and clinical significance of self-reported provoking physical factors in CU patients. The aim of this study was to evaluate the frequency of self-reported provoking physical factors in patients with CU using a questionnaire. Also, we investigated the clinical differences between patients with or without provoking physical factors.

Patients who presented with wheals and/or angioedema lasting at least 6 weeks were diagnosed with CU by a single dermatologist in our out-patient clinic between September 2006 and February 2017, were asked to complete a questionnaire about provoking physical factors. The questionnaire included queries about whether or not common physical factors (dermographism, pressure, cold, and cholinergic stimuli) provoke urticaria. Our questionnaire also included detailed questions about the patient's demographics and medical history, such as age,

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