

Erythromelalgia and psoriasis

M Hanabusa, D Tsuruta, M Ishii, H Kobayashi

Citation

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Abstract

Psoriasis is a common, chronic devastating skin disease. Erythromelalgia is a rare disease characterized by episodic attacks of burning pain and inflammatory vasodilation in the distal extremities, especially after increased temperature. We are reporting 66-year-old Japanese man diagnosed as erythromelalgia secondary to psoriasis. Although intravenous lidocaine, ketamine and oral steroid did not control his lesions and pain, low-dose aspirin successfully improved his pain. In addition, psoriatic macules were also dramatically healed at the same time. Low-dose aspirin is an old drug for the treatment of psoriasis, but still usable.

INTRODUCTION

Psoriasis is a common, chronic devastating skin disease, which is characterized by sharply-demarcated erythematous plaques covered with silver scales and by the skin underlying the scale having a glossy appearance [1]. Erythromelalgia is a rare disease characterized by episodic attacks of burning pain and inflammatory vasodilation in the distal extremities, especially after increased temperature[2]. The mechanism of the course of erythromelalgia is supposed to be a multifactorial peripheral vascular phenomenon associated with vasomotor tone attenuation mediated through vasoactive substances and drugs such as calcium-channel blockers[2]. We report a case of erythromelalgia secondary to psoriasis treatment.

CASE REPORT

A 66-year-old Japanese man referred to our hospital because of severe hyperkeratosis and slightly pruritic eruptions scattered on the trunk. We had diagnosed him as psoriasis and had started systemic etretinate 1 mg per kilogram of body weight per day orally, but had not cured. Then, we started cyclosporine A 5 mg per kilogram of body weight per day. After 2 weeks, blood urea nitrogen level and creatinine level became over the normal range, so we had to stop this treatment. After 6 months of topical steroidal therapy, hyperkeratosis of the extremities, back, buttock, palms and soles had suddenly developed, he was admitted to our hospital (Figure 1 A and D). Histopathological findings from his left palm and trunk revealed Munro's microabscess, epidermal hyperplasia, elongation of the rete ridge, dilatation of blood vessels in the upper dermis, suggesting the typical

diagnosis of psoriasis. Firstly, we started oral PUVA therapy combined with topical strongest steroid using occlusive dressing technique. After 2 weeks, although hyperkeratosis of the palms and soles almost subsided, severely painful swelling with severe erythema appeared in almost entire area of palms and soles (Fig. 1B). In order to control severe pain, we referred him to anesthesiologist. He was tested intravenous lidocaine hydrochloride and ketamine hydrochloride, but both of the drugs had no effect on controlling his pain. Antidepressant also had no effect. We then tried oral steroid, but no effect had obtained. As pain increased after increase of body temperature, area of the eruption, improvement after elevation of extremities or cooling, we diagnosed the lesion as erythromelalgia. Since the common treatment of erythromelalgia is oral aspirin, we treated him aspirin 162 mg daily. Surprisingly, the pain and erythema of palms suddenly subsided within 12 hours (Fig. 1C). Moreover, his psoriatic macules in the trunk almost perfectly disappeared, as well within 1 week (Fig. 1E).

Figure 1

Figure 1: (A) Clinical feature of the palms (before treatment (A), after treatment by PUVA and topical steroid (B), after treatment by aspirin (C)). See the marked erythema in B. (C) (D) Clinical feature of the buttock (before treatment (D), after treatment by aspirin (E)).



We tried to stop aspirin twice, but both psoriatic macules on the trunk and pain of palms appeared again. So in each case,

we restarted 162 mg daily of aspirin, causing dramatic improvement of both lesions. After 5 months, both his psoriatic macules and painful red palms and soles has controlled successfully. Patient did not mention the family history of erythromelalgia.

Besides primary hereditary idiopathic form of erythromelalgia, secondary form, that occur with hypertension, diabetes, rheumatoid arthritis, lupus erythematoses, thromboangitis obliterans, gout, vasculitis, myeloproliferative disorders of erythromelalgia, has been well-known^[2,3]. Recently, Thami and Bhalla reported the first case of erythromelalgia associated with psoriasis^[4]. In their report, they considered that the cause of erythromelalgia is secondary to cyclosporine administration, which might cause the possible calcium channel blockade^[4]. In our case, the patient also had been treated by cyclosporine A, but erythromelalgia in our case appeared almost 6 months after the last treatment of cyclosporine, suggesting no association of cyclosporine A. Moreover, one report argued this explanation; cyclosporine rather rapidly improves erythromelalgia^[5]. One possible explanation of the cause of our patient is that erythromelalgia appeared secondary to psoriasis rather than caused by calcium channel blockade from cyclosporine. Or, alternatively, rapid treatment of palms by PUVA and topical steroid may cause microvascular arteriovenous shunting and therefore cause reddish burning palms by some unknown mechanism as previously proposed^[6].

By taking low dose aspirin, burning pain and erythema of the extremities disappeared, and at the same time psoriatic plaques have also dramatically diminished. Aspirin is not a common treatment of psoriasis; representative treatment of psoriasis is topical vitamin D analogues ointment, corticosteroids, systemic treatment with methotrexate, cyclosporine, fumaric acid esters and phototherapy^[7]. In the old literature, we found two cases of psoriasis patients successfully treated with aspirin 1951^[8,9]. Since then, no report about aspirin treatment of psoriasis is found. We do

not know the reason why aspirin cause good outcome of psoriasis, but we consider that aspirin may correct hyperaggregation of platelets and enhanced cyclooxygenase activity both of which is reported to be shown in the psoriasis patients^[10,11].

CORRESPONDENCE TO

Daisuke Tsuruta, MD Department of Dermatology Osaka City University Graduate School of Medicine 1-4-3 Asahimachi, Abeno-ku, Osaka 545-8585 Japan
dtsuruta@med.osaka-cu.ac.jp

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Author Information

Makiko Hanabusa, MD

Department of Dermatology, Osaka City University Graduate School of Medicine

Daisuke Tsuruta, MD

Department of Dermatology, Osaka City University Graduate School of Medicine

Masamitsu Ishii, MD

Department of Dermatology, Osaka City University Graduate School of Medicine

Hiromi Kobayashi, MD

Department of Dermatology, Osaka City University Graduate School of Medicine