A Case of Acrodermatitis Continua of Hallopeau

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Acrodermatitis continua of Hallopeau (ACH) is a rare manifestation of pustular psoriasis which may considerably disable affected patients. ACH, which occurs more frequently in women, is characterized by a suppurative process in the distal phalanges of the hands and feet, often leading to onycholysis and onychomadesis. We report the case of a 52-year-old woman who suffered for 20 years from recurrent pustular eruptions and atrophic changes on her right thumb and 2nd finger. Histopathologic features were those of pustular psoriasis. (Ann Dermatol 16(3) 141~143, 2004)

Key Words: Acrodermatitis continua of Hallopeau

INTRODUCTION

Acrodermatitis continua of Hallopeau (ACH) is characterized by pustular eruptions predominantly involving the distal phalanges of fingers and toes with marked involvement of the nail bed, often leading to dystrophy, onycholysis, and eventually loss of the nail plate[1]. The etiology and pathogenesis of ACH still remains elusive and female predominancy is one of the well-known findings[1,2]. Because ACH resembles palmoplantar psoriasis (PPP) in many aspects including its histopathological features, some authors consider ACH as a variant of PPP. However, it may be individualized as a separate entity by its distinctive distribution, destructive nature, and recalcitrancy of the treatment[3]. We describe a patient who suffered for 20 years from recurrent pustular eruptions and atrophic changes on her right thumb and 2nd finger associated with ACH.

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CASE REPORT

A 52-year-old woman presented with a 20-year history of redness, scaling, pustulation and atrophic changes on the thumb and 2nd finger of the right hand. Prior to disease onset, there was no event of trauma or infection and she has suffered from hand eczema intermittently. No systemic complaints were noted. There was no evidence of arthritis, and lesions of psoriasis vulgaris were absent. Family history was negative for psoriasis. Physical examination revealed inflammatory, in part scaly, erythematous, atrophic patches and some yellowish pustules associated with dystrophic nail changes on the thumb and 2nd finger of the right hand (Fig. 1, 2). Movement limitation on the distal interphalangeal joint of the affected fingers and shortening of the distal phalanx of the 2nd finger were also noted. Histopathologic findings were indistinguishable from pustular psoriasis with intraepidermal neutrophilic pustules and parakeratosis (Fig. 3). Routine laboratory tests were unremarkable and bacterial cultures from pustules showed no microbial growth. Unfortunately, radiologic examination was not performed. A diagnosis of ACH was made clinically and pathologically. The patient was treated with oral acitretin, 10 mg twice daily, and topical corticosteroids (Clobetasol propionate 0.05%, Diflucortolone valerate 0.3%). Her condition improved partially after 8 weeks of treatment.

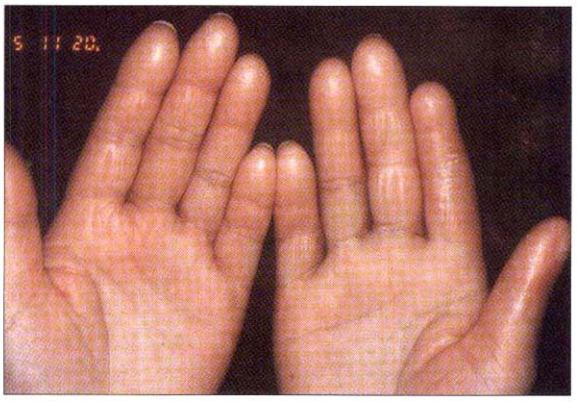

Fig. 1. Scaly, erythematous, and atrophic patches on the thumb and 2nd finger of the right hand. Note the asymmetric involvement and the loss of fingerprints on affected areas.

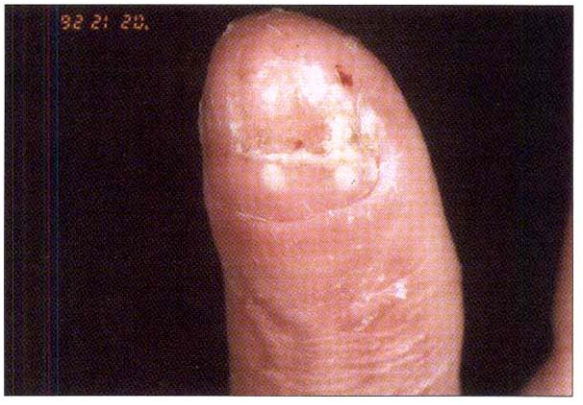

Fig. 2. The nail bed shows some large pustules, hyperkeratosis and crusts with anonychial change on the thumb.

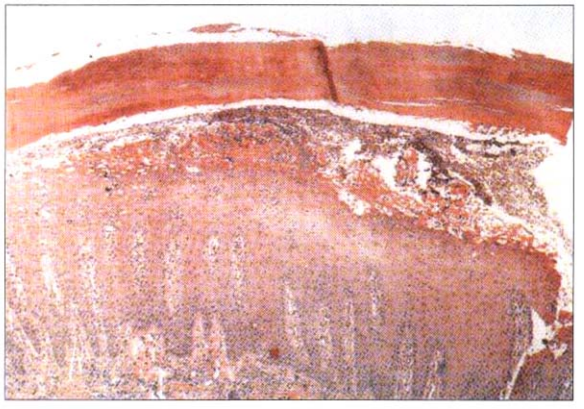

Fig. 3. Histopathologic findings were indistinguishable from pustular psoriasis with spongiform subcorneal pustules and parakeratosis (H&E, × 40).

DISCUSSION

Pustular psoriasis is a rare form of psoriasis that is characterized by an eruption of sterile pustules. It can be divided into generalized and localized forms[4]. Generalized pustular psoriasis can be further subdivided into five groups: acute generalized pustular psoriasis (Von Zumbusch), generalized pustular psoriasis of pregnancy, circinate and annular pustular psoriasis, juvenile and infantile pustular psoriasis, and localized forms (not acral or palmoplantar)[4]. The two main subdivisions of localized pustular psoriasis are palmoplantar pustulosis and acropustulosis (ACH).

ACH is a rare chronic pustular eruption of the distal portions of the hands and feet with marked involvement of the nail bed[1]. It is more prevalent in middle-aged women and usually occurs after minor trauma or infection of the involved digits. The lesions of ACH typically develop on the distal portions of the digits, spreading proximally with time, and can be extremely painful and disabling. Pustules often coalesce to form lakes of pus that eventually crust and involve both the nail bed and nail matrix, leading to severe onychodystrophy or even to anonychia[5]. The eruption may cause sclerosis of underlying soft tissue with digital contractures and even osteolysis of the tuft of the distal phalanx[6]. ACH may evolve into generalized pustular psoriasis, especially in the elderly[7].

Slawsky and Libow[3] suggested that ACH should be separated from PPP or pustular psoriasis with several distinguishable features such as asymmetric acral distribution, soft tissue sclerosis, frequent paronychial involvement, localized pain, association with trauma, osteoporosis and bony resorption. Other differential diagnosis includes paronychia due to bacterial or fungal infection, pustular dyshidrotic eczema, contact dermatitis with secondary infection, and acral granulomatous dermatitis[8,9].

The histopathologic changes are essentially psoriatic, but the central feature is a fully developed, large subcorneal pustule filled with neutrophils[4]. Spongiform pustules may be found in the wall of the larger unilocular pustule. Piraccini et al[10]. reviewed 20 patients with ACH restricted to the nails and suggested that ACH of the nail is mainly a nail bed disorder and the nail matrix is only occasionally affected. They also suggested that bone resorption was not common and apparently not related to

duration or severity of the disease, and that the typical history of periodical acute flares was the distinctive finding.

Treatment of ACH is notoriously difficult. No controlled studies and only anecdotal observations have been reported in the literature[1,3,5-6,11-16]. The many therapeutic regimens, including topical corticosteroids, calcipotriol[11], fluorouracil[12] and systemic agents such as corticosteroids, aromatic retinoids[1,3], hydroxyurea, colchicines, cyclosporin[13], sulfones[5] and methotrexate[14], and oral psoralen-UVA[15] have been tried with variable responses. We treated our patient with oral acitretin and topical corticosteroids, and achieved partial improvement. Recently anti-TNF-α antibody infliximab has been used in a patient who was unresponsive to all previous therapies[16]. Infliximab was given intravenously as a single infusion according to the experience in the treatment of psoriasis and psoriatic arthritis, and substantial improvement was observed after 4 months.

In summary, we present the case of a ACH patient with a partial response to the combination therapy with oral acitretin and topical corticosteroids.

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