Dermatology Practical & Conceptual

Biologics for the Treatment of Severe Acrodermatitis Continua of Hallopeau: Report of Two Cases Successfully Treated with Ixekizumab and Ustekinumab

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Introduction

Acrodermatitis continua of Hallopeau (ACH) is a rare form of pustular psoriasis, which involves the distal portion of the digits of hands and feet [1]. The exact pathogenesis of this disease is still not completely understood, and a role of interleukin (IL)-36 and IL-17 related cytokines (IL-17A/F, IL23Receptor) has been proposed [1]. ACH has a chronic-relapsing course, and it can lead to severe nail dystrophies [1]. Given the rarity of this condition, no data are available from clinical trials regarding the use of biological drugs in these patients [1,2]. We present two cases of severe ACH successfully treated with biologics: one patient received ixekizumab, a humanized monoclonal antibody targeting IL-17A, and the second was given ustekinumab, an inhibitor of IL-12/23.

Case Presentation

A 56-year-old patient presented to our Dermatology department with a history of psoriasis and psoriatic arthritis (PsA), with a Dermatology Life Quality Index (DLQI) score of 28. In the past, she was treated with oral acitretin 10 mg, one capsule daily for 3 months, ineffectively. On clinical examination, we observed intense red erythema on the distal surface of the five fingers of the right foot, along with intense pustulation and severe onychopathy (Figure 1A),

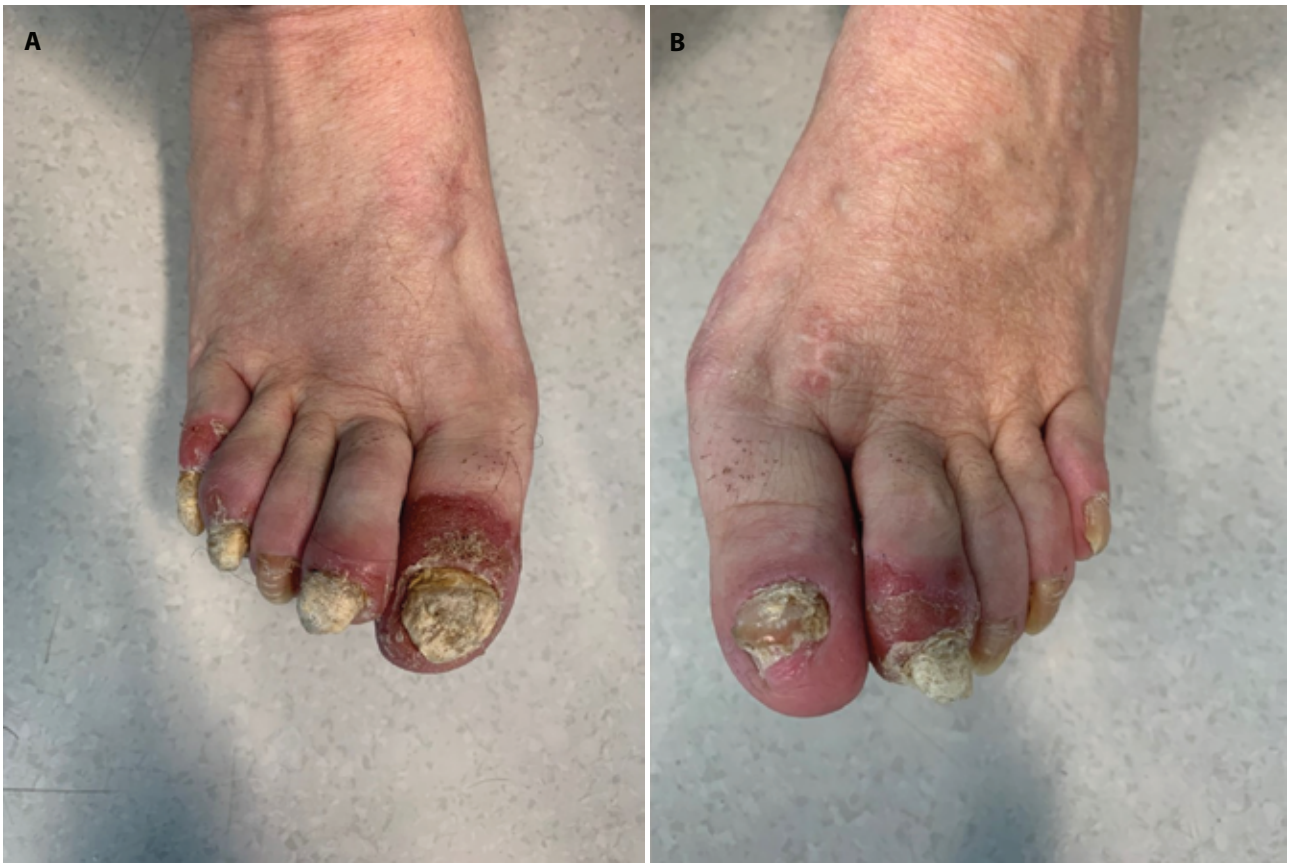

Figure 1. (A) Severe acrodermatitis continua of Hallopeau affecting the digits of the right foot of a 56-year-old patient, with intense pustulation on erythematous skin along with severe psoriatic onychopathy. (B) Clinical appearance of the left foot.

and moderate erythema and onychopathy on the left foot (Figure 1B). A skin biopsy was not performed as the clinical picture was strongly suggestive for ACH. Given the severity of the clinical picture, as screening exams were all in the normal ranges, we prescribed therapy with ixekizumab 80 mg, two injections at baseline followed by one injection every two weeks until week 12, and then every four weeks. At week 36, the patient came back to our department showing complete skin clearance, with the persistence of only slight onychopathy (Figure 2, A and B) and a DLQI of 1.

The second patient is a 32-year-old female, who presented to our Institute in 2016 with a history of flares of ACH (with fever and elevated neutrophils count), previously ineffectively treated with oral cyclosporine. On physical examination, several pustules on erythematous skin were observed on the distal surface of the fingers of both hands. Subsequently, after screening exams returned all in the normal ranges, we prescribed ustekinumab 45 mg, 1 injection at weeks 0, 4, and then every 12 weeks. At week 40, the patient showed complete skin clearance. She is still on treatment to date, without any relapse of the disease.

Conclusions

The treatment of ACH is challenging, due to the lack of randomized clinical trials on biological drugs, given the rarity of this condition [2]. There are only a few case reports on the efficacy of ixekizumab in the treatment of pustular variants of psoriasis [3]. In our first case, we prescribed ixekizumab for several reason: the rapid onset of action, the efficacy on PsA and our favorable experience on this drug on difficult-to-treat areas [4,5]. On the other hand, more data are available on ustekinumab in patients affected by ACH [6]. In a multicenter retrospective study, ustekinumab showed improvement in 75.0% of patients [6]. In our case, we decided to prescribe ustekinumab because at the time it was the most recent and most effective biological drug approved for psoriasis.

Further studies, with longitudinal design and larger cohorts of patients, are needed to establish the exact role of biologics, including ustekinumab and ixekizumab, in the management of ACH.

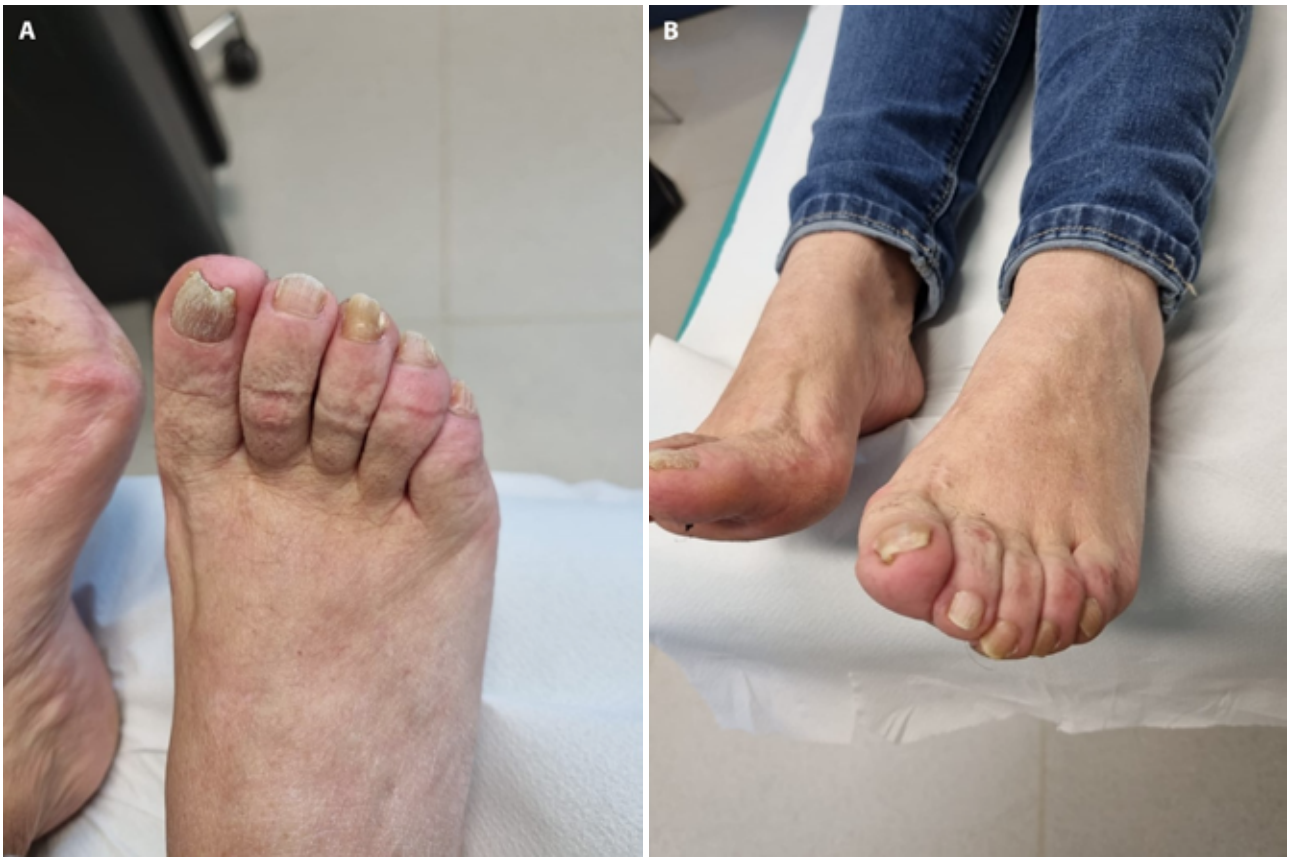

Figure 2. (A,B) Clinical picture at week 36, showing resolution of the cutaneous lesions. Only slight onychopathy is observed.

References

1. Navarini AA, Burden AD, Capon F, et al. European consensus statement on phenotypes of pustular psoriasis. *J Eur Acad Dermatol Venereol.* 2017;31(11):1792-1799. DOI:10.1111/jdv.14386. PMID: 28585342.
2. Maliyar K, Crowley EL, Rodriguez-Bolanos F, O'Toole A, Gooderham MJ. The Use of Biologic Therapy in the Treatment of Acrodermatitis Continua of Hallopeau: A Review. *J Cutan Med Surg.* 2019;23(4):428-435.DOI:10.1177/1203475419836435. PMID: 30938189.
3. Miller AC, Holland TE, Cohen DJ. Treatment of acrodermatitis continua of hallopeau with ixekizumab. *J Dermatolog Treat.* 2021;32(1):117-119. DOI:10.1080/09546634.2019.1628170. PMID: 31184530.
4. Narcisi A, Valenti M, Cortese A, et al. Anti-IL17 and anti-IL23 biologic drugs for scalp psoriasis: A single-center retrospective comparative study. *Dermatol Ther.* 2022;35(2):e15228. DOI:10.1111/dth.15228 PMID: 34820969.
5. Husson B, Barbe C, Hegazy S, et al. Efficacy and safety of TNF blockers and of ustekinumab in palmoplantar pustulosis and in acrodermatitis continua of Hallopeau. *J Eur Acad Dermatol Venereol.* 2020;34(10):2330-2338. DOI:10.1111/jdv.16265 PMID: 32030802.
6. Gargiulo L, Pavia G, Ibba L, et al. Generalized Pustular Psoriasis and Plaque Psoriasis Successfully Treated With Ixekizumab. *Clin Exp Dermatol Ther.* 2022;7:183. DOI: 10.29011/2575-8268.100183.