Acrodermatitis of Hallopeau and erosive oral mucositis successfully treated with secukinumab

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INTRODUCTION

“Treatment of acrodermatitis continua of Hallopeau is difficult and often disappointing.”

“Oral lesions of psoriasis are rare clinical observations.”

Acrodermatitis continua of Hallopeau (ACH) is characterized by chronic, painful, destructive, and typically disabling disease of the hands and feet. It is considered an uncommon variant of pustular psoriasis that does not readily respond to standard topical or systemic treatments for psoriasis. ACH was first described as a suppurative process that affects the fingertips and hands in 1890 by Hallopeau. If left untreated, the disease process can result in sclerosis and osteolysis, as well as onychodystrophy and anonychia. Numerous topical and systemic treatments have been utilized in the treatment of ACH including phototherapy, topical and systemic vitamin A derivatives, topical vitamin D derivatives, and immunosuppressant therapy.

Possibly due to underreporting, it is not evident in the literature whether oral lesions of psoriasis are associated with ACH. The true incidence of intraoral psoriasis is lacking from the medical literature, mostly because of the inconsistency of histologic patterns and clinical presentation of disease, which ranges from geographic tongue to erosive glossitis, includes painful and nonpainful lesions, and might or might not include cutaneous involvement. Oral lesions might wax and wane, making diagnosis even more difficult to confirm.

CASE REPORT

This is a report of a 42-year-old woman in otherwise good health with no personal or known family history of psoriasis or other skin or systemic disease. Approximately 10 years ago, she developed non-tender circinate erosions and vesicles on her soft and hard palate. Over several months and years, similar lesions appeared on the tongue and buccal, gingival, and vermilion mucosa, as well as the oropharynx. Five years ago, an oral surgeon confirmed erosive loss of the tongue papillae. At that time, the affected areas had become painful and she could not eat most foods due to pain and ageusia. Three years ago, she developed severely painful sterile pustules of the distal fingertips and separation of the nail plate from the nail bed of her left index and fifth fingers. The nail plates became pitted, and additional nail plates of both hands began to show pitting.

In the early and uncertain phase of this illness, she went to tertiary care emergency departments, infectious disease specialists, an oral surgeon, a hand surgeon, and several other dermatologists in private practice and at university hospitals in 3 states. Initial differential diagnoses included bacterial and fungal paronychia, pyoderma, herpetic whitlow, and cellulitis (Figs 1 and 2). Lesional swabs and blood cultures confirmed lack of pathologic organisms. The affected fingers exhibited edema, erythema, calor, pain, pustules, erosions, and paresthesia. Failed topical and systemic medical therapy included clobetasol ointment with and without occlusion, calcipotriol cream, tazarotene cream, tacrolimus...

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Abbreviations used:
ACH: acrodermatitis continua of Hallopeau
IL-17: interleukin 17
ointment, mupirocin ointment, clotrimazole cream, terbinafine cream, intralesional triamcinolone, systemic cephalexin, doxycycline, linezolid, prednisone, valacyclovir, and apremilast. Failed treatment for the oral lesions included dexamethasone oral solution, chlorhexidine oral solution, tacrolimus ointment, fluconazole lozenges, and systemic valacyclovir. No sulfa-based treatment was used due to history of anaphylactic allergy. As the disease continued to progress and it was clinically evident that this was not an infectious process, several biologic and immunosuppressant treatment approaches were considered (eg, adalimumab, methotrexate, cyclosporine) and potential side effects and outcomes were discussed with the patient. Interim palliative treatment consisted of incision and drainage of pustules and petrolatum ointment with occlusion on a 24-hour schedule. Her body mass index dropped below 18 because of her inability to eat. In addition, during treatment with apremilast, she experienced extensive nausea, vomiting, and anorexia (>4 months). She began treatment with sublingual ondansetron before mealtimes and was able to maintain nutrition with liquid supplements only (Figs 3 and 4).

The patient was treated with 300 mg of subcutaneous secukinumab and had significant positive

**Fig 1.** Affected fingers before treatment with secukinumab. Patient reported severe, disabling pain.

**Fig 2.** Affected fingers before treatment with secukinumab. Patient reported severe, disabling pain.

**Fig 3.** Labial and gingival mucosa before treatment with secukinumab, showing erosions. Patient reported pain and significant difficulty speaking and eating.

**Fig 4.** Erosive circinate glossitis with loss of lingual papillae.
results in approximately 5 days, both in pain reduction and neurologic sensory recovery as well as disappearance of pustules, erythema, edema, calor, and pain from the affected fingers. The mouth also improved dramatically, with decreased pain and erosions (Figs 5 to 8).

**DISCUSSION**

A review of the literature by Younai and Phelan in 1997 identified 57 reported cases of oral mucositis with histologic features of psoriasis, excluding cases of geographic tongue seen in patients with cutaneous psoriasis. Oral lesions appeared in the oral cavity, vermilion lip, buccal mucosa, tongue, gingiva, palate, and floor of the mouth. The cases of psoriasis on the palate had the appearance of erythematous patches with or without ulcerations.

Secukinumab (Novartis Pharma AG, Basel, Switzerland), a recombinant high-affinity, human immunoglobulin G1 (kappa) monoclonal antibody, selectively binds to and neutralizes the inflammatory mediator interleukin (IL) 17A. IL-17A has been recognized as a central promoter of inflammatory pathology in autoimmunity and other settings. Gene products induced by IL-17 include cytokines,
chemokines, inflammatory effectors, and antimicrobial proteins. In this case, it appears to have an effectual response to this unusual disease process. The therapeutic outcome in this case report is at least 90% subjective disease remission and restoration of function and pain reduction.

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