Combined therapeutic use of oral alitretinoin and narrowband ultraviolet-B therapy in the treatment of Hailey-Hailey disease

Kaitlin A. Vanderbeck,1 Lyne Giroux,2 Nirosha J. Murugan,3,4 Lukasz M. Karbowski2,4 1Department of Medicine, Northern Ontario School of Medicine, Greater Sudbury; 2Department of Medicine, University of Ottawa; 3Behavioural Neuroscience Program and 4Department of Biomolecular Sciences, Laurentian University, Greater Sudbury, Canada

Abstract

Hailey-Hailey disease (HHD) is a chronic familial bullous disease characterized by recurrent blisters and erosions typically at friction-prone areas of the body accompanied by acantholytic disease with incomplete penetrance that is characterised by recurrent blisters, plaques, and erosions often accompanied by a burning or pruritic sensation.1-3 Patients typically experience a relapsing-remitting course of the disease.1 It is caused by a mutation in the ATP2C1 gene on chromosome 3q21-q24, which encodes a disrupted Golgi associated Ca2+ ATPase.5

This mutation induces abnormal intracellular Ca2+ signaling which promotes premature keratinocyte proliferation leading to inappropriate desmosomal protein production causing failed keratinocyte adhesion and acantholysis, typically at flexural regions and friction prone sites.1,5,6

We report a 64-year-old female with a 37-year history of severe Hailey-Hailey disease involving her whole body. Most recently, HHD lesions have appeared on her pubic region and middle back. The patient’s HHD has been unresponsive to common therapies used in the management of HHD.

Case Report

In 2005, a then 55-year-old Caucasian female presented with clinical signs and symptoms of HHD, which had been active for 32 years. The patient initially developed symptoms of Hailey-Hailey disease in 1973 in her axillae and inframammary folds as well as her pubic region (namely her labia). A biopsy performed confirmed the HHD diagnosis. The patient reported a family history of the disease. She also reported that HHD lesions have previously appeared on her arms, neck, back, abdomen, popliteal regions, and oral mucosa. The presence of white bands on her fingernails, a rare manifestation of the disease, has also been documented.2,4 In 2003, the severity of the HHD lesions within her inframammary folds necessitated a double mastectomy. A second biopsy was performed and confirmed that the inframammary lesions were in fact HHD lesions. Most recently, the patient presented with erythematous and crusted erosions and erupted bullae on her pubic region and middle back (Figure 1).

Since the patient’s initial presentation and diagnosis, several different treatments have been administered for the management of the disease and its symptoms including: steroid and non-steroidal anti-inflammatory treatments (systemic, topical and intra-lesional), cyclosporin, methotrexate, dapsone, botulinum toxin A, fraxelated CO2 laser to affected regions, and a variety of oral and topical antimicrobial therapies with minimal relief. Of the treatments given the patient’s disease and symptoms were best controlled by oral doses of alitretinoin.5,6

Introduction

Hailey-Hailey disease (HHD), otherwise known as familial benign chronic pemphigus is a rare autosomal dominant, acantholytic disease with incomplete penetrance that is characterized by recurrent blisters, plaques, and erosions often accompanied by a burning or pruritic sensation.1-3 Patients typically experience a relapsing-remitting course of the disease.1 It is caused by a mutation in the ATP2C1 gene on chromosome 3q21-q24, which encodes a disrupted Golgi associated Ca2+ ATPase.5

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UVB burns experienced during the fourth UVB session were also noted. Only after the fourth UVB treatment did the patient present with rubor from UVB burns, which led to the cessation of the UVB treatment, but continued use of oral alitretinoin as a mono-therapy. Healing HHD lesions could also be seen in the patient’s pubic area at this time with no new lesions noted (Figure 2). No other topical or systemic treatments were used throughout this treatment period. Currently, a mono-therapy of oral alitretinoin has maintained remission of the disease for 14 weeks since the beginning of the initial combination alitretinoin and narrowband UVB treatment course. No other treatments or interventions have been used, and no new lesions have been experienced with the alitretinoin mono-therapy.

Discussion

Hailey-Hailey disease was first described by brothers Hailey and Hailey in 1939.10 Familial benign chronic pemphigus is an inherited, autosomal dominant bullous disease.1,2,4 HHD presents with recurrent bullae, vesicles, and erythematous patches and erosions. Patients usually experience a relapsing-remitting course of the disease.1,2,4 For many patients, a family history of HHD is present with lesions manifesting after adolescence.1,2 Lesions favoring the axillae, chest, neck, genital areas, and other flexural regions are usually noted.1,2 Eruptions are sometimes accompanied by a burning or pruritic sensation.2 Secondary infection with candida and/or staphylococcus is often noted and considered to be a common complication of the disease.1,3 Several white bands on the fingernails have also been described in some cases. Involvement of the vulva, conjunctiva, and mucosae are considered rare manifestation of the disease.1,3

This disease affects a patient’s quality of life and can be quite distressing. The management of HHD can be challenging.1,11 There is currently no cure for HHD, however, treatment for managing the symptoms are available.3,4 In some cases, antibiotics, antifungal agents, as well as systemic, topical, and intralesional corticosteroids have proven effective for the management of HHD.1,3 Furthermore, other agents such as cyclosporine, retinoids, botulinum toxin A, and dapsone have also proven to be effective in some cases, and ineffective in others.1,3 According to Sardy and Ruzicka,4 there is a need for new treatments. The patient, whose case is described, presented with a severe manifestation of HHD with recurrent bullae, erythematous patches, and erosions.1 The patient has experienced HHD lesions on many different areas of her body including her genital region, neck, back, and oral mucosa, to name a few. For this patient, HHD has been a part of her life for almost 40 years. Finding an effective treatment for her HHD has been challenging. Recently, the successful remission of HHD with narrowband UVB has been discussed.7 In this patient’s case narrowband UVB was ceased after only four sessions due to UVB burns. This may be attributed to the oral alitretinoin, a retinoid agent that has been shown to induce photosensitivity.2,7,8,12

The case report by Sardy and Ruzicka showed successful treatment with alitretinoin in a patient with HHD.5 The treatment was accompanied by a continued course of oral prednisone, which was later tapered while treatment with oral alitretinoin persisted.6

Conversely, in our patient’s case, the combination daily oral alitretinoin (30 mg) and narrowband UVB therapy described, which resulted in the successful remission of the patient’s HHD, was started after the tapering and complete cessation of prednisone use. Further, considerable and sustained clinical improvement of the patient’s HHD lesions has been noted with the administration of the daily oral alitretinoin therapy alone. Presently there has been no need for any treatment with further UVB, prednisone, or any other systemic or topical agents as the patient’s disease appears to be in remission. For the first time in almost 40 years the patient has found relief and an effective treatment for her HHD.

Conclusions

In conclusion, we suggest that conjunctive therapy of oral alitretinoin with narrowband UVB therapy be considered as a therapeutic option for the treatment of HHD to be followed by a mono-therapy of alitretinoin. The use of oral alitretinoin and narrowband UVB therapy should be explored further. In addition, the efficacy of oral alitretinoin as a mono-therapy for HHD should be explored.
References