



The Effect of Cryotherapy in Hailey-Hailey Disease

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Dear Editor:

Hailey-Hailey disease (HHD), also known as benign familial pemphigus, is a chronic recurrent bullous and vesicular dermatitis, presented histologically with suprabasilar acantholysis¹. Flexural sites, especially lateral side of neck, groin and axillae are affected. Patients are suffered by chronic erosions of the aforementioned sites, which is painful and commonly become infected secondarily². Even many studied reported various medical treatments, such as topical and systemic corticosteroid, antifungals, and antibiotics, no radically curative therapy for HHD was found³. Good results for HHD have been obtained from such surgical interventions as excision, split-thickness skin graft, and dermabrasion⁴. However, there are few reports regarding the efficacy of cryotherapy for HHD. Here, we describe the successful treatment for recalcitrant HHD.

A 33-year-old man clinically presented with signs and symptoms of HHD in the area of bilateral crural folds. HHD was diagnosed with biopsy. His signs and symptoms had been presented for two years, despite multiple standard treatment and anecdotal therapies: numerous topical corticosteroids, tetracycline, cyclosporin, isotretinoin, prednisone, topical pimecrolimus cream, and tacrolimus ointment. Surgical, laser, or radiation therapy had never been tried.

As multiple therapies were either ineffective or associated with unacceptable side effects, cryotherapy and CO₂ laser (UM-L30; Union Medical Co., Seoul, Korea) were initiated.

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The patient was started on cryotherapy (left side) and CO₂ laser (right side) monthly for 3 months, after intense history taking and careful physical examination. We performed cryotherapy with two cycles using an open-spray technique at 10~15 seconds and CO₂ laser with (1.2 W in a continuous wave) one pass each session. Cryotherapy with the Cryosurg[®] spray gun (Coopersurgical, Trumbull, CT, USA) was done. The cryotherapy was performed perpendicular from the lesion at a 1~2 cm distance. When the ice-ball had presented from the center to include the edge of the area with a 2 mm margin, cryotherapy was stopped. It was then allowed to melt. After each therapy, no extra dressing was done. Photographs of lesional skin were taken at baseline and week 12 (Fig. 1, 2). The area receiving cryotherapy was disease free and asymptomatic 3 months later. The region subjected to CO₂ laser treatment showed mild to moderate response, but less than the area receiving cryotherapy.

A variety of measures have been recommended for recalcitrant HHD. Cryotherapy has been advocated although freezing may induce lesions⁵. Necrosis, after the freezing and thawing of cells is the mechanism of



Fig. 1. Intertriginous skin at baseline.



Fig. 2. Week 12 of cryotherapy (left side) and CO₂ laser (right side).

cryotherapy. Re-epithelialize in treated areas occurred. The HDD lesion was shown to have altered cellular connections within desmosomes and adherens junctions of the epidermis. The mechanism of cryotherapy for treatment of HHD may eliminate diseased epidermis and re-epithelialize normal epidermis.

Our patient presented with recalcitrant HHD. In management, we found, for the condition of patient's inguinal area, cryotherapy is more effective than was CO₂ laser. Moreover, No short-term untoward side-effects was ob-

served, such as hypopigmentation, after the use of cryotherapy as the treatment for HHD. During at least 3 months, patient went through relatively disease-free remission. These observations represent the successful use of cryotherapy for HHD.

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