Topical hypochlorous acid gel in management of symptomatic dermographism: A case report

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ABSTRACT

Introduction: Symptomatic dermographism (SD) also known as urticaria factitia, is the most common subtype of chronic inducible urticaria (CIndU) mainly affecting young adults with the mean duration of six years and can be difficult to treat. It is characterized by the development of itchy wheals induced by mild stroking, rubbing or scratching of the skin at the site of exposure. Typically, wheals occur within seconds to minutes after skin provocation and lasts for half an hour to two hours. **Case description:** A 31-year-old lady who came for a history of 6 months of severe itchiness and wheal in context of usual activities at home (dressing, tight clothes, some physical activities). Some of the episodes were also spontaneous without an obvious trigger and the patient described a negative impact on her quality of life. There was no significant past medical or family history. Her workup including differential blood count, ESR or CRP and diagnostic workup for autoimmune disorders, were normal. The diagnosis of SD was supported by the history and the positive provocation test (itchy palpable wheals within 10 min after light stroking pressure with a wooden spatula on the volar forearm). She was put on high dose cetirizine 20mg daily but refused to add a second line systemic agent despite poor control of her symptoms due to fear of side effects. Trial of topical application of EZyma™ Hydrogel 2 times daily was added as an adjunct treatment and at the beginning of the treatment, her Dermatology Life Quality Index (DLQI) was 25, and the urticaria activity score (UAS7) was 35. Her symptom improved as early as day 5 and was sustainable until week 6 of usage with UAS7 score and DLQI was 10 and 8 respectively. **Discussion:** The goal of treatment in SD is complete symptom control. However, for most patients with physical urticaria, the standard antihistamines dose is usually not sufficient to achieve this goal and up dosing of antihistamines is often needed. Despite up-dosing, there are some patients who still suffer from severe symptoms and for these patients, systemic therapies such as cyclosporine A, dapsone or omalizumab therapy can be recommended. Unfortunately, there is limited option for patients who were ineligible for systemic therapy due to unavailability, cost or side effects. Topical hypochlorous acid (HOCl) has been proposed as a treatment of pruritus of various dermatoses, particularly in atopic dermatitis. The postulated mechanisms were its microbicidal actions to cutaneous pathogens, anti-inflammatory properties and its ability to reduce the activities of histamine, leukotriene B4, and interleukin-2. Despite no prior studies on its usage on chronic urticaria, previous in vitro study has shown that it has a mast cell membrane stabilizing effect thus preventing subsequent degranulation which makes it a promising treatment option in SD. **Conclusion:** EZyma™ Hydrogel shows promising results as an adjunct topical therapy in SD however further in-depth clinical trials are needed.

Keywords: Symptomatic dermographism, topical hypochlorous, urticaria