Contact Urticaria to Glycolic Acid Peel

Sir,

An 18-year-old male patient from northern Kerala came with Grade 2 acne vulgaris. He had tried various medications for the same with no improvement. He was advised to undergo glycolic acid peel. Thirty-five percent of glycolic acid was prepared after diluting 70% glycolic acid (GLYLAK solution, which contains only 70% glycolic acid in an aqueous solution; Shalaks Pharmaceuticals Pvt Ltd) with tap water.[1] No pre-peel cleanser was used, and was asked to wash his face with soap and water 5 min prior to the procedure. Sensitive areas like the inner canthus of the eyes and naso-labial folds were protected with Vaseline. The peeling agent was then applied with a brush on the entire face, beginning from the forehead, then the right cheek, nose, left cheek, and chin in that order. Between 80 and 90 s of application, the patient complained of stinging, burning and itching over the face. There was faint erythema over the malar area; in addition, wheals were also seen over the forehead and chin [Figure 1]. There was no associated rhinitis, conjunctivitis, breathlessness, features of shock or any urticarial lesions outside the treatment zone. The peel was immediately neutralized with ice water.

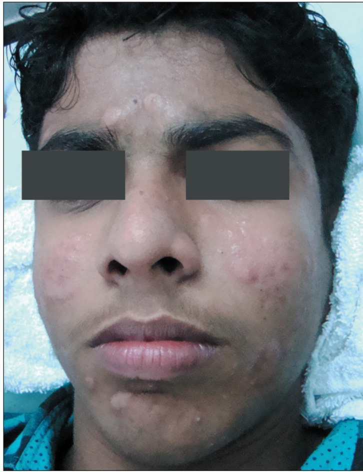

Figure 1: Wheals seen over the forehead and chin along with faint erythema

A diagnosis of contact urticaria (CU) to glycolic acid was made. He was given hydroxyzine hydrochloride 25 mg tablet and kept under observation. The wheals and pruritus gradually subsided over a period of 2 h. Our patient was not an atopic nor did he have any prior history of allergies or contact with glycolic acid products. The same glycolic acid peel was performed on other patients after doing a precautionary use test and no similar adverse event was noted.

Though glycolic acid peels are generally safe, complications may occur. The various complications that can occur in chemical peeling are post-inflammatory hyperpigmentation, infections (Herpes simplex), scarring, allergic reactions, milia, persistent erythema and textural changes.[2,3] Our patient developed CU after a minute of application which was not observed in other patients using the same peeling agent.

CU, first described by Fischer in 1973, is defined as the development of a wheal-and-flare reaction at a site where an external agent contacts the skin or mucosa.[4] Symptoms of CU range from pruritic, localized wheal-and-flare reactions to generalized urticaria and anaphylaxis. CU is divided into two subtypes: Immunological and nonimmunological. Nonimmunological CU is an immediate reaction not requiring prior exposure to the substance, while immunological CU is a Type 1 IgE-mediated hypersensitivity reaction in which the patient's immune system has been previously sensitized to the eliciting substance. The initial presentation of the reaction appears within minutes to hours of exposure, affecting normal or eczematous skin with nonspecific symptoms. In nonimmunological CU, symptoms usually remain in the contact area whereas in immunological CU, symptoms like conjunctivitis, rhinitis, asthmatic attack or even anaphylactic shock may be present. Diagnosis is made primarily on the basis of history and clinical presentation, without extensive laboratory investigation.[5] In our case, symptoms and signs were limited to the area of contact and there was no prior contact with glycolic acid products; we believe it to be a nonimmunological type of CU.

This case has been reported because we have never observed CU as an adverse reaction to glycolic acid peel.

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