

CORRESPONDENCE

The need of an updated culture of “occupational” atopic hand dermatitis in children at the time of COVID-19

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To the editor,

Two school-aged children, affected by well-controlled atopic hand dermatitis (AHD) for several years, attended our Pediatric Allergy Unit because they experienced worsening symptoms in their hands in the last year. Deepening the anamnesis of both children, they followed all measures of prevention and therapy of AHD. At the same time, they reported intensive handwashing through alcohol-based hand sanitisers (ABHS) before entering all classrooms and laboratories every day at school. Starting from the consideration that ABHS can represent a risk factor for hand dermatitis exacerbations (1), we suggested children wash their hands using an alcohol - and additives - free soap and water, informing the school about this preventive and therapeutic measure. Both children benefited from this treatment, with good control of AHD within a short time. It is known that AHD is a pediatric chronic condition affecting the skin and is characterized by the compromise of the integrity of the epidermal barrier. (2) The most important tool for the prevention of atopic dermatitis (AD) is the use of moisturizing creams, that preserve the skin's hydration as much as possible. (3) Another key step in the prevention of AD is to minimize the stress factors on the skin. (2) At the same time, during the COVID-19 outbreak, handwashing has emerged as an essential tool to prevent the spread of SARS-CoV-2 virus. (3) It can be put into practice through the use of warm water and soap or, if not available, ABHS. (3) The use of warm

water and soap is not always possible (4), while ABHS are frequently used for their versatility. (4) The prolonged use of ABHS leads to an increase in water loss, with a loss of lipids and emollients, and a denaturation of skin proteins, especially keratin. (5) This could lead to an intensification of skin dryness, exacerbation of eczematous lesions, irritation, and itching sensations. This event mostly happens when the skin barrier function is already compromised, such as in AD. (5) At the same time, the Italian Ministry of Health established a school regulation, asking the students to periodically disinfect hands with sanitizing gel or soap and water; especially before entering classrooms and laboratories and after contact with everyday objects, after using the toilet, after throwing away the handkerchief and before and after eating. (6) No rules have been personalized in this statement for children affected by AD attending the school. (6) Analyzing the history of these patients and the good control of AHD after following the pediatrician's advice, it seems appropriate to consider ABHS as a “school trigger” and their low-controlled AHD as an “occupational dermatitis”. The key to the treatment consists in avoiding this trigger factor at their workplace (school) and suggesting a personalized method for hand washing. Although school-age children affected by AHD are placed in a difficult position because they must both minimize the stress factors on their skin and washing adequately their hands to counteract the spread of SARS-CoV-2. A renewed pediatric culture of AHD at the time of COVID-19 seems to be an adequate solution.

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Abbreviations: AD: atopic dermatitis; ABHS: alcohol-based hand sanitizers

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