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Another source of allergic contact dermatitis to isothiazolinones in children – urgent call for regulation

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Editor,

Allergic contact dermatitis (ACD) from isothiazolinones is frequent and following an epidemic sensitization their use in leave-on products in Europe was forbidden and restricted that in rinse-off cosmetics,¹ with a consequent decrease in the frequency of new cases in Europe, but still not evident in Portugal.² Although more common in adults, methylchloroisothiazolinone (MCI) and methylisothiazolinone (MI) are also prevalent paediatric contact sensitizers.³

We report a case of an eleven years' old girl with hand dermatitis for six months, which improved on topical corticosteroids and recurred on their withdrawal. There was no personal or family history of atopy. Hands showed fissured eczema involving the palms and finger pulps, but the mother showed photos of frequent episodes of severe vesicular hand dermatitis (Fig. 1), in two occasions with extension to the forearms and face. The child was playing with slime for one year and more recently was using "homemade" slime with lesional worsening.

Patch testing with the European baseline and preservative series (Chemotechnique diagnostics, Vellinge Sweden) and a semi-open test using slime "as is", white glue, laundry detergent and shaving cream (ingredients of the "homemade" slime) showed at D3 and D7 readings, a strong positive reaction (2+) to MCI/MI 200ppm and MI 2000ppm, and to slime and the white glue, which contains MCI/MI and benzisothiazolinone, and a doubtful reaction to the laundry detergent (Fig.2). Chemical composition of the "commercial" slime was not available. Hand eczema improved very significantly on suspension of slime manipulation.

Slime has increasing popularity during the last year and nowadays is a widespread toy among children. It is a sticky substance made by mixing sodium borat with water but it can also be homemade with a variety of recipes including mixing glue, laundry detergent and shaving cream. Both glue and detergent can be important known sources of isothiazolinones. Analysis of slime also showed high concentrations of these preservatives.⁴

Since the first case report on PubMed on September 2018, 12 other children were reported has having ACD to slime.⁵ Clinicians should be aware of this emerging cause of ACD and important source of sensitization to isothiazolinones among children, with lifelong consequences with need to avoid other sources of isothiazolinones. The authors believe that a complete declaration of isothiazolinones beyond cosmetic products is important and an urgent regulation on slime is needed.

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