



Multiple subungual splinter haemorrhages simulating a systemic disease in a patient allergic to acrylates

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Currently, acrylates are an important cause of allergic contact dermatitis (ACD), with extremely varied clinical presentation. We report on an atypical clinical presentation: multiple splinter haemorrhages without associated lesions as a clinical sign of ACD caused by acrylates.

CASE REPORT

A 40-year-old woman attended the emergency department referred by her general practitioner after presenting with splinter haemorrhages that had developed over the course of 1 week. The patient, who worked as a child carer, had not previous remarkable medical history. On physical examination, there were multiple splinter haemorrhages with slight subungual hyperkeratosis in the distal areas of all the nails of the hands, without any lesions around the nail or skin. (Figure 1). Investigatory tests included an electrocardiogram, an echocardiogram, chest X-ray, urinalysis, and a blood test, without any abnormality. The unguinal culture from scrapings was negative for dermatophytes.

While taking a detailed clinical history, she reported having regularly used permanent nail polish for the past 3 years, without using UV or LED lamps for curing the nail polishes. In the last 2 years, she noted nail itching. She had previously consulted about this without successfully identifying the cause.

Suspecting a case of allergic contact dermatitis (ACD), patch tests were performed with the Spanish Contact Dermatitis and Skin Allergy Research Group (GEIDAC) baseline series using the TRUE Test with supplementary allergens and a series of acrylates supplied by AllergEAZE (SmartPractice, Barsbüttel, Germany). The tests were applied under occlusion on the upper back for 2 days on Curatest Chambers (Lohmann and Rauscher, Neuwied, Germany) fixed with Omnifix tape (Hartmann-Conco, Rock Hill, South Carolina). Readings were performed on day (D) 2 and D4 according to International Contact Dermatitis Research Group guidelines. An open test on the

forearm with the undiluted and uncured actual nail polishes used by the patient was also performed.

Test results were positive +++ for 2-hydroxyethyl methacrylate 1% (HEMA), 2-hydroxypropyl methacrylamide 2% (HPMA), ethylene glycol dimethacrylate 2% (EGDMA) and ++ for the patient's own products. (Figure 2). The allergens mentioned were identified on the labels of the patient's own products.

Avoiding the use of acrylates for nail care was recommended and the patient was informed of other sources and uses of acrylates (fillings, adhesives, etc.) in order to achieve complete avoidance. During the acute phase, a 8% clobetasol propionate nail lacquer was used for treatment and, along with acrylate avoidance, complete resolution was achieved, of both the symptoms and the splinter haemorrhages.

DISCUSSION

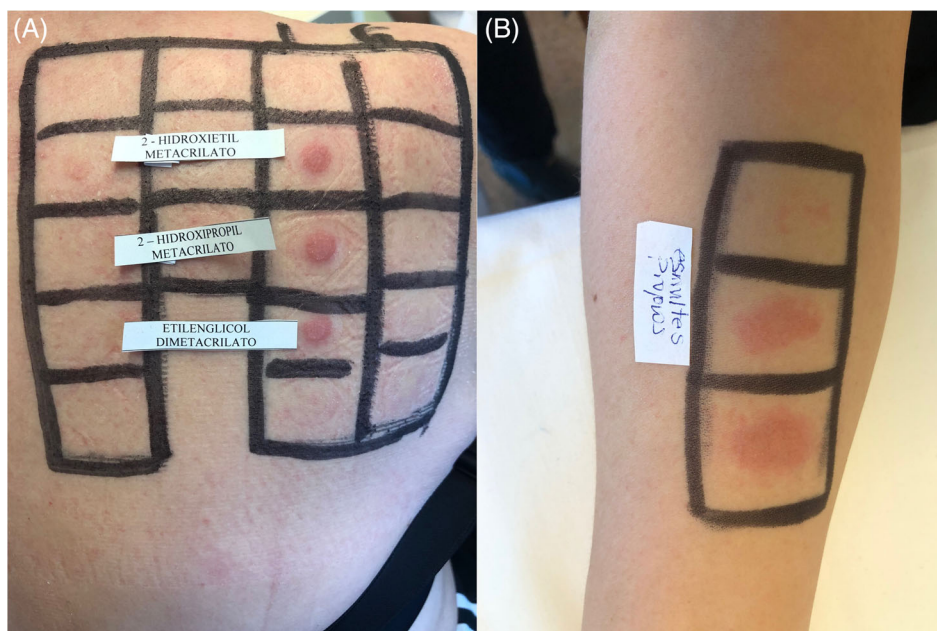
Acrylates are emerging allergens due to their increased use at an occupational level by technicians, beauticians, and dentists, as well as the fact that more and more people use nail polish. This is reflected in the high levels of sensitivity to acrylates in general patch testing, which is around 2.4%.¹ HEMA is the acrylate which most frequently produces sensitivities (92.5%), followed by HPMA (88.6%).²

The clinical presentations of ACD from acrylates are so varied that it may be difficult to diagnose ACD without carrying out an extensive anamnesis and examination. Cutaneous lesions caused by acrylates affect the hands in 88.9% of cases and clinically present as eczema of the fingers, frequently affecting the area around the nail in nail polish users and the finger pulps in beauticians.² Paraesthesia, onycholysis, onychodystrophy, subungueal hyperkeratosis, and splinter haemorrhages are not infrequent. Nonetheless, multiple subungueal splinter haemorrhages without cutaneous lesions are not a common early sign of a contact dermatitis caused by acrylates, as multiple nails being affected simultaneously suggests a systematic illness. In conclusion, we present an atypical manifestation of contact allergy

FIGURE 1 (A, B) Subungual splinter haemorrhages at the distal level in all fingernails in both hands. (C). Polarized light dermoscopy (PLD) shows longitudinal, reddish-brown striations located at the distal level of the nail plate, with a slight brown pigmentation at that level. (D). The PLD also revealed 1.5 mm thick hyperkeratosis below the nail plate



FIGURE 2 Positive patch tests, (A), Positivity to 2-hydroxyethyl methacrylate (HEMA), 2-hydroxypropyl methacrylate (HPMA) and ethylene glycol dimethacrylate (EGDMA) (B), Positivity to enamels provided by the patient



caused by acrylates which simulated a systemic disease and which, to our knowledge, is the first reported case of this type of presentation.

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CONFLICTS OF INTEREST

The authors have no conflicts of interest to declare.

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