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LETTER TO THE EDITOR

Fingertip dermatitis: a spy for psoriasis

Dear Editors,

Allergic contact dermatitis (ACD) due to acrylates is a frequent disease among workers, above all dentists, printers and fibreglass workers. Recently, the number of cases of contact allergic dermatitis has increased among beauticians specialised in sculpting artificial nails and also among who apply artificial nails on themselves.

The use of sculptured nails is becoming popular in beauty treatment centres, and they are also available in kits for applications at home. In recent years, we have witnessed an increase in the incidence of ACD caused by the acrylic products used in artificial nails. ACD firstly affects the professional beauticians who handle the product, but it is also observed in end users (1).

A 33-year-old woman presented to our ambulatory with pain and burning at the ends of the fingers, which appeared after the application of artificial nails. The patient reported the persistence of symptoms even after treatment with topical steroid creams.

Assuming an allergic basis, we performed a patch test series SIDAPA produced by F.I.R.M.A Spa (Firenze, Italy). The test consists of patches containing the following haptens, applied on the back of the patients: potassium dichromate, rosin, epoxy resin, formaldehyde resin, euxil 400, neomycin sulphate, fragrance mix, nickel sulphate, mercaptobenzotiaziolo, paraphenylendiamine, cobalt chloride, balsam of peru, thiuram mix, benzocaine, lanolin alcohols, parabens, Vaseline, scattered yellow, scattered blue and hydroquinone.

The patient was asked not to wash her back and not to take cortisone and antihistamines by mouth.

The patient came back to the clinic after 48 hours; then the operator who applied the patches removed them and a first reading was made. The patient then returned after 12 hours for reading at 72 hours.

The test is positive if any signs such as erythema (+positive), erythema + vesicles (++positive), erythema + vesicles + edema (+++positive) occur at the sites that contacted with haptens.

The results of all patch tests were negative (absence of all signs).

To make our research more scrupulous, we subsequently also applied special series of acrylates (TRUE test panels 1 and 2) supplemented with pet.-based selected allergens from a series of adhesive and acrylate chemicals F.I.R.M.A. [Benzoyl peroxide 1%, methyl methacrylate 2%, 2-hydroxyethyl methacrylate 2%, tripropylene glycol diacrylate 0·1%, trimethylolpropane triacrylate 0·1%, urethane diacrylate 0·1%, urethane diacrylate 0·05%, ethyl cyanoacrylate (ECA) 10% and hydroquinone 1%].

Special series for acrylate chemicals (F.I.R.M.A.) was positive (+++) for ECA 10%.

We advised the patient to remove artificial nails; following the removal, the patient returned to our clinic presenting severe fingertip dermatitis and nail plate dystrophy (Figure 1).

Allergic reactions to sculptured nails can appear within months or years after use by both professional users and end users. Symptoms of sensitisation to acrylates, generally in women, include subacute or chronic eczema on the pads of the fingers that come into direct contact with the acrylic resin (2).

Typical symptoms are pruritus, fingertip dermatitis and pain once fissures develop. Generally, the first sign is itchiness at the nail base, with paronychia, painful nails and, occasionally, paresthesia developing subsequently. The nail base often becomes dry and thickened, and onycholysis is frequent. The nail plate may show evidence of thinning, splitting and discolouration.

Eczematous lesions can also occur away from the site of contact because there is a transportation of residues of acrylates by the hands to more distant areas of skin (3).

Generally, in ACD, avoiding the items that caused the allergy is connected with the improvement of symptoms.

Despite the patient had no previous history of any other skin disease and had removed the artificial nails, not just the fingertip dermatitis symptoms were regressed, but crusted lesions also occurred in other parts of the body, such as the arms and back.

We decided to perform a skin biopsy, the results of which were compatible with psoriasis. Allergy-induced psoriasis was diagnosed.

Initially, Koebner phenomenon was considered as the formation of psoriasic lesions in the normal skin of people with psoriasis after cutaneous trauma. Actually, the definition includes lesions developed after trauma in people with no pre-existing dermatosis (4). It occurs in about 25% of people with psoriasis after various traumatic injuries (5), but it can also be caused by burns, friction, insect bites, surgical incision, irritant reactions and allergic reactions.

In this patient, fingertip dermatitis due to acrylate allergy was the provoking factor for psoriasis (Figure 1).

In this work, we emphasise that Koebner phenomenon can occur in patients without pre-existing dermatosis, and it can be linked with allergic reactions, also considering that the number of dermatology consultations for contact dermatitis caused by acrylate sensitisation is increasing, and this has important repercussions for both treatment and work.

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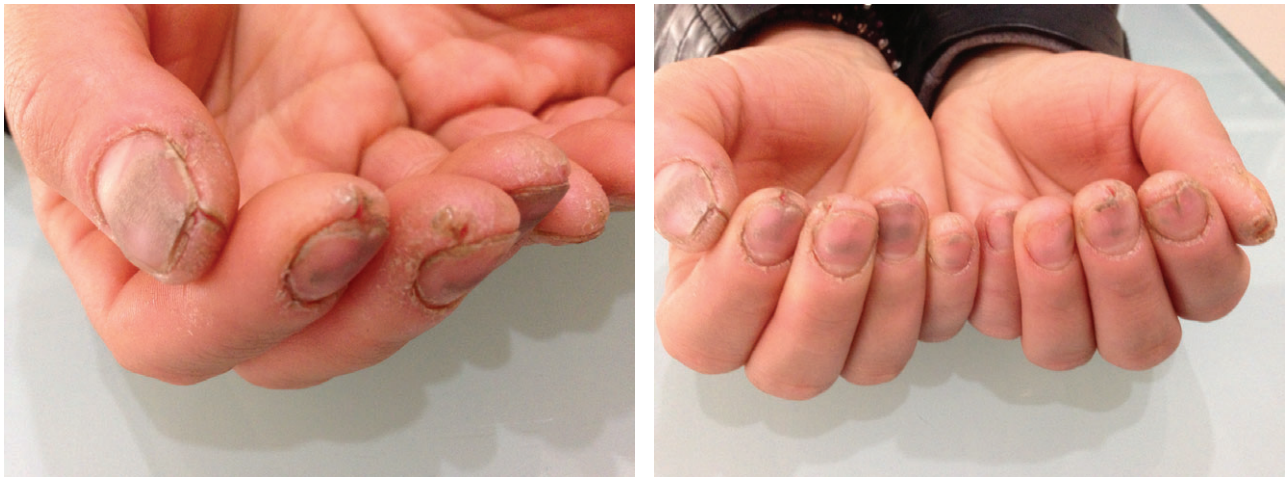

Figure 1 Fingertip dermatitis in acrylate allergic patient after application of artificial nails.

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