to 30 years of age. A benign course was reported for all patients and no malignant change or secondary metastases have been described to date. Berbis[6] reports a case followed for 20 years without complications. We believe it is important to bear this in mind for the management and follow-up of this condition.

In our patient, the symptoms, distribution of the lesions, and histopathology were identical to those previously described in the literature, although the onset of the condition at an early age is noteworthy.

In conclusion, we highlight the atypical presentation of multiple clustered dermatofibromas, a subgroup of a very common condition as is dermatofibroma, and its benign course in all the cases described to date.

References

1. Baraf CS, Shapiro L. Multiple histiocytomas, report of a case. Arch Dermatol. 1970;101:588–90.
2. Ammirati CT, Mann C, Hornstra IK. Multiple eruptive dermatofibromas in three men with HIV infection. Dermatology. 1997;195:344–8.
3. Dupré A, Christol B, Martínez D. Histiocytofibromes multiples groupés. Ann Dermatol Venereol. 1984;111:163–4.
4. Gershtenson PC, Krunic AL, Chen HM. Multiple clustered dermatofibroma: case report and review of the literature. J Cutan Pathol. 2010;37:e42–5.
5. De Unamuno P, Carames Y, Fernández-López E, Hernández-Martín A, Peña C. Congenital multiple clustered dermatofibroma. Br J Dermatol. 2000;142:1040–3.
6. Berbis P, Benderitter T, Perier C, Frey J, Privat Y. Multiple clustered dermatofibromas evolution over 20 years. Dermatologica. 1988;177:185–8.

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Occupational Contact Dermatitis Due to an Acrylic Resin (ThreeBond): 4 Cases in the Same Company☆

Dermatitis de contacto profesional por Threebond®. Cuatro casos en la misma empresa

To the Editor:

Acrylic resins are thermoplastic polymers or copolymers of acrylic acid or its esters. Acrylic monomers, with initiators, accelerators, and catalysts as additives, are polymerized in 1 of 2 ways: by exposure to ambient temperature, UV or visible light, or electron beams; or by heating.

Acrylic resins can cause a range of skin problems, including allergic contact dermatitis, irritant contact dermatitis, and contact urticaria.

In 1998, Björkner[1] published a classification of acrylic resins that is widely accepted and with which we concur. That classification includes monoacrylates, monomethacrylates, multifunctional acrylates, prepolymers, acrylonitrile, acrylamide and derivatives, and cyanoacrylates.

Multifunctional acrylates are used for dental and orthopedic prostheses, glues, adhesives, varnishes, artificial nails, dyes and inks, printing plates, parquet and wood flooring, and sealants for the automotive and iron and steel industries (Loctite, Threebond, and Sta-Lok).

The most important multifunctional acrylates in terms of frequency of sensitization are as follows: hydroxyethyl methacrylate (HEMA), hydroxypropyl methacrylate (HPMA), etyleneglycol dimethacrylate (EGDMA), diethylene glycol dimethacrylate (DEGDMA), trimethylolpropane triacrylate (TMPTMA), triethylene glycol dimethacrylate (TREGDMA), and butanediol dimethacrylate (BUDMA).

We report 4 cases of eczematous allergic contact dermatitis in workers employed in the same company. The dermatitis, which affected both hands, was the result of sensitization to acrylic resins contained in a sealant called Threebond (Fig. 1).

In October 2009 our skin allergy unit was asked to perform a study of 4 patients who worked in the same motorcycle assembly company. The clinical appearance of the palms and between the fingers of both hands was identical in all 4 patients, with extremely pruritic lesions consisting of long-standing vesicles and blisters. The patients obtained sick leave from work and received standard treatment with antihistamines and corticosteroids (topical for 3 patients and oral for 1 patient). The lesions became cracked and scaly and eventually healed. On returning to work, 3 of the patients experienced immediate relapses (the fourth patient had changed jobs). The 4 patients had been in contact with oils and greases, and also with the Threebond sealant resin, which the patients themselves attributed as the cause of their dermatitis. Although the use of special protective gloves, made of thick cloth, was mandatory in the company, all 4 patients admitted that they had occasionally failed to use them.

The 3 patients who experienced a relapse were 35, 40, and 32 years old, and their lesions had developed within 1.5 months, 1 year, and 10 months, respectively, of starting to work with the sealant. As mentioned above, the fourth patient had changed jobs, and so was not included in our study.

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Figure 1 Threebond sealant responsible for allergic contact dermatitis in our patients, 1 of whom had a vesicular reaction to the 2% Threebond solution.

The 3 patients underwent patch testing using the following series: the standard Spanish Contact Dermatitis and Skin Allergy Research Group (GEIDAC) battery; the Chemotechnique PG-1000 plastics and glues series and MA-1000 (meth)acrylates series (Chemotechnique Diagnostics AB, Vellinge, Sweden); and the Threebond sealant in 2%, 0.5%, and 0.2% aqueous solutions.

For all 3 patients, readings at 48 and 96 hours were negative for allergens in the GEIDAC battery and in the plastics and glues series. As for the (meta)acrylates series, all 3 patients were positive for HEMA, HPMA, and EGDMA, as well as for the 3 concentrations of Threebond; 1 patient was also positive for TREGDMA.

The literature contains a number of reports of allergic contact dermatitis developing following contact with acrylic resins in the Threebond sealant, presenting with eczema in the acute phase.[2–5] In 2000, Turker and Beck[6] published the results of their study performed between 1983 and 1995, reporting 15% positivity to (meth)acrylates. Of the positive cases, 71% were due to occupational contact: 34% in odontostomatology (dentists, clinical assistants, and dental technicians), and the remaining 66% in other professions.

To avoid sensitization and burns during patch testing, it is important to adequately dilute the sealant before applying the corresponding patch.[7]

In summary, our 4 patients, workers employed in the same company, had eczematous allergic contact dermatitis on both hands caused by sensitization to acrylic resins contained in the Threebond sealant. The lesions would probably have been avoided had the patients assiduously worn the gloves provided by the company. This underlines the need, in certain occupations, to ensure absolute compliance with all protective measures aimed at preventing direct or airborne contact of the skin with possible allergens or irritants. A number of other cases of dermatitis caused by the same material have been reported in Spain for other occupations.[8–10]

References

1. Björkner B. Resinas acrílicas. In: Symposium Internacional De Dermatología Labora. Vol 9. Madrid: Mapfre Medicina; 1998. p. 58–66.
2. Romaguera C, Conde Salazar L, Grimalt F. In: Grimalt F, Romaguera C, editors. Dermatitis de contacto por resinas y plásticos. 2ª ed. Barcelona: Ed. Dermatitis de Contacto de F. Syntex; 1987. p. 195–229.
3. Romaguera C, Conde Salazar L. Plásticos y resinas sintéticas. In: García Pérez A, Conde Salazar L, Giménez Camarasa JM, editors. Tratado de Dermatosis, Profesionales. 1ª ed. Madrid: Eudema, eds., S.A.; 1987. p. 184–224.
4. Conde Salazar L, Romaguera C. Dermatitis por plásticos. In: Giménez Camarasa JM, editor. Dermatitis de Contacto. Madrid: Aula Médica Ediciones; 1999. p. 245–81.
5. Conde Salazar L, Ancona A. Dermatosis profesionales por plásticos y resinas. In: Dermatosis Profesionales. Barcelona: Editorial Signament Editions; 2000. p. 89–110.
6. Tucker SC, Beck MHA. A 15 years study of patch-testing to meth(acrylates) in dental personel. Contact Dermatitis. 2000;42:175–6.
7. Vozmediano J, Manrique A. Active sensitization to (meth)acrylates. Contact Dermatitis. 1998;39:314.
8. Pérez-Formoso JL, de Anca-Fernández J, Maraví-Cecilia R, Díaz-Torres JM. Dermatitis de contacto a acrilatos en una industria de fabricación de ascensores. A propósito de 8 casos. Actas Dermosifiliogr. 2010;101:336–40.
9. Roche E, de la Cuadra J, Alegre V. Sensibilización a acrilatos por uñas artificiales acrílicas. Revisión de 15 casos. Actas Dermosifiliogr. 2008;99:788–94.
10. Conde Salazar L, Romero L, Guimeraens D, González MA. Dermatitis alérgica de contacto por acrilatos en odontólogo y protésico dental. Actas Dermosifiliogr. 1988;23:45–9.

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