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CLINICAL CASE OF ALLERGIC CONTACT OCCUPATIONAL DERMATITIS CAUSED BY METHYLMETHACRYLATE MONOMER

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SUMMARY:

A case of contact dermatitis on the palms by a dentist is presented. The clinical findings, the paraclinical investigation and the treatment are described. The methylmethacrylate monomer was found as an etiologic factor.

INTRODUCTION.

The allergic contact dermatitis is a disease, caused by the contact of the skin with the allergen. The most common agents causing it are Ni and Cr salts, resin and polymers components, the monomer, hinolol derivates, benzocain, formaldehyde, coloring substances and others.

The allergic contact dermatitis is developing as a delayed type of allergic reaction of hypersensitivity.

MATERIALS AND METHODS.

The presented case is of a female dentist S.Y., 47 years, with a 21 years dental practice. In the anamnesis she mentioned that for two years she had multiple eruptions on the palms and the fingers, accompanied with itching, chaps and fissuring which did not heal under the repeatedly prescribed treatment from a dermatologist, or there was a small and not constant effect (Fig.1). The patient enumerated the different dental materials with which she is in daily contacts. She told of usage of latex gloves too.

The patient was asked to make an orthopantomography (Fig.2), which revealed devitalized teeth 26, 37, 35, 46. After that she was directed to the office of Dental Allergology and Foci Diagnostics at the Department of Maxillofacial Radiology and Oral Diagnostics from the first two authors. There an allergic anamnesis and a complex foci diagnostics was carried out, including routine tests: electro skin test of Gelen, test for measuring of the oral electro potentials of the metal objects in the mouth, patch tests for different allergens and intradermal test for atopic reaction.

In the series of epicutaneous tests were included the most used in the dental practice of our colleague materials and also some canal filling materials, used in the endodontic treatment her teeth (Tabl.1).

The colleague was directed to the clinic of Dermatology for a consultation and treatment.

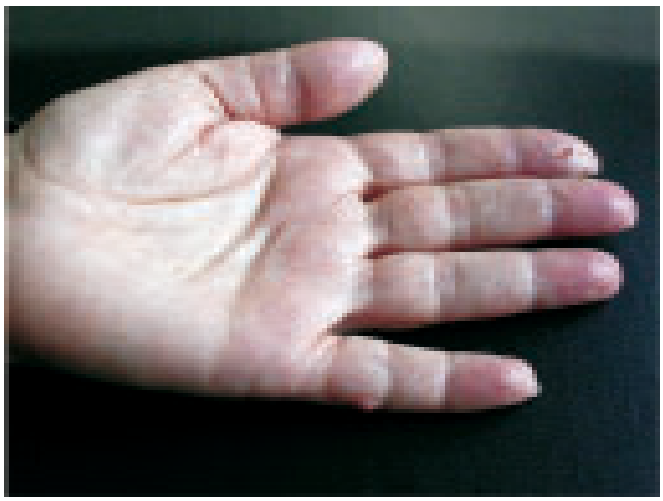


Fig.1

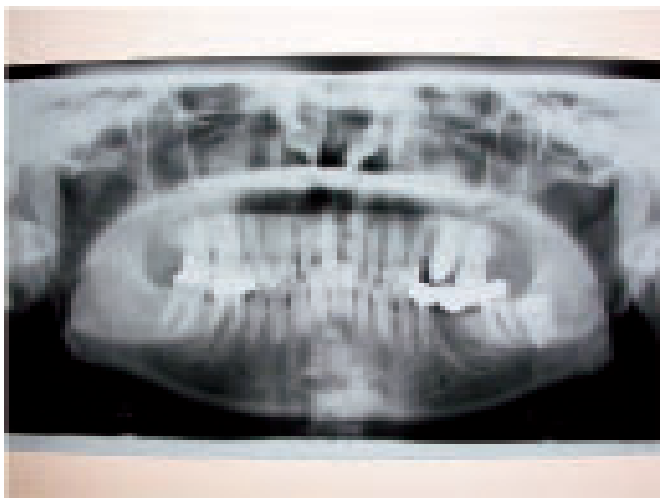


Fig.2

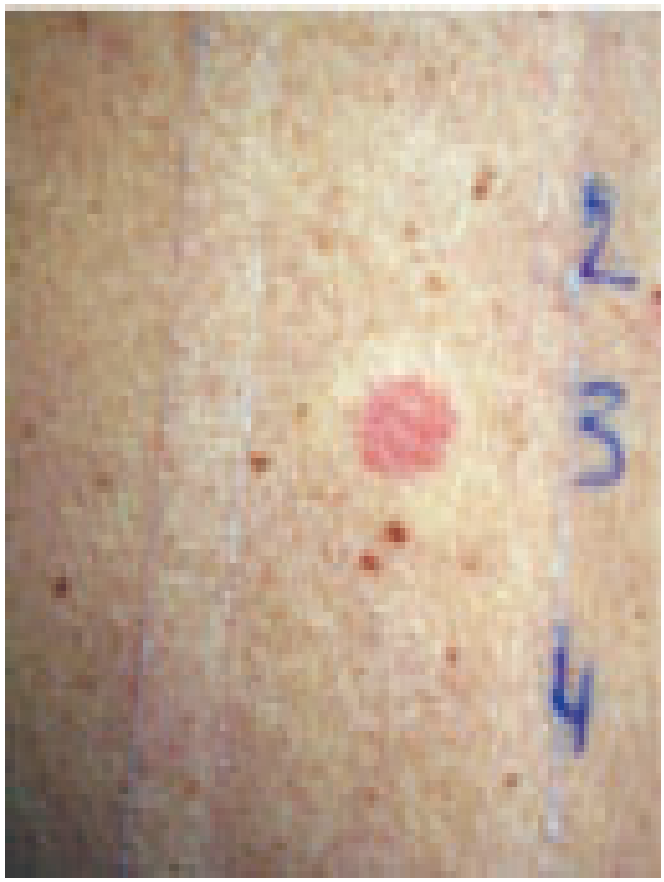


Fig.3

RESULTS:

The results from the test by Gelen showed no active foci of dental origin. There were potential foci at teeth 26, 37, 35, 46. The electro potential measuring showed no oral galvanism. The test for atopia was positive. The patch-test series revealed very strong positive reaction to the methylmethacrylate monomer- two plusses and negative reactions to the other suspected allergen materials (Fig. 3).

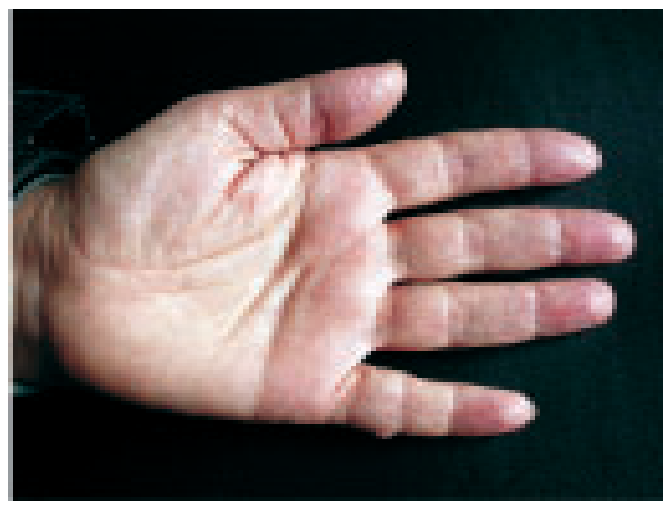
Tabl. 1. Patch tests series for epicutaneous screening.

Epidermal allergens	Accounting of the results at the 48th h.
1. Amalgam	- negative
2. Pink resin /PMMA/	- negative
3. Chemically polymerizing filling composite"Carizma"	- negative
4. Alloy for metal-ceramic constructions"Cristaloy"	- negative
5. Metal-ceramic-9M	- negative
6. Ceramic-"Vita"	- negative
7. Eugenol	- negative
8. Bonding agent of "Kerr"	- negative
9. "Lidomun"	- negative
10. "Foradent"	- negative
11. "Cortisomol"	- negative
12. Forphenan	- negative
13. Methylmethacrylate monomer	++ two plusses positive
14. Light-curing filling composite-"Te-econom"	- negative
15. Light curing filling composite-"Valux" 3M	- negative

The consultation from the dermatologist revealed moderate lichenification and hyperkeratosis of the palms and the fingers, pigmented maculae with light-brown color and clearly marked borders. On the palmer skin several fissures with a depth of 2 –2, 5 мм were seen, painful and with marked erythema. A local treatment with Elidel, 1% unguent /Pimecrolimus/ was prescribed.

We recommended the patient /colleague/ to exclude every contact with methylmethacrylate monomer and to use non-latex protective gloves /Vinyl gloves, Derma vinyl, AQL 1.0/ and a control appointment was arranged after 1 month.

The patient came at the third month. She had no subjective complaints. On her palms the xerosis was very mild (Fig. 4, 5). The pigmented lesions were very pale and with vague borders. The fissures were lacking but at that place we saw zones of hyper- and hypo pigmented maculae.



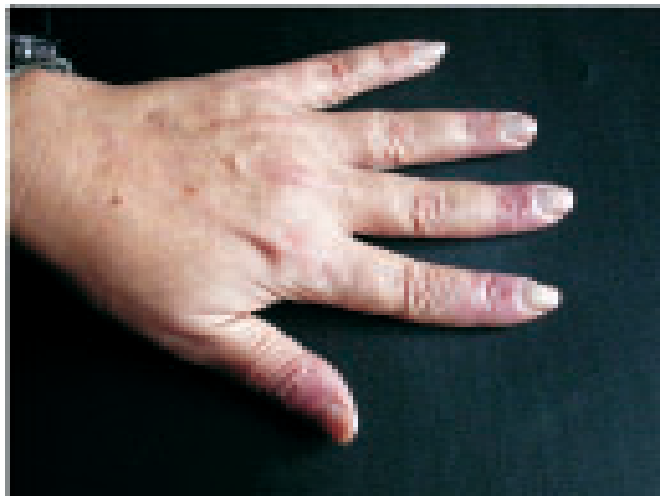


Fig. 4, 5: The patient after three months

CONCLUSIONS:

The allergic contact dermatitis caused by dental materials is a condition not so rare met in the dental practice. The dental personnel are also subjected to that risk. The patch testing is a quite effective model of the mechanism of originating and developing of the contact dermatitis.

The contact dermatitis is a disease where the clinician has the lucky opportunity to find the etiologic factor, to eliminate it from the working and the life environment and by this way to treat the disorder.

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