Contact dermatitis due to methyl methacrylate: uncommon and unwanted entity for dentists

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DESCRIPTION

Derivatives of methacrylic acid showing strong sensitising properties are frequent causes of allergic contact dermatitis in dentists and dental technicians.¹⁻⁴

Methyl methacrylate is used for fabrication of acrylic removable partial or complete dentures for edentulous patients. Dentists, especially prosthodontists, are repeatedly exposure to these chemicals during various clinical and laboratory procedures. The most frequent sensitisers include 2-hydroxyethyl methacrylate, ethylene glycol dimethacrylate and methyl methacrylate.

Allergies to acrylates in dental professionals presents as itching and rashes of the contact areas. Images in this case report involve a postgraduate student in the Department of Prosthodontics of our hospital, who developed contact dermatitis due to exposure to methyl methacrylate monomer.

Initially small rashes which were pruritic in nature appeared on the dorsum of the hand (figure 1).

After 1 h of exposure, there was swelling of all fingers with small vesicles all over.

The next day the vesicles were ruptured and bleeding was observed from the ruptured sites (figure 2).

On the third day there was skin peeling off the swollen fingers. The extension of the finger was difficult and painful due to swelling (figure 3).

Figure 1 Immediately after exposure small rashes/redness over the skin.

Figure 2 Oozing of blood from ruptured vesicles.

Figure 3 Peeling of skin and swollen fingers on third day after exposure.

To cite: Prajapati P, Sethuraman R, Bector S, et al. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2013-200520

Figure 4 Hands after completely resolved condition.

After local application of steroid formulations and systemic antiallergic drug therapy condition was improved.

After 10 days of treatment the condition completely resolved back to normal (figure 4).

Learning points

- Contact dermatitis may be due to immediate or prolonged exposure to the foreign body.
- Dermatitis can be in form of rashes, itching, skin peeling or even bleeding and vesicles.
- People prone to such conditions should avoid direct contact with causative agents.
- Use of protective barrier is always indicated to avoid such incidence.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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