

Photoallergic contact cheilitis from benzydamine hydrochloride contained in a mouthwash

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Benzydamine (CAS no. 642-72-8), available as hydrochloride salt [1-benzyl-3-(3-diethylaminopropoxy)-1H-indazole hydrochloride], is a non-steroidal anti-inflammatory drug systemically and locally used in odontostomatology, otorhinolaryngology, orthopaedics, urology, and gynaecology for its anaesthetic, analgesic, and anti-inflammatory properties. It is topically used as cream or gel, as well as vaginal rinse and mouth wash.¹ We describe two cases of photocontact cheilitis to benzydamine hydrochloride contained in a mouthwash.

CASE REPORTS

Case 1. A 56-year-old man presented with eczematous lesions of his lips (Figure 1A). The history revealed that the skin lesions appeared 1 month after using a mouthwash containing benzydamine hydrochloride (Tantum Verde, ACRAF SpA, Rome, Italy) for daily oral hygiene. Allergic contact dermatitis was suspected, and the mouthwash was immediately stopped. The lesions disappeared in 10 days

with twice daily application of methylprednisolone aceponate ointment.

Case 2. A 69-year-old atopic woman presented with erythematous lip dermatitis (Figure 1B). The patient was using an oral prosthesis and reported long-term regular use of a mouthwash containing benzydamine hydrochloride (Tantum Verde). The product was immediately stopped, and the lesions disappeared in 1 week with once daily application of mometasone furoate ointment.

In both patients, patch tests with the Società Italiana di Dermatologia Allergologica, Professionale e Ambientale (SIDAPA) base-line series (Euromedical, Calolziocorte, LC, Italy) and the mouthwash "as is" were carried out 1 month after complete healing. We also performed photopatch tests with the European photopatch series (containing benzydamine hydrochloride 2% pet.) and with the mouthwash "as is". Patch and photopatch tests with the AI Test (Euromedical) on Scanpor Tape (Norgesplaster, Vennessla, Norway) were applied on the back and left in occlusion for 2 days. Photopatch tests were carried out by



FIGURE 1 (A), Photoallergic contact cheilitis in the 56-year-old man and **(B),** in the 69-year-old woman

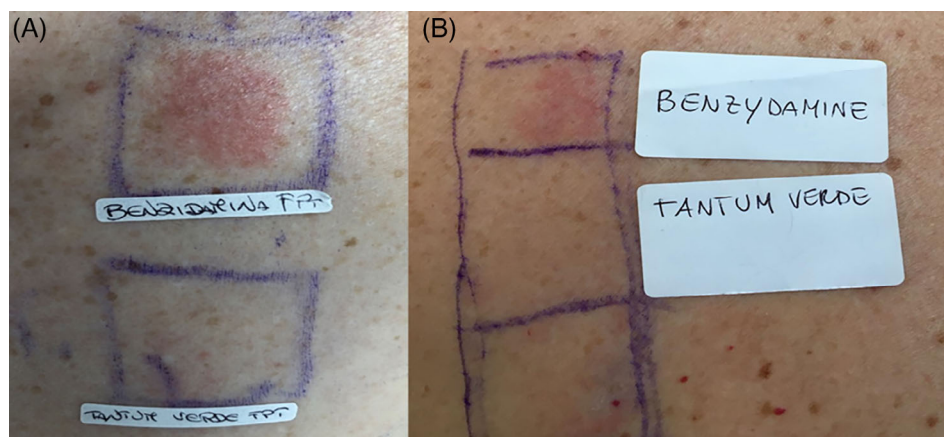


FIGURE 2 Photopatch tests to benzydamine hydrochloride 5% pet. (++) and to the mouthwash as is (neg) at D4 in Case 1 (A) and case 2 (B)

applying in duplicate the allergens on the back; one set was irradiated on day (D)2 with UVA radiation at the dose of 5 J/cm² (UV 801 KL, PUVA/TL01, Waldmann GmbH, Villingen-Schwenningen, Germany). Readings were taken on D2, D4, and D7.²

In Case 1, patch tests were negative, while photopatch tests showed a positive reaction to benzydamine hydrochloride (++) at D2, D4, and D7) (Figure 2A). In Case 1, patch tests showed a positive reaction to methylisothiazolinone (++) at D2, D4, and D7; past relevance), while the photopatch test was positive to benzydamine hydrochloride (++) at D2, D4, and D7) (Figure 2B). Of note, patch and photopatch tests with the mouthwash "as is" (containing benzydamine) were negative.

DISCUSSION

We report two cases of photoallergic contact cheilitis to a mouthwash containing benzydamine hydrochloride, a well-known contact and photocontact sensitizer.^{1,3-7}

Photoallergic contact cheilitis caused by mouthwashes containing benzydamine might be under-estimated, as it is an unusual clinical presentation, with the involvement of the lips which are not strictly exposed to gargling solutions.¹ Moreover, negative patch and photopatch tests with the suspected mouthwashes, as in our cases, might be misleading because of the low concentration of benzydamine in them (0.15%). In conclusion, we highlight that benzydamine hydrochloride is a current photocontact sensitizer. Photopatch tests with the European standard series, which contains benzydamine hydrochloride at the appropriate concentration, are required for its diagnosis.

CONFLICTS OF INTEREST

Authors declare no conflicts of interest.

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