

Table 1. Patch test results with Labiatae

	D2	D4
rosemary leaves (as is)	++	+++
thyme (as is)	—	—
origanum (as is)	—	—
mint (as is)	—	—

cation. Lesions improved in 10 days after withdrawal of the plasters. Patch tests to Labiatae were positive only to rosemary leaf (Table 1), which was negative in 10 controls.

Discussion

Rosemary is a plant commonly used as a spice, flavouring agent and naturally-occurring antioxidant (1). It has also been used for its medical properties. There have been reports of the inhibition of carcinogenesis by rosemary and its constituents (1, 2). Because of its anti-inflammatory properties, it has been used on local injuries.

Contact dermatitis due to plants applied topically for

medical purposes has often been described. Rodriguez et al. (3) reported contact dermatitis caused by burdock (*Arctium lappa*) applied in plasters for knee and ankle injuries (4). Del Pozo et al. (4) reported allergic contact dermatitis due to *Verbena officinalis* L. applied topically to the chest for bronchitis (4).

To our knowledge, this is the 1st documented report of a confirmed allergic contact dermatitis from rosemary leaves. We did not find cross-reactions with other members of the Labiatae.

References

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Maculopapular and urticarial eruption from cetirizine

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Recently, we reported an erythematous maculopapular eruption caused by cetirizine in an asthmatic patient, confirmed by positive oral challenge test. Skin tests (patch, prick and intradermal) were negative (1).

Case Report

A 70-year-old non-atopic woman was admitted because of a 1-week history of erythematous maculopapular eruption, predominantly follicular on the abdomen and urticarial on the thighs. She had been treated with lisinopril, betaistine and prazepam for hypertension, dizziness and anxiety since 1987 and with cetirizine (10 mg oral daily) for facial itching over the last 2 weeks. In the past, the patient had had an allergic contact dermatitis caused by an antifungal ointment. Histologic examination of a thigh lesion revealed slight spongiosis and a perivascular lymphohistiocytic infiltrate with some eosinophils. Direct immunofluorescence did not detect deposits of immunoglobulins and complement components. Haematological changes were not found; in particular, there

Table 1. Results of patch, prick and intradermal tests

Patch tests	D2	D3
GIRDCA standard series		
ethylenediamine dihydrochloride 1%	+++	++
neomycin sulphate 20%	++	+++
fragrance mix 8%	++	++
diethylenediamine (piperazine) 1% ^{a)}	++	++
cetirizine 1% ^{a)}	—	—
cetirizine 2.5% ^{a)}	++	++ ^{b)}
cetirizine 5% ^{a)}	+++	+++ ^{b)}
Prick tests ^{c)}	20 min	D1
cetirizine 1%	—	—
cetirizine 2.5%	—	—
cetirizine 5%	—	—
Intradermal tests ^{d)}		
cetirizine 1%	+++ ^{e)}	—
cetirizine 0.5%	++ ^{e)}	—
cetirizine 0.1%	++	—
cetirizine 0.05%	+	—

^{a)}pet. ^{b)}Persistent at D5. ^{c)}Hydroglyceric solution. ^{d)}Saline solution. ^{e)}Erythematous-oedematous reaction.

was no increase in eosinophilic granulocytes, IgE or circulating immune complexes.

All drugs were stopped on admission and the lesions cleared within 10 days. Oral challenge tests with lisinopril, betaistine and prazepam, performed 1 month after discharge, were negative. 2 weeks later, the patient suffered another pruritic crisis of the face and self-administered cetirizine at the same dose; after 3 days, the eruption relapsed in the same sites.

Patch testing with the GIRDCA standard series and the other allergens listed in Table 1 revealed positive reactions to ethylenediamine dihydrochloride, neomycin sulfate, fragrance mix, diethylenediamine, cetirizine 2.5 and 5%. The last 2 positive reactions persisted for 5 days. Prick tests with cetirizine were negative, while intradermal tests showed positive immediate reactions to all dilutions of cetirizine. Patch, prick and intradermal tests with cetirizine in 20 controls were negative.

Discussion

Antihistamines can cause contact and photocontact dermatitis (2), but skin reactions provoked by their systemic use are very rare (3). These are mainly linked to phenothiazine- and piperazine-derived compounds (3). Cetirizine is an oxidative metabolite of hydroxyzine, which is a piperazine derivative structurally based on a dimer of ethylenediamine (Fig. 1). Cetirizine is used world-wide in the treatment of allergic disorders and it is well tolerated in the Italian population, despite the high prevalence (4.3%) of sensitivity to ethylenediamine (4), generally induced by topical antifungal medications. This could be due to not very common cross-reaction between ethylenediamine and diethylenediamine (or piperazine), which was found in only 5 of the 50 ethylenediamine-positive subjects investigated by Balato et al. (5). This has been confirmed by oral challenge test with hydroxyzine: relapse of ethylenediamine lesions was observed in only a few patients (6).

In conclusion, we suggest that cross-reactions among ethylenediamine, hydroxyzine and cetirizine are influenced by sensitivity to diethylenediamine, which has the piperazinic ring in common with the above-mentioned antihistamines. However, it is possible that other antigenic determinants are involved in cutaneous eruptions

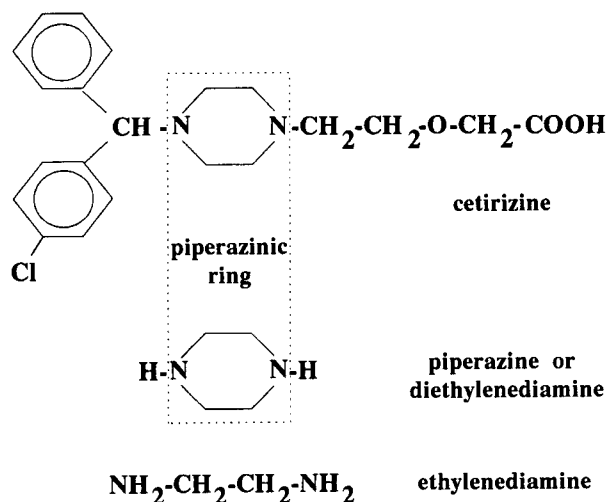


Fig. 1. Chemical structures of cetirizine, diethylenediamine, and ethylenediamine.

from cetirizine, especially when skin tests are negative (1, 7).

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