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Comparison of the eliciting properties of 3 different propolis samples

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Key words: propolis; contact sensitivity; cross-sensitivity; balsam of Peru; differences between samples. © Munksgaard, 1998.

Hausen et al. (1) stated the main allergen in propolis to be 1,1-dimethylallyl caffeic acid ester. Later, he observed that the minor constituents of propolis also sensitized and cross-reacted with balsam of Peru (2–4). In our clinic, cross-reactions between propolis and balsam of Peru have long been observed (5). Lately, we wondered how much such cross-reactions might be influenced by differing samples of propolis.

For this study, 3 propolis samples, from various regions of Poland, were designated with letters A, B, C, and used for patch testing (10% pet.), along with balsam of Peru of 1830 consecutive patients with dermatitis. The results obtained are presented in Table 1. 2 conclusions were drawn: firstly, different samples detected sensitivity with different frequencies; secondly, there was a small group of patients sensitive to only 1 of the 3 samples tested.

Table 2 presents the frequency of sensitivity to balsam of Peru coexistent with sensitivity to various propolis

samples. For comparison, the frequency of sensitivity to this balsam in patients sensitive to nickel, the most frequent contact allergen, was noted. In patients sensitive to every propolis sample, sensitivity to balsam of Peru was 6× as frequent as in patients sensitive to nickel, and this difference was statistically significant ($p < 0.001$). Moreover, coexistence of sensitivity to the balsam with sensitivity to various propolis samples was different be-

Table 2. Coexistence of sensitivity to balsam of Peru with sensitivity to propolis samples A, B, C and nickel

Contactant	Positive	Positive also to balsam of Peru	
	<i>n</i>	<i>n</i>	(%)
A	33	26	78.8
B	26	17	65.4
C	28	18	64.3
nickel	41	4	9.8

Table 1. Frequency of sensitivity to various propolis samples in 1830 consecutive patients with dermatitis

Propolis sample	All sensitive patients		Sensitive only to a given sample	
	<i>n</i>	(%)	<i>n</i>	(%)
A	33	1.8	8	0.4
B	26	1.4	2	0.1
C	28	1.5	2	0.1

Table 3. Coexistence of allergy to balsam of Peru in patients sensitive to propolis but negative to at least 1 propolis sample

Patients unresponsive to propolis sample	Sensitive to balsam of Peru		
	<i>n</i>	<i>n</i>	(%)
A	8	2	25.0
B	15	11	73.3
C	13	10	76.9

tween the samples used, though the observed differences were without statistical significance.

Table 3 shows the coexistence of sensitivity to balsam of Peru and propolis, taking into account only those propolis-sensitive patients in whom tests with at least 1 propolis sample were negative. The table shows that patients not responding to sample A were less frequently (25.0%) positive to balsam of Peru than patients not responding to 1 of the 2 other propolis samples (73.3% and 76.9%), and these differences were statistically significant ($p < 0.05$).

Hausen et al. (1–4) demonstrated that the samples that he used contained 26 identified substances. It is clear that our samples, obtained from various regions of Poland, were lacking certain of these constituents. Furthermore, Hausen found that at least 13 propolis constituents were present in balsam of Peru. This explains our finding that sample A more frequently gave cross-reactions with balsam of Peru, containing probably more components in common with it as compared to the

2 other samples studied. In our whole material of 1830 consecutive patients with dermatitis, more patients were positive to balsam of Peru than to any propolis sample studied. Of 86 patients sensitive to balsam of Peru, only 28 were positive to propolis. However, the coexistence of sensitivity to balsam of Peru with propolis is not accidental, in view of the relatively infrequent coexistence of sensitivity to balsam of Peru and nickel.

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Allergic contact blepharoconjunctivitis caused by phenylephrine, associated with persistent patch test reaction

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Key words: allergic contact blepharoconjunctivitis; phenylephrine; medicaments; eyedrops; persistent patch test reaction. © Munksgaard, 1998.

Case Report

A 75-year-old woman was referred in October 1997 by her ophthalmologist to investigate her allergic blepharoconjunctivitis. She also had glaucoma and cataracts, for which she had been treated for some years with ophthalmic topicals. She had had 3 episodes of conjunctival injection, periocular oedema and erythema with pruritus, in the previous year. Symptoms had arisen within 24 h of ophthalmological examination and had gradually resolved over the next few days. There was no personal or family history of atopy.

Patch tests were carried out to the Portuguese standard series, medicaments, and preservatives series, and her own ophthalmic topicals, with the following positive results:

	D2	D4
neomycin sulfate 20% pet.	–	++
phenylephrine eyedrops as is	++	++

1 month later, she returned with a persistent positive patch test to the phenylephrine eyedrops, which persisted for 2 months, before leaving residual pigmentation. The components of these eyedrops (phenyleph-

rine hydrochloride, boric acid, sodium bisulphite, trisodium citrate, EDTA (triplex III) and benzalkonium chloride) were supplied to us by the manufacturer and the patient was patch tested with them. The only positive result was to phenylephrine 1% pet. (+D2/+ +D4). This positive patch test to phenylephrine persisted for only 10 days. 7 healthy controls were negative.

The patient has since remained well, with no recurrence of symptoms, since eyedrops containing phenylephrine were withdrawn.

Discussion

Phenylephrine hydrochloride is a sympathomimetic drug frequently employed in ophthalmology, as a mydriatic and conjunctival decongestant, in 0.1 to 10% solution. Contact sensitivity to this drug is well-known (1–5). Mancuso et al. (6) reported 2 long-lasting allergic patch test reactions to phenylephrine in 2 patients, which persisted for 7 and 5 months, respectively. In our case, a positive patch test to phenylephrine disappeared after 10 days, but a positive patch test to the eyedrops containing phenylephrine persisted for 2 months and left residual pigmentation, although only phenylephrine, among the components, was positive. The pathogenetic mechanism of this type of patch test reaction is still unknown (7).