

Diluted Compositae mix versus sesquiterpene lactone mix as a screening agent for Compositae dermatitis: a multicentre study

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The objective of this study was to compare diluted Compositae mix with sesquiterpene lactone mix as a marker for Compositae dermatitis. Patients undergoing diagnostic patch testing in 8 British Isles patch test centres were also patch tested to sesquiterpene lactone mix (0.1% pet.) and Compositae mix (3% pet. or 0.6% pet.). Of a total of 5574 patients tested, 71 (1.3%) reacted to Compositae mix, 57 (1.0%) reacted to sesquiterpene lactone mix, and 45 to both. Diluted Compositae mix remained a more sensitive screening marker for Compositae allergy. We recommend that patients are patch tested to both agents.

Key words: Compositae mix; sesquiterpene lactone mix; patch testing technique; active sensitization; plants; allergic contact dermatitis. © Munksgaard, 2001.

Accepted for publication 27 February 2001

Several studies have highlighted the inadequacy of sesquiterpene lactone mix 0.1% pet. as a screening agent for Compositae dermatitis (1–4). Compositae mix 6% pet. is now available commercially as an alternative. It has been shown to be more sensitive than sesquiterpene lactone mix 0.1% pet. (5, 6). Unfortunately Compositae mix 6% pet. has been associated with an increased risk of active sensitization (7). In this multicentre study, we were interested to see whether Compositae mix diluted to 3% pet. remained a sufficiently sensitive screening agent for Compositae dermatitis.

Materials and Methods

Members of the British Contact Dermatitis Group were invited to participate in this multicentre study. Patients who attended for diagnostic patch testing between July 1998 and December 1999 were included in the study. All patients were patch tested to the European standard series, sesquiterpene lactone mix and diluted Compositae mix. Commercially available Compositae mix 6% pet. (Trolab) was diluted to 3% pet. at individual patch test centres. A few months into the study, members were advised to reduce the Compositae mix further to 0.6% pet., because of 2 cases of active sensitisation to the 3% pet. mix.

Patch tests were applied to the back for 2 days (D). Reactions were read on D2 and between D4 to D6. MOAHL indices were obtained from each centre. Information on age, sex, primary site of dermatitis, duration of disease, history of atopy (personal history atopic eczema and/or mucosal allergy) and occupation was documented in a standard form for patients with positive reactions to either Compositae mix or sesquiterpene lactone mix.

Results

8 centres in the British Isles participated in the study. A total of 5574 patients were tested. The MOAHL index and number of patients from each centre are summarized in Tables 1 and 2.

The median ages of patients with positive reactions to Compositae mix and sesquiterpene lactone mix were 57 and 59 years, respectively. 83 patients were found to be Compositae allergic. 54% were female, 42% were atopic and the median duration of disease was 48 (range 1–600) months. The primary sites of involvement for 90% of patients were hands, face or both. 6 patients worked in the horticultural industry. Of the 83 Compositae-allergic patients, 71 reacted to Compositae mix, 57 to sesquiterpene lactone mix and 45 to both.

Table 1. MOAHL index from each centre (in %s)

Centre	Male	Occupation	Atopic	Hand	Leg
Amersham	35	11	39	24	16
Bristol	38	22	43	36	8
Cork	28	22	32	35	7
Oxford	36	6	70	40	21
Dundee	40	15	27	32	2
Dundee photo	70	10	28	30	0
Leeds	36	17	51	38	2
Nottingham	40	13	36	33	11
mean	40	14	41	33	8
median	37	14	38	34	8

Table 2. Results from 8 British Isles patch test centres

Centre	No. patients	No. SL+ve	No. CM+ve	No. both +ve
Amersham	603	2	2	1
Bristol	305	2	2	2
Cork	167	0	2	0
Oxford	517	5	8	5
Dundee	1600	6	7	6
Dundee photo	167	4	8	4
Leeds	559	10	9	7
Nottingham	1436	28	33	20
Sheffield	220	0	0	0
total	5574	57	71	45
% +ve		1.0%	1.3%	

Fig. 1 shows the number of patients with positive reactions to sesquiterpene lactone mix and Compositae mix. The prevalence of current and old reactions to the Compositae mix was 79%. 2 irritant reactions were reported (Table 3).

We were aware of at least 2 cases of active sensitisation with the 3% pet. Compositae mix. A 61-year-old housewife developed a positive reaction to Compositae mix 3% pet. 3 weeks after patch testing. She gave no history of Compositae allergy and her facial eruption was later diagnosed as Jessner's lymphocytic infiltrate. The 2nd patient was a 50-year-old catering assistant with a history of hand dermatitis. She had a weak positive patch test reaction to *Taraxacum officinale* on D4. 3 weeks later, she became positive to Compositae mix, sesquiterpene lactone mix, feverfew and tansy. Her hand dermatitis resolved after avoiding lettuce.

The change in Compositae mix dilution during the study led to some patients being patch tested to the 3% pet. mix and others to the 0.6% pet. mix. Unfortunately, documentation of this information in the result form was poor. It is likely that the majority of patients were positive to the 0.6% pet. mix. Direct comparisons of efficacy and side-effects of the 2 dilutions were therefore not possible.

Discussion

An additional 26 (31%) Compositae-sensitive patients were identified using the diluted Compositae

mix. The diagnosis would have been missed in these patients if only the sesquiterpene lactone mix had been used for screening. Comparing this result to a previous published study, the sensitivity of diluted Compositae mix has thereby been reduced from 58% to 31% (6).

The number of Compositae mix-positive patients was highly variable across the British Isles. It ranges from 0.3% in Amersham to 2.3% in Nottingham. The 2 centres are within 120 miles of each other and there is no obvious difference in occupational exposure. The difference may simply reflect local referral and selection of patients for patch testing. The overall Compositae mix-positive prevalence rate was, however, in keeping with the observation made by Paulsen et al. in a multicentre European study of sesquiterpene lactone mix (8).

The age distribution from this study was typical of patients with Compositae dermatitis (2, 8). The sex ratio corresponded to previous European experience, with a slight female preponderance (8). Occupational sensitization was low. The hands and face were the most commonly affected sites. The MOAHL indices were very similar between centres, except for that of the Dundee phototherapy unit which reflected the type of patients seen in this specialized unit.

In conclusion, Compositae mix, even after dilution, is still more sensitive than sesquiterpene lactone mix 0.1% pet. for the diagnosis of Compositae allergy. There were a few patients who reacted to sesquiterpene lactone mix only, so we recommend that patients are patch tested to both allergens.

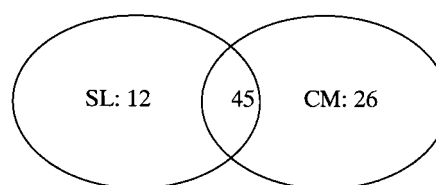


Fig. 1. The number of patients with positive reactions to sesquiterpene lactone mix (SL), Compositae mix (CM) and both.

Table 3. Relevance of positive Compositae mix reaction (c=current, o=old and d=don't know)

Centre	No. CM+ve	Irritant Rx	Relevance		
			C	O	D
Amersham	2	0	2		
Bristol	2	0	1	1	
Cork	2	0			2
Dundee	15	0	15		
Oxford	8	2	4		4
Nottingham	33	0	24	3	6
Leeds	9	0	6		3

Acknowledgements

We thank those members of the British Contact Dermatitis Group who collected data for this study.

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