

been playing with and cuddling the children. The father did not use any personal care products other than soap on the face. He shaved with an electric razor. The father's face displayed a prominent beard stubble, and the pattern of the lesions resembled the spatial distribution of the stubble.

3 main mechanical irritants were involved: the sharp ends of the beard stubble and physical pressure and abrasion from the stubble. Sharp tips can be created on hairs as a result of shaving or cutting. These sharp points can penetrate the skin and have been implicated in the etiology of other conditions, such as pseudofolliculitis barbae (1) and barber's sinus (2).

The appearance and transience of the lesions suggested a component of dermatographism. Although the lesions in these 2 cases are not linear, as in classical dermatographism, the punctate pattern of the lesions corresponds to the distribution of the source of the eliciting pressure, the beard stubble. Dermatographism is also known as urticaria factitia (3), as is also suggested

by the lesions in these 2 cases. Clustered lesions appear in follicular dermatographism and in cholinergic or heat urticaria (3–5). The similarity of these stubble-induced lesions to the mark created by a tine test or inoculation suggested the name "pseudoinoculum barbae".

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The seasonal influence on patch test reactions is significant in Israel

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There are several reports of the suppressive effect of sunlight, UVA, UVB and PUVA on the induction and elicitation of allergic contact dermatitis (1–4). The closer to the equator, the smaller the difference between summer and winter UV radiation (5). Previous studies on the influence of season on patch test reactions are conflicting (Table 1). The difference in UV radiation between winter and summer in Israel is large (Table 2).

Patients and Methods

We studied 1019 patients (488 male (47.9%) and 531 female (52.1%)) patch tested with European standard

series (Chemotechnique Diagnostics, Sweden), according to ICDRG guidelines (11). We analysed the seasonal variations in patch test reactions between summer (June–August), winter (December–February) and transitional seasons (March–May, September–November). The data also included correlations as to age and sex, and specific allergens. The following statistical methods were used: computerized SAS analysis, χ^2 test and Spearman correlation coefficient test.

Table 1. Studies on the influence of season on patch test reactions

Ref.	Country	Latitude	Seasonal variation
(6)	Denmark	56°	no
(7)	Sweden	56°	yes
(8)	Belgium	48°	no
(5)	Sweden	56°	yes
(9)	Greece	38°	no
(10)	Austria	46°–49°	no

Table 2. Average daily and monthly UV dose/h on horizontal flat surface – MED – in central Israel, latitude 32°

Month	Daily dose	Monthly dose
January	4.0	123
February	4.9	142
March	9.9	308
April	10.4	312
May	13.3	412
June	15.8	474
July	17.4	539
August	14.9	461
September	11.5	345
October	8.1	250
November	4.5	135
December	4.1	126

Results

216 patients (23.9%) were tested in winter, 177 (19.6%) in summer and 509 (56.4%) in transitional seasons. In 117 patients, the season in which patch tests were performed was not indicated. Negative patch test reactivity was observed in 96 (55%) patients in winter, 108 (70%) in summer and 233 (53%) in transitional seasons. Positive reactivity (++) and (+++) was observed in 79 (45%) patients in winter, 204 (47%) in transitional seasons and 47 (30%) in summer. Doubtful, irritant and + reactions were excluded from analysis. In transitional seasons and in winter, the differences between positive and negative patch test reactions are statistically insignificant. In summer, on the other hand, negative patch test results are much more frequent. This observation is statistically significant ($p=0.002$).

Age and sex had no influence on the seasonal variation in patch test reactions, and different allergens showed the same pattern of results.

Discussion

Most patch testing in Israel is performed in transitional seasons and in winter. The results of this study encourage us to maintain this. Patients patch tested in summer and giving negative reactions should be re-evaluated in winter or in transitional seasons. If sunbathing in July-August is causing suppression of patch test reactions in summer, recent campaigning against excessive sun exposure may be expected to diminish this seasonal effect in the future.

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Difficulties in the interpretation of patch test reactions to ophthalmic β -blockers

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Key words: allergic contact dermatitis; glaucoma; β -blocking agents; carteolol; medicaments; patch testing technique; false-negative reactions. © Munksgaard, 1998.

Ophthalmic β -blockers are widely used in the topical treatment of glaucoma. It is documented that they can induce allergic contact dermatitis.

Case Report

A 68-year-old woman, with no history of atopy, had had severe eczema, associated with conjunctivitis, on her upper and lower eyelids for 6 months. She had been treated for several years with the ophthalmic β -blocker Carteol[®] (carteolol). Patch testing with the European standard series, an ocular series and her eyedrops revealed a ?+ reaction to Carteol[®] at 2 and 3 days, which persisted till 7 days. Patch testing to benzalkonium chloride (preservative of Carteol[®]), as well as to the ex-

Table 1. Patch test results

Patch tests	D2	D3
standard series	—	—
benzalkonium chloride 0.1% aq.	—	—
Carteol [®] 2% as is	?+	?+
excipients of Carteol [®] 2%		
sodium chloride 1% aq.	—	—
sodium monobasic phosphate 1% aq.	—	—
sodium bibasic phosphate 1% aq.	—	—
carteolol 2% aq	—	—
carteolol 5% aq.	—	—
befunolol 2% aq.	—	—
befunolol 5% aq.	—	—
betaxolol 2% aq.	—	—
betaxolol 5% aq.	—	—