

SEASONAL FACTORS IN ATOPIC DERMATITIS AND THEIR RELATIONSHIP TO ALLERGY

E. Young

Department of Dermatology, Academic Hospital, Utrecht, The Netherlands

Abstract. The number of first visits to an out-patient department by patients with atopic dermatitis, as well as anamnestic data from such patients, clearly shows seasonal changes in the course of this disease. An obvious relation is demonstrable between seasonal exacerbations and allergy to seasonal allergens.

Key words: Atopic dermatitis; Seasonal factors; Relation to allergy

It is well known that there are seasonal changes in the course of atopic dermatitis, many patients showing a tendency to improve in summer and to deteriorate in winter. According to Schnyder (3) and Rajka (2) only 10% of all cases fail to show any seasonal dependence. It was suggested by Pirilä (1) that in winter, the shorter duration of daylight plays the principal role in this deterioration.

According to Schnyder (3) house dust cannot be incriminated, for the exacerbation in winter would be more common in cases in which skin tests with house dust are negative than in those with positive reactions. Although several factors may be responsible for improvement or deterioration in summer there was some evidence, according to Rajka (2), that reactivity to summer pollens was a little more common in patients who deteriorated compared with those who improved, in summer. The incidence of sensitivity to spring pollens was also found higher

(by Rajka) in patients deteriorating in spring, than the overall incidence of pollen sensitivity.

METHODS AND RESULTS

In order to investigate further these possible relationships, we noted the first visits to our out-patient department of patients with atopic dermatitis over a 4-year period. The findings are given in Table I.

In Table I a striking preference is apparent of first visits to the autumn, supposed to correspond to a preference of complaints in that season. To investigate this possibility, we questioned 106 patients with atopic dermatitis about possible seasonal susceptibility to complaints. The results are given in Table II.

From the data given in Table II it seems probable that indeed generally there is a tendency to seasonal susceptibility to complaints in the autumn, though a minority of patients still had a tendency to suffer more complaints in spring and summer.

If we call the former group of patients "the autumn group" and the latter "the spring and summer group" and we look for a possible relationship of these groups to the allergy pattern in regard to reactions to house dust or pollen, we come to the results given in Table III.

A statistically significant relationship exists between seasonal susceptibility to complaints and allergy pattern, as given in Table III.

Table I. *First visits to the out-patient department over a 4-year period*

Season	Number of first visits	Percentage of patients
Spring	35	21
Summer	34	20.5
Autumn	62	37
Winter	36	21.5
Total	167	

Table II. *Seasonal preference of complaints (anamnestic data)*

Season	Number of patients	Percentage of patients
Complaints mainly in autumn	28	26.3
Complaints mainly in spring + summer	17	16
Complaints mainly in other seasons	14	13.2
Seasonal preference	59	55.5
No seasonal preference	47	44.5
Total	106	

Table III. Seasonal susceptibility to complaints in relation to allergy

(a) Complaints mainly in autumn 28 patients ("autumn group")		
allergy pattern:	house dust + 27 patients house dust - 1 patient	pollen + 2 patients pollen - 26 patients
(b) Complaints mainly in spring 17 patients and summer ("spring and summer group")		
allergy pattern:	house dust + 5 patients house dust - 12 patients	pollen + 6 patients pollen - 11 patients

DISCUSSION

Of course it needs no explanation why allergy to pollen must be of significance as regards complaints in spring and summer, but perhaps it could be more difficult to explain a relationship between allergy to house dust and exacerbation in the autumn.

For this we should like to refer to an investigation by Voorhorst in asthmatics (4).

He found that the first visits of asthmatic patients with allergy to house dust show a striking preference to the autumn, whereas no such preference is to be seen in asthmatics without allergy to house dust. Because of this, in asthma a distinct relationship between house dust allergy and a predominance of complaints in the autumn appears to be present. In our investigation the same seems to be the case in atopic dermatitis.

CONCLUSION

Because of all these facts we must conclude that there is certainly a relationship between seasonal susceptibility to complaints and allergy to seasonal

allergens, which points to the fact that allergens must play a role in several cases of atopic dermatitis.

REFERENCES

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DISCUSSION

Zachariae (Aarhus). Q: When does autumn start in Holland?

A: I think we can best state September.

Zachariae: We have always said that our atopics in Denmark get worse in winter, but this should be later in the autumn.

Berrens (Utrecht). Q: Have you compared the percentage distribution of the number of patients visiting the out-patient department with atopic dermatitis with the total number of dermatological patients visiting the clinic with any dermatological disease?

A: Yes we did that.