
Childhood- and later-onset vitiligo have diverse epidemiologic and clinical characteristics

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Background: Vitiligo onset during childhood is common. There are limited data regarding childhood-onset vitiligo.

Objective: We sought to provide an epidemiologic and clinical comparison between childhood- and later-onset vitiligo.

Methods: Two groups of patients were included in this cross-sectional study. Consecutive patients examined at the Vitiligo Clinic of Andreas Sygros Hospital for Skin and Venereal Diseases, Athens, Greece, from January 2005 to December 2009 with a disease onset before the age of 12 years were included in the childhood-onset group. The later-onset group included randomly selected patients who were examined at the same period and had a disease onset after the age of 12 years. After clinical examination, a standardized questionnaire was completed for each patient.

Results: In all, 126 patients were included in the childhood-onset and 107 patients in the later-onset group. Childhood-onset vitiligo: (1) involved different sites at initial presentation, (2) included more cases of segmental type, and (3) was characterized by a higher prevalence of allergic diseases and a lower prevalence of thyroid diseases. Longer duration of disease and a positive family history of thyroid disease were associated with the presence of thyroid disease only in the childhood-onset group. In the later-onset group, only female sex was associated with the presence of thyroid disease.

Limitations: The study was conducted in a hospital specializing in skin diseases and a selection bias toward more severe vitiligo cases is possible.

Conclusions: Childhood-onset vitiligo had distinct epidemiologic and clinical characteristics, compared with later-onset disease. (J Am Acad Dermatol 2012;66:954-8.)

Key words: childhood vitiligo; clinical presentation; epidemiology; thyroid disease.

Vitiligo quite often appears early in life. Disease onset before the age of 20 years has been reported in 29%¹ and 50%² of patients with vitiligo. However, few reports^{1,3-13} have addressed clinically and epidemiologically the issue of childhood vitiligo, that is vitiligo occurring before the age of 12 years. Even fewer have compared childhood- with later-onset vitiligo on clinical and epidemiologic grounds.^{1,3,4,8}

In this study, we provide an epidemiologic and clinical comparison between childhood- and later-onset vitiligo.

METHODS

Two groups of patients were included in the study. Consecutive patients examined at the Vitiligo Clinic of Andreas Sygros Hospital for Skin and Venereal Diseases, Athens, Greece, during the

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5-year period from January 2005 to December 2009 with a disease onset before the age of 12 years were included in the childhood-onset group. The later-onset group included randomly selected patients who were examined at the same period and had a disease onset after the age of 12 years.

A detailed history was obtained from each patient.

Vitiligo was classified as focal (≥ 1 macules in one area, but not clearly in a dermatomal configuration), acral (several macules on the extremities on different areas), acrofacial (several macules on the extremities and face), vulgaris (scattered macules widely distributed), universal ($>80\%$ of body surface area affected), or segmental (≥ 1 macules in a dermatomal configuration or unilateral segment of the body).

Statistical analysis

The comparison of quantitative variables between different groups was performed using the independent samples *t* test and Mann-Whitney test in case of violation of normality. The comparison of qualitative variables between different groups was performed using the χ^2 test or the Fisher exact test. All tests were two-sided; statistical significance was set at *P* less than .05.

A logistic regression model was used to detect which of several independent variables affected the probability of presence of thyroid disease in our patients.

All analyses were carried out using the statistical package SPSS, Version 13.00 (Statistical Package for the Social Sciences, SPSS Inc, Chicago, IL).

RESULTS

In all, 394 patients were examined during the 5-year period of the study and 126 of them had a disease onset during childhood (32%). Among the rest of the patients with later-onset disease, we randomly selected 107 patients to be included in the study.

Demographic features of patients

Table I shows the demographic characteristics of patients. Female patients were similarly overrepresented in both groups. Patients with later-onset vitiligo had darker skin phototypes ($P < .002$).

Disease presentation

Sites of initial disease presentation were statistically significantly different between the two groups (Table II). Childhood-onset (vs later-onset) vitiligo had a predilection for the eyelids (21% vs 6.5%) and lower extremities (20.3% vs 3.7%), whereas the main site of presentation for later-onset vitiligo were the upper extremities (47.7% vs 16.3%) and particularly the hands (40.2% vs 12.2%).

The type of vitiligo upon initial presentation of the disease is shown in Table III. Segmental vitiligo was more common in the childhood vitiligo group (6.6% vs 1%, $P < .05$).

Patients with later-onset vitiligo recalled a stressful event at disease presentation with greater frequency, compared with the childhood-onset group (37% vs 24%, $P < .02$).

Disease progression

Vitiligo vulgaris was the predominant type of the disease upon consultation for both groups (Table IV).

The vast majority of patients in both groups reported a progressive course of their disease. No progression among patients with a disease duration of more than 4 years was reported by 4.8% and 2.4% of patients in the childhood- and later-onset group, respectively. An immediate progression of the disease was reported by 10.5% and 35.5% of patients in the childhood- and later-onset group, respectively ($P < .001$). Among patients whose disease did not progress immediately, the mean number of years from disease appearance until progression to other sites was 4.14 ± 6.13 and 2.7 ± 4.1 for the childhood- and later-onset group, respectively ($P < .06$).

Personal history of autoimmune and/or endocrine diseases

Allergic diseases had a higher prevalence within the childhood-onset group (5.7% vs 0%, $P < .01$) (Table V). On the contrary, thyroid diseases were reported with a greater frequency from patients with later-onset vitiligo (42% vs 18%, $P < .01$).

Several variables, such as patients' sex, skin phototype, age of vitiligo onset, duration of disease, presence of a stressful event at disease presentation, progression or not of the disease, years before disease's progression, body surface area affected by

CAPSULE SUMMARY

- Childhood-onset vitiligo may differ from later-onset disease.
- Childhood-onset vitiligo affected different sites at initial presentation and it was characterized by a higher prevalence of allergic diseases and a lower prevalence of thyroid diseases.
- In childhood-onset vitiligo, the presence of thyroid disease was associated with duration of vitiligo and a positive family history of thyroid disease and not with female sex, as in later-onset vitiligo.

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