Clinical characteristics in 113 Turkish vitiligo patients

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ABSTRACT

Background and design: This study assesses clinical findings and coexisting dermatological and systemic diseases of Turkish vitiligo patients.

Materials and methods: One hundred and thirteen patients were included in the study over a 2-year period. Patients were diagnosed by clinical findings and Wood's lamp. Each patient's age, sex, date of onset, first localization, clinical type, disease activity, coexisting systemic or dermatological diseases, and familial history were recorded. A complete blood count, routine biochemistry tests, serum vitamin B_{12} and folic acid, thyroid hormones, and complete urinalysis were done. All patients were examined by the outpatient psychiatric service.

Results: The majority of patients were female (*n* = 60, 53.1%), and the rest males (*n* = 53, 46.9%). Their ages ranged from 2 to 76 years. Eighty-seven patients showed a progression of vitiligo. The age at onset of the condition varied from 6 months to 75 years. In 58 patients vitiligo was generalized, whereas in 47 it was localized. The most common site of onset was the upper limbs (38.1%), followed by the head and neck (24.8%), trunk (15%), lower limbs (13.3%), and genital area (8.8%). Leukotrichia was present in 21 patients; only 12 had a family history of vitiligo. The most common psychiatric diagnoses were depression (32.7%) and anxiety (15.9%). Coexisting cutaneous and systemic disorders were present in 22 patients.

Conclusion: The disease predominantly affects the younger population.

KEY WORDS

vitiligo, clinical finding, systemic disease

Introduction

Vitiligo affects all age groups, and is characterized by acquired, idiopathic, progressive, different-sized, circumscribed, milky white depigmentation (1). The incidence of the disease ranges between 0.1 and 8.8% (1, 2). In Turkey, 0.15 to 0.32% of the population is affected (3). Vitiligo can be divided into several types based on its distribution pattern. It may be localized, segmental, generalized, or universal (1). It has social implications, and still remains a disease difficult to treat (4). This study assessed clinical findings and coexisting dermatological and systemic diseases of Turkish vitiligo patients.

Materials and Methods

One hundred and thirteen patients were included in the study, which was conducted in Istanbul over the

Table 1. Localization of the lesions at the onset of vitiligo by age group

Onset localization	Age Groups								Total	
	0–15		16–30		31–45		46–80			
	n	%	*n*	%	*n*	%	*n*	%	*N*	%
Upper limbs	4	3.5	16	14.2	12	10.6	11	9.7	43	38.1
Lower limbs	2	1.8	7	6.2	6	5.3	–	–	15	13.3
Trunk (front and/or back)	9	7.9	3	2.7	3	2.7	2	1.8	17	15.0
Head and neck	5	4.4	11	9.7	6	5.3	6	5.3	28	24.8
Genital area	–	–	–	–	9	7.9	1	0.9	10	8.8
Total	20	17.7	37	32.7	36	31.9	20	17.7	113	100.0

course of 2 years. Patients were diagnosed both clinically and by Wood's lamp. Age, sex, date of onset, localization, clinical type, disease activity, coexisting systemic or dermatological diseases, and family history were recorded. A complete blood count was carried out, and routine biochemical tests under fasting conditions were conducted. A research laboratory test and urinalysis were conducted, as well as tests of blood sugar, venereal diseases, hepatitis B markers, serum levels of vitamin B_{12} and folic acid, and thyroid function. When necessary, additional tests, such as hemoglobin A_{1C}, thyroid antibodies, parietal antibodies, and other organ specific antibodies were measured. All patients were examined in the outpatient psychiatric service. The patients were divided into groups of <15, 16–30, 31–45, and >46 years. The disease duration was assessed as <5, 6–10, 11–15, 16–20, and >21 years. All the percentage calculations, statistical assessments and tables were performed using SPSS 8.0 for Windows.

Results

The male to female ratio in the study was 46.9% to 53.1%, with females in the majority (*n* = 60 female, and *n*=53 male). The patients ranged in age from 2 to 76 years. The mean age was 29.2 (2–71) for males and 33.4 (9–76) for females. The lesions were asymptomatic in all patients. Eighty-seven (77%) of the patients showed progression of vitiligo over the last few months. The duration of the disease was shorter than 1 year for 23 (20.4%) and shorter than 2 years for 51 (45.1%) patients. The age at onset of the disease was between 6 months and 75 years, at a mean age of 23 years for males, and 26 years for females. In 76 cases (67.3%) the onset was at 30 years of age or earlier. The localizations at the first onset are summarized in Table 1. Generalized vitiligo was observed in 58 patients (51.3%) and localized vitiligo in 47 (41.6%). Leukotrichia was present in 21 patients. First-degree relatives (parents/brother/sister) were affected in nine instances; second-degree relatives (grandparents/maternal and/or paternal uncle or aunt) were affected in four. The most common psychiatric diagnoses were depression (*n* = 37, 32.7%) and anxiety (*n* = 18, 15.9%). Other problems, such as neurotic symptoms, obsession, and personality disorders, were identified in 22. Additional coexisting cutaneous and systemic diseases in the patients are provided in Tables 2 and 3.

Table 2. Coexisting disorders related to types of vitiligo in the patients investigated

Associated Diseases	Vitiligo Types				Total	
	Generalized (*n* = 58)	Localized (*n* = 47)	Universal (*n* = 4)	Segmental (*n* = 4)	*n*	%
Diabetes mellitus type I	2	–	–	1	3	2.7
Diabetes mellitus type II	3	2	–	–	5	4.4
Autoimmune thyroiditis	2	3	–	–	5	4.4
Pernicious anemia	–	1	–	–	1	0.9
Asthma	1	1	–	–	2	1.8
Psoriasis	–	–	1	–	1	0.9
Halo nevus	2	–	1	–	3	2.7
Idiopathic guttate hypomelanosis	1	–	–	–	1	0.9
Alopecia areata	–	–	1	–	1	0.9

Table 3. Coexisting diseases related to duration of vitiligo (by age group)

Associated Diseases	Duration of Vitiligo					Total	
	0–5 (*n* = 76)	6–10 (*n* = 15)	11–15 (*n* = 5)	16–20 (*n* = 4)	21+ (*n* = 13)	*n*	%
Diabetes mellitus type I	3	–	–	–	–	3	2.7
Diabetes mellitus type II	2	–	–	1	2	5	4.4
Autoimmune thyroiditis	4	1	–	–	–	5	4.4
Pernicious anemia	–	–	–	–	1	1	0.9
Asthma	2	–	–	–	–	2	1.8
Psoriasis	–	1	–	–	–	1	0.9
Halo nevus	2	–	1	–	–	3	2.7
Idiopathic guttate hypomelanosis	–	–	–	–	1	1	0.9
Alopecia areata	1	–	–	–	–	1	0.9

Discussion

To our knowledge, vitiligo affects both the sexes equally, but women more frequently visit the doctor due to cosmetic reasons. The usual age of onset is between 10 and 30 years, and it is generally accepted that almost half are under the age of 20 (1). In our study, there is no statistical difference between the number of male and female patients, thus the female to male ratio was 1.1:1. Hann et al. (5) reported a ratio of 1.6:1, whereas others reported 1:1.2 (2) and 0.9:1 (6). As in similar studies, we saw in our patient group that the disease can start at any age (2, 7). For example, while the onset of vitiligo in our study was generally at less than 30 years of age, Liu et al. (6) report that 73% of their patients were under the age of 30. Likewise, Singh et al. (7) report that 75% of the patients in their series were between 10 and 39 years old. The mean age of vitiligo was reported to be 21.1 (2), 19.8 (7), and 18.9 (6) years. In our study the mean was 24.6 years. All these findings indicate that vitiligo predominantly affects a younger population. The condition is a major cosmetic concern, which indicates that early diagnosis and treatment may be important.

The majority of our patients (77%) consulted a dermatologist due to an increase in the number of skin lesions, and many came to inquire about new treatment methods. Hann et al. also reported that 88.8% of their patients showed a progression in the disease (5).

Most displayed generalized vitiligo (1, 8), including more than half of our patients. Segmental forms of the disease were present in 3.5%, whereas Hann et al. noted 20.5% (5). Because the upper limbs, head, and neck areas were mostly affected in our vitiligo patients, it may be concluded that sun exposure or physical trauma are possible triggering factors. The onset of depigmentation in the genital area was seen in 8.8% by the age of 30. Genital involvement may negatively affect the patient's sex life. Leukotrichia, a marker for poor prognosis in repigmentation, was found in 18% of our patients, and in 43.5% (5) and 11.5% (2) in other studies.

In our study, 11.5% of patients reported a family history of vitiligo. The same rate was reported by Handa and Kaur (2), whereas other studies reported 13% (5), 18% (9), and even 1.56% (6). These rates show that vitiligo may be genetic. Family studies indicate that vitiligo does not conform to the pattern of inheritance expected for a single autosomal genetic trait. Thus, vitiligo may be controlled by recessive genes at 3 or 4 autosomal loci (8).

Given the common ectodermal origins of the epidermis and central nervous system, it is suggested that some dermatologic and psychiatric disorders may have a common origin (10). Severe or mild psychological abnormalities were found in most of our patients (68.1%). Other studies also show that psychiatric disorders may accompany vitiligo (11, 12), which is the reason it often causes alarm and psychological problems. Although the psychosomatic aspect is predominant in this condition, one cannot exclude the influence of emotions, stress, and deep psychological conflicts in triggering the onset or affecting its course in predisposed subjects. Because vitiligo is a long-lasting disease, it may become a major source of anxiety in the daily life of patients and their families (13).

Diabetes mellitus were seen in 7.1% of our patients, 2.7% of whom were afflicted with type I diabetes. This association was reported in 0.6% (2), 1% (5), and 0.4% (6) of subjects in the previous studies. Somorin and Krahn also found vitiligo to be associated with diabetes mellitus in 5% of cases, mostly in the form of type II (9). Autoimmune thyroiditis was present in 4.4% of our patients, and in 6.8% of those in the study by Shong and Kim (15). At the same time, the association with thyroid dysfunctions was reported in 0.5 to 23% of cases (6, 16). Although pernicious anemia coexisting with vitiligo was observed in 3.7 to 4.1% of those studied (17, 18), we found it in only one of our patients. Moreover, decreased serum vitamin B_{12} levels in the blood may be observed in the patients even if they do not have pernicious anemia (3).

Two of our subjects had asthma. Atopic vitiligo is a controversial topic (19).

Halo nevi are seen frequently in vitiligo (1), but were observed in only 2.7% of our patients. Other studies list the incidence of halo nevi as 2% (Handa and Kaur, 2), 2.7% (Somorin and Krahn 9), and 4.4% (Liu et al. 6). Alopecia, psoriasis, and idiopathic guttate hypomelanosis were each noted in one patient with vitiligo. The frequency of alopecia areata in vitiligo was 0.4% (2), 0.3% (6), and 5.2% (7) in the previous studies. Powell and Dickens found psoriasis in 29 out of 717 vitiglio patients (20).

Our study confirmed some of the data from previous studies. Some systemic diseases may coexist with the disease; therefore it is reasonable to investigate each patient periodically. We found that clinical characteristics of vitiligo in our Turkish vitiligo population are similar to those of other studies. Thus, ethnicity does not contribute to major clinical differences in the disease.

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