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Original Research Paper

Study of the clinical and demographic characteristics of Vitiligo patients in Najaf Governorate

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Abstract: Vitiligo is a chronic autoimmune disease that causes parts of the skin to lose their pigments. Due to the increasing incidence of the disease, especially among adolescents, the aim was to study the demographic and clinical characteristic of vitiligo patientsin Najaf province.
Methods: This research included 63 vitiligo patients from the Department of Dermatology at AL-Najaf AL-Ashraf Teaching Hospital and AL-Sader Medical City, as well as 25 healthy controls of the same age and sex.Each patient group was further subdivided based on age, gender, age of illness beginning, type, severity of vitiligo disease, and family history. The physicians used Wood's lamp to identify patients according on their symptoms and clinical history.
Results: Vitiligo patients had an average age of 26.68±15.39 years, according to the data. In comparison to other age groups, the percentage of vitiligo patients was greatest in the 16–30 age bracket (36.5%), followed by the under–15 age bracket (30.2%). Males accounted for 57.1% of vitiligo cases, while females accounted for 42.9%. Generalized vitiligo accounts for the highest proportion of patients (63.5%), followed by facial vitiligo (15.9%), acrofacial (11.1%), and focal (9.5%). The majority of patients (54.0%) had the condition start while they were under 15 years old, followed by those between 16 and 30 years old (23.8%), followed by those between 31 and 45 years old (12.7%) and those beyond 46 years old (9.5%). Regarding vitiligo's family history, 41.3% of patients had a family history, whilst 58.7% of patients had none.
Conclusion: The majority of vitiligo patients are children and adolescents, and the majority do not have a family history.

Keywords: Vitiligo, Generalized, family history, Acrofacial, Facial.

1. Introduction

Vitiligo is an autoimmune condition marked by the destruction of epidermal melanocytes, typically presenting as white skin patches. Keratinocytes, collaborating with melanocytes to preserve the structural and functional integrity of the skin, are involved in the advancement of vitiligo. Recent studies have indicated atypical keratinocyte proliferation and epidermal thickness in certain patients with vitiligo; nevertheless, the correlation between these alterations and the clinical features of vitiligo remains ambiguous [1]. Both males and females are equally impacted; however, women and girls tend to seek counsel more often, potentially because to the more significant negative societal repercussions they face compared to men and boys[2].Nonsegmental vitiligo generally manifests between the ages of 10 and 30, however it can occur at any age. About 25% of individuals with vitiligo develop the disorder before to the age of 10, and nearly 50% before the age of 20.

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Approximately 70% to 80% of individuals manifest the condition prior to reaching the age of 30. Most populations display various age-of-onset cohorts and specific incidence peaks [3].

In 2011, an international agreement distinguished segmental vitiligo (SV) from other vitiligo varieties and categorized vitiligo as encompassing all kinds of non-segmental vitiligo (NSV). Mixed vitiligo is a variant of non-segmental vitiligo (NSV) distinguished by the simultaneous presence of segmental vitiligo (SV) and NSV in an individual. A key outcome of the agreement was the differentiation of SV from other forms of vitiligo, particularly regarding its prognostic significance[4].About 90% of occurrences of vitiligo are of non-segmental vitiligo (NSV) or vitiligo vulgaris, making it the most prevalent. [5]. Focal vitiligo is a small, localized region of depigmentation that lasts for one to two years is the hallmark of focal vitiligo. Either segmental vitiligo (SV) or nonsegmental vitiligo (NSV) may develop from it [6]. Mucosal vitiligo generally affects the oral and/or genital mucosa. It may manifest in the setting of systemic vitiligo or as an isolated occurrence [7].Acrofacial vitiligo is defined by the occurrence of depigmented macules on the face and extremities. It may disseminate to other regions of the body and evolve into a generalized or systemic illness. In instances with lip-tip vitiligo, the lesions are restricted to the lips and fingertips[8].Generalized vitiligo is defined by bilateral, frequently symmetrical, depigmented macules or patches that appear in a random distribution throughout various regions of the body surface. Generalized vitiligo can commence in childhood or early adulthood and frequently manifests at locations exposed to pressure, friction, and/or trauma. Depigmented lesions frequently occur on the face, torso, and limbs [9].

It can also be categorized as either active or stable vitiligo based on the disease activity [10]. Vitiligo's stable and active phases are not unchangeable and frequently switch places [11]. Active vitiligo is distinguished by a specific process known as the Koebner phenomenon [12],This takes place while vitiligo is in its advancing stage.

2. Methodology

Patients

The present research was conducted among Sep.2024 and Jan. 2025. The Dermatology Departments of AL-Sader Medical City and AL-Najaf AL-Ashraf Teaching Hospital each contributed samples. This study comprised sixty-three vitiligo patients and twenty-five healthy controls of the same age and gender. In addition to using Wood's light, the doctor used the patients' symptoms and medical history to make his selections. The following information was requested from each participant: age, duration of vitiligo, family history of vitiligo, and medication history. Research participants were also asked for their consent before any data was collected or blood was drawn. The research's experimental design and subject information delineated that each patient group was categorized into subgroups according to age, gender, age at onset of illness, type, degree of vitiligo, and family history.

Exclusion criteria

Inflammatory disorders, acute or chronic infections, patients with diabetes, arthritis, allergic diseases, and depigmentation-causing dermatological conditions, or any other condition were not allowed to participate in the study.

Control group

Twenty five male and female participants in good health served as the control group. About 26.80 ± 12.13 years old was the average age. All patients in the control group had detailed medical histories recorded. People in the control group did not have any skin conditions whatsoever. These patients were examined as part of their regular medical checkups and did not exhibit any symptoms. The people living in the same region as the vitiligo patients served as the control group; however, they were not exposed to any harmful chemicals.

Statistical Analysis

All of the study's statistical analysis was done using SPSS version 25. "A P value of ≤ 0.05 was deemed statistically significant." When comparing nominal and categorical data between groups, the Chi-Square test was used. The results were then shown as frequency and percentage.

3. Results and discussion

Characteristics of the study population

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The results Figure (1) showed that the average age of vitiligo patients was 26.68±15.39 years, While the average age of the control group was 26.80±12.13 years.

The results in Figure (2) showed that there was a significant difference (p=0.040, Chi-Square=8.302) in the numbers and percentages of the age groups in vitiligo patients, as the highest percent was in the age group 16-30 years, which was estimated as 23 (36.5%), followed by the age group under 15 years which was estimated as 19 (30.2 %) compared with the age group above 46 years which was estimated as 13 (20.6%) and the age group 31- 45 years which was estimated 8 (12.7 %). While the control group had the numbers and percentage of age groups without significant differences (p=0.989, Chi-Square: 0.120) due to its collection in a selective manner, the numbers and percentage were as follows: 6 (24 %) in the age group under 15 years, 6 (24 %) in the age group 16- 30 years, 6 (24 %) in the age group 31- 45 years and 7 (24 %) in the age group above 46 years.

Also, the results in Figure (3) show the highest percentage of vitiligo patients were males by 36 (57.1%),while Female were 27 (42.9 %), but this difference was not significant (p=0.257, Chi-Square=1.286). For the control group, there was no significant differences (p=0.841, Chi-Square: 0.040) in the number of male 13 (52 %) and female 12 (48 %).

According to the statistics, men made up 57.1% of vitiligo patients and females 42.9%; nevertheless, there was no statistically significant difference between the sexes.

Contrary to our statistics, it has been discovered that vitiligo is more frequent in women than in males. According to local research that examined 100 instances, 45% of men and 55% of women supported the illness. The proportion of women to males In another research, the ratio was 2.1:1 [13] , This contrasts with the statements made by Handa and Kaur, Koranne et al., and Sarin et al.,[14], [15], [16]made the claim. Vitiligo manifested differently in women than in males, however there were some shared symptoms. For example, he found that the prevalence of vitiligo in men and women was about equal in his research [17].While the majority of studies found that men and women had the condition at around the same rates, we found that women were more likely to seek help early on than men, which may be attributable to factors such as marital concerns and social shame. The average age, according to another study, was 27.02 ± 18.34 years, with a range of 5.5 months to 82 years [18].

Clinical characteristics of vitiligo patients

Clinical characteristics of vitiligo patients are summarized in Figure (4), (5) and (6). Regarding the type of vitiligo, the results showed that 100% of patient had non-segmental vitiligo. As for the types of vitiligo within non-segmental type, the results showed that there were significant differences (p=0.001, Chi-Square= 50.333) in numbers and percentage, as the largest percentage of patients within the Generalized 40 (63.5 %), followed by Facial vitiligo , as the numbers and percentages were estimated as10 (15.9 %), then the Acrofacial at 7 (11.1 %), and finally Focal at 6 (9.5 %) Figure (4).

Also the results in Figure (5) showed that there were significant differences (p=0.002, Chi-Square: 31.032) in the age groups in which the disease appeared, as the largest percentage 34 (54.0 %) of patients had the disease at the age of under 15years , and 15 (23.8 %) had the disease at the age 16- 30 years, compared to 8 (12.7 %) had the disease at the age 31- 45 years and 6 (9.5 %) had the disease at the age above 46 years.

As for the family history of the vitiligo Figure (6), the results showed that there was non-significant deference's (p=0.166, Chi-Square: 1.921), however, the highest percentage of patients were without family history 37 (58.7 %) compared to patients who had a family history of vitiligo 26 (41.3%).

As for the results of vitiligo stability, the results indicate that (63) 100% of patients had Active vitiligo.

Clinical characteristics in vitiligo patients revealed that all patients had non-segmental vitiligo, and there were significant differences depending on the type of vitiligo, with Generalized (63.5%) being the most common, followed by Facial (15.9%), compared with Acrofacial (11.1%) and Focal (9.5%). Furthermore, the research found that 100% of the patients had active vitiligo.

There were statistically significant differences in the results according to the age at which the disease began (in years). Specifically, the age group under 15 years old was the most vulnerable (54.0%), followed by the age group 16–30 years old (23.8%), the age group 31–45 years old (12.7%), and the age group over 46 years old (9.5%).

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According to the data, there were no significant differences based on family history, and a larger number of vitiligo patients (58.7%) did not have a family history than those who had (41.3%).

The findings of the present research serve as a risk indication, given the majority of patients are children and adolescents without a familial history of the illness. This is probably attributable to inadequate sleep patterns, an unhealthy lifestyle, and worry and stress at this age.

The research findings reveal a potential risk factor for developing vitiligo, attributed to several causes such as trauma, melancholy, smoking, irregular sleep patterns, or exposure to hazardous compounds in the workplace.

According to some research, the most common kind of vitiligo, affecting over 50% of patients, is generalized vitiligo [19]. In their research [13] The following types of vitiligo were most often observed: acrofacial, segmental, localized, mucosal, universal, and vitiligo vulgaris. varying studies have shown varying distribution frequencies of clinical forms of vitiligo.

Among the few latest research, Arycan et al., [20] noted that, among Akrem et al., the most often occurring location of onset was in the upper limbs (38.1%). [21] indicated that the lower extremities were the primary location of manifestation in the majority of individuals (29.8%). The clinical categorization of the condition indicated a larger frequency of non-segmental vitiligo (81.8%) compared to segmental vitiligo (18.2%), supporting findings from another research. In line with Liu et al., who documented 90% prevalence, and Berti et al., whose involvement of patients by non-segmental vitiligo was 92%, Shah et al., observed that 92.5% of patients displayed non-segmental forms of the illness [22], [23], [24]. The psychological and physical factors contributing to the onset of vitiligo were assessed. Of the patients, 26.9% reported experiencing stress or psychological disorders prior to the disease's onset, 25.6% indicated no identifiable triggering factors, 22.9% noted the emergence of lesions linked to physical trauma, and 24.7% reported a local correlation between psychological factors and preceding physical events. Physical trauma was found to be the most prevalent precipitating cause in 3.84% of patients, according to Shah et al., whereas antecedent emotional disorders were observed in 2.19% of cases [13].

This psychosocial stress and related mental comorbidities should be considered in vitiligo care, since stress might be a triggering factor[25]. It is important to consider both the severity of the clinical condition and the patient's quality of life while treating vitiligo[26]. Social anxiety resulting from vitiligo may be alleviated with self-directed cognitive behavioral therapy[27]. Cognitive behavioral treatment may slow the disease's course, according to early findings presented by Papadopoulos et al., [28].

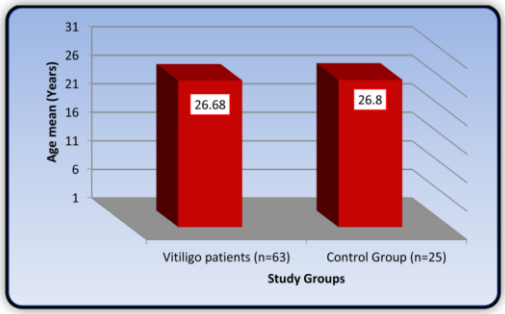

Fig 1. Mean age of Vitiligo patients and control group.

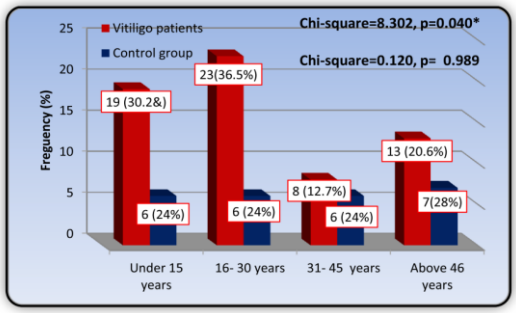

Fig 2. Prevalence of age group in vitiligo patients and control group.

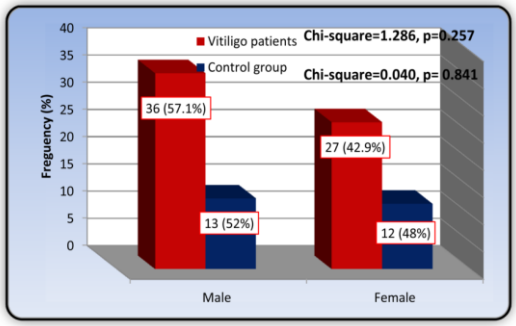

Fig 3. Prevalence of gender in vitiligo patients and control group.

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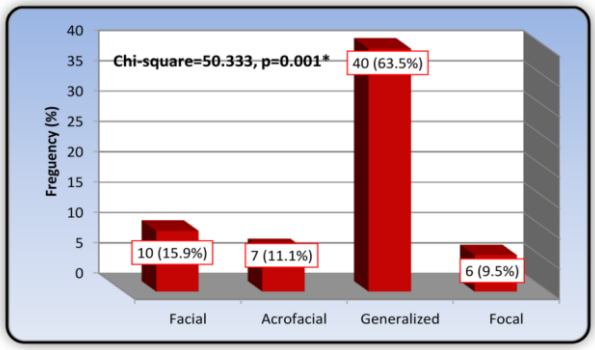

Fig 4. Prevalence of type of vitiligo in patients.

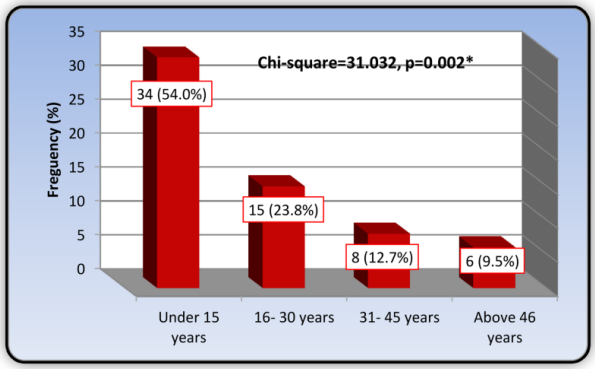

Fig 5. Prevalence of the age at disease onset in Vitiligo patients.

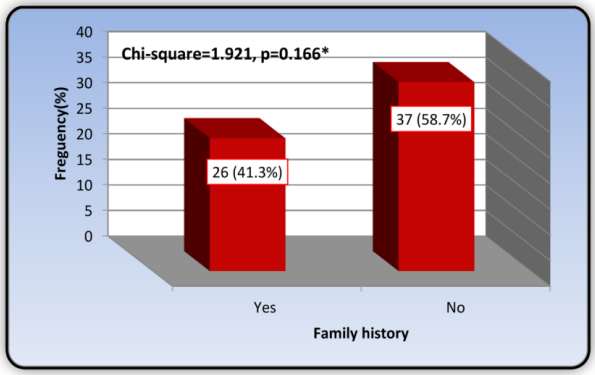

Fig 6. Prevalence of the family history of Vitiligo patients.

Conclusion: The majority of vitiligo patients in current study are children and adolescents, and the majority do not have a family history. This is a dangerous indicator that requires attention to determine the causes of disease.

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Author's Contributions

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Ethics

This study was conducted under approval by the medical ethics committee at the University of Kufa (2017). Verbal and written consent was provided by parents and agreement for publication was obtained from both participants and researchers.

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