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Original article

Clinico-epidemiological profile of vitiligo patients in Najran Region, Saudi Arabia

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Abstract

Objectives: To assess the prevalence of vitiligo among patients with dermatological diseases in Najran, South-Western Saudi Arabia, and to explore the epidemiological profile of vitiligo patients in the region.

Materials and methods: This single-observer, cross-sectional, descriptive study was conducted over a period of six months by recording the clinico-epidemiological profile of 101 vitiligo cases. The patients were diagnosed by history, clinical findings and Wood's lamp at the dermatology out-patient clinic in the King Khalid Hospital, Najran. Demographic and clinical data of the patients were collected using a pre-structured data collection form. Pearson χ^2 test and Fisher's exact test were used to explore the significant association of selected characteristics with 'type' and 'site' of vitiligo among the study-patients.

Results: The estimated prevalence of vitiligo cases among the dermatology out-patient clinic attendees was 1.98%. Vitiligo patients were predominantly males (57.4%), Saudis (93.1%), housewives (24.8%), and non-smokers (95%). The mean age of the study-patients was 34.33 ± 15.82 years, and the highest number (28.7%) belonged to the age group '31–40 years'. Of the cases, 5.9% had a family history of vitiligo, 6.9% had diabetes mellitus, and 4% were suffering from anemia. Approximately 99% of the patients or the parents of the pediatric patients were affected by either moderate or mild stress due to vitiligo. Highest number (48.5%) of the patients presented localized type of vitiligo, whereas 22.8% had acrofacial, 20.8% showed vulgaris, 5% presented universal, 2% had acral, and 1% experienced segmental type of vitiligo. Around one-fourth (25.7%) of the patients had vitiligo only on their extremities, while remaining cases experienced vitiligo on the other parts of their body. Median duration of the disease was 4 years (IQR: 2–7.5 years). The type of vitiligo showed a significant association with sex, underlying diseases, and stress grade ($p < 0.05$), while the site of vitiligo was significantly associated with sex and stress grade ($p < 0.05$).

Conclusion: Localized vitiligo was found to be the most common type of vitiligo prevalent in the Najran Region. Because stress has a role in provoking vitiligo, community based awareness programs should be developed to reduce the stress in order to control and modify the course of the disease.

Keywords: Vitiligo; Stress; Najran; Saudi Arabia

1. Introduction

Vitiligo is a hypo-pigmentation disorder of the skin and hair characterized by well-circumscribed, asymptomatic white cutaneous macule affecting 0.1–4% of the population worldwide in all races and both sexes (Steiner et al., 2004). Based on the size and distribution of the depigmented area, vitiligo is classified into localized, generalized and universal

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type. The universal form corresponds to 50% depigmentation of the skin and/or mucous membranes (Kovacs, 1998; Sehgal and Srivastava, 2007; Alkhateeb et al., 2003).

The exact etiology of vitiligo is not fully understood. There are principle theories presented about the mechanism of destruction of melanocytes including autoimmune theory, neurogenic theory and self-destructive theory (Forschner et al., 2007). Many studies suggest that vitiligo can be considered as an autoimmune disease and it has frequently been described in association with other autoimmune diseases including thyroid disorders, diabetes mellitus, alopecia areata, pernicious anemia, systemic lupus erythematosus (SLE), rheumatoid arthritis (RA), autoimmune polyglandular syndrome, and psoriasis (Laberge et al., 2005; Zettinig et al., 2003).

The actual onset of vitiligo in genetically suspected individuals seems to require exposure to environmental triggers such as trauma and sun exposure (Steiner et al., 2004). Vitiligo has a genetic background. More than 30% of the affected individuals have reported vitiligo in a parent, sibling, and it is reported in identical twins. Theoretically, consanguineous marriages should carry a high risk for the development of diseases that have a genetic basis, either completely or partially (Khoury et al., 1987; Freire-Maia, 1990). In a previous Saudi study (Alzolibani, 2009) in the Qassim region, one-third of all cases (22.5%) were positive for a parental consanguinity with a particularly high first-cousin consanguinity that was higher than that reported (19.5%) among the general Saudi population (el-Hazmi et al., 1995).

Currently in the literature, there is a paucity of studies that demonstrate the epidemiological profile of vitiligo among Saudi population with no previous reports from the Najran Region, southwestern Saudi Arabia. This study was aimed to assess the prevalence of vitiligo among the patients with dermatological diseases in Najran, South-Western Saudi Arabia and to describe the epidemiological profile of vitiligo patients.

2. Materials and methods

2.1. Study design, place and time

We conducted a single-observer, cross-sectional, descriptive study over a period of six months by recording the clinico-epidemiological profile of 101 vitiligo cases. The patients were diagnosed at the dermatology out-patient clinic in the King Khalid Hospital Najran, Saudi Arabia during the period from January 2012 to July 2012.

2.2. Clinical assessment of cases

Full patient's history was taken from each case as well as clinical examination was performed. Vitiligo cases were diagnosed by history, clinical findings and Wood's lamp. A complete blood count, routine biochemistry tests and thyroid hormones were also performed for each case.

2.3. Data collection

Demographic and clinical data of the patients were collected using a data collection form. Each patient's age, sex, occupational status, educational status, familial history of vitiligo, duration of the disease, site/distribution of vitiligo lesions, clinical type, coexisting systemic diseases (such as diabetes mellitus, hypertension, thyroid disorder, pernicious anemia, arthritis etc.) and other associated dermatological conditions (such as psoriasis, atopic dermatitis, alopecia areata etc.), self-perception about possible cause of contracting vitiligo, and smoking status were recorded. Moreover, histories of precipitating or initiating factors like physical trauma, sun exposure, and emotional stress were noted. Stress grade was labeled as: 0 = no significant stress, 1 = mild stress, 2 = moderate stress, 3 = sever stress.

2.4. Data analysis

All data were coded, validated, and then analyzed using SPSS 16.0 for Windows (IBM Corporation, NY, USA). Pearson χ^2 test and Fisher's exact test were used to see whether there is any significant association of selected characteristics with 'type' and 'site' of vitiligo among the study-patients. P value less than 0.05 was accepted as the level of statistical significance. Fisher's exact test was performed if any expected frequency was less than 2 or if more than 20% of the expected frequencies were less than 5.

3. Results

Of the total 5097 patients who visited the dermatology outpatient department (OPD) during the study period, 101 individuals were diagnosed as vitiligo cases. Therefore, the estimated prevalence of vitiligo cases among the dermatology OPD attendees was 1.98% during the specific period of data collection.

Table 1 illustrates socio-demographic characteristics of the vitiligo patients we studied. Among 101 patients, majority (57.4%) were male, while remaining 42.6% were female. Mean age of the study patients was 34.33 ± 15.82 years with a range from 4 to 75 years. Of the patients, highest number (28.7%) belonged to the age group 31–40 years, while 15.8% of them were below 18 years, and 13.9% were 51 years old or more. The patients were predominantly Saudis (93.1%), whereas a few (6.9%) were from other nationalities. Among the respondents, 27.7% had no formal education, 15.8% received primary education, 25.7% completed secondary education, and the remaining individuals (30.7%) had a higher level of education. Regarding occupational status, maximum (24.8%) respondents were housewives, followed by students (16.8%), government service holders (15.8%), armed forces job holders (12.9%), teachers (7.9%), and so on (Table 1).

Table 2 shows the history and clinical profile of the vitiligo patients. Of the cases, 5.9% had a family history of vit-