

Original research article

The study of psychological burden of Vitiligo and impact of Vitiligo on Psychiatric Morbidity

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Abstract

Background: Vitiligo is characterized by depigmentation and skin patches. It occurs in localized areas and in many cases, it occurs in a generalized form. It is known to affect self-esteem and has a great impact on the quality of life. The present study aimed to find the frequency and type of psychiatric illness. In addition, this study also aims to correlate stressful life events, and hostility with the severity and duration of vitiligo, as well as with the comorbid psychiatric disorder.

Methods: The demographic and socio-economic profiles of all the cases were recorded. A detailed history of the disease was obtained using a pretested and structured proforma. A detailed physical examination including neurological evaluation and examination of mental status with help of a psychiatrist was done. VASI-Vitiligo area and severity Index to calculate clinical severity of Vitiligo. The subjects were administered the MINI International Neuropsychiatric interview and the Hospital Anxiety Depression Scale.

Results: In the study, 70% of the sample had Non-segmental (Generalized) vitiligo and 30% localized/segmental type. The duration of illness was < 5 years in 80% of patients, 6-12 years in 12% of patients, and in 8%, it was > 13 years. The common type was at 37.5% stationary at 32.5% Remission and exacerbation at 17.5% and the Progressive type was in the least cases at 12.5% cases. In this study out of n=28(70%), cases had some form of psychiatric illness and n=12(30%) cases were without any psychiatric illnesses. Among the cases with psychiatric illnesses, it was found that major depressive disorder was in 30% of cases followed by a generalized anxiety disorder in 12.5% of cases and dysthymic disorder, social phobia, mixed anxiety, and depressive disorder in 7.5%.

Conclusion: Longer duration of vitiligo was associated with more severity of the disease and psychiatric manifestations. Based on the results of our study, people with vitiligo have a significant chance of developing psychiatric manifestations, and their morbidity may rise if emotional issues are not appropriately handled. Early diagnosis and treatment of psychiatric manifestations may improve the course of the vitiligo illness as well as the general quality of life.

Keywords: Vitiligo, Psychological comorbidity, Quality of life, major depressive disorder.

Introduction

Skin is acknowledged as the organ of expression and the relationship between the mind and the skin has been accepted. The skin is shown as the mental mirror, and it reacts to both endogenous and extrinsic stimuli. A more contemporary branch of psychosomatic medicine called psycho-dermatology studies how the mind (psyche) and skin interact. The two fields are related at the embryonic stage because they both derive from the ectoderm and are impacted by the interaction of the immune and neuroendocrine systems. ^[1, 2] Recently, attention has been drawn to the involvement of psychoneuroimmunology in the origin,

progression, and prognosis of psycho-cutaneous diseases. Dermatologists now recognize the value of a psychiatrist's viewpoint in identifying psychological problems that are a primary source of worry in chronic, intractable skin disorders such as vitiligo, psoriasis, eczema, atopic dermatitis, lichen planus, etc. Stress acts as a precipitating factor because psychological stress activates the Hypothalamic-Pituitary-Axis, which can cause cutaneous conditions to worsen unintentionally. Cermack and Panconesi first noted stress in dermatoses in the 1980s and early 1990s.^[3, 4] Patients with cutaneous diseases may struggle with emotions including guilt, a skewed self-image, and low self-esteem. The effect on a person relies on several variables, including the patient's sociocultural background, demographic profile, personality, stresses in their life, and how the sickness is seen by others in society. Most crucially, it depends on the illness's natural course and the patient's psychological susceptibility; a greater characteristic of anxiety may be one such susceptibility factor.^[5, 6] It was noted that people who struggle to express their rage and hatred frequently suffer from cutaneous diseases. About 40–100% of people with dermatological conditions are claimed to have an aggravation due to stress.^[7] Between 25 and 43 percent of individuals with dermatological problems are reported to have psychological comorbidities.^[7, 8] White macules and patches in the skin and mucosa are the hallmarks of the psychocutaneous disorder vitiligo, which has a multifactorial etiology and an unpredictable course with remission and exacerbation that can cause psychosocial distress and social stigmatization and impair patient functionality.^[9] The quality of life of vitiligo patients is significantly impacted by negative emotions such as shame, embarrassment, loss of confidence, low self-esteem, social phobia, dysthymia, sleep difficulties, adjustment disorders, anxiety, depression, and suicidality.^[10, 11] According to a study, vitiligo can have substantial psychiatric comorbidities of up to 79.2%.^[12] Recent studies have emphasized the significance of emotional and psychological aspects of vitiligo development, progression, remission, and relapse.^[13] As a result, psychological disorders may increase the severity of this ailment.

The correlation may be even stronger given that some vitiligo patients with psychological issues may not be aware of their sickness and may have gone misdiagnosed. These mental comorbidities have a direct impact on how patients behave when seeking therapy, how well they comply with it, and how well they do overall. As a result, early detection and treatment of these psychiatric symptoms will significantly slow the progression of vitiligo and enhance patients' quality of life.

Material and methods

This cross-sectional study was done in the Department of Dermatology along with the Department of Psychiatry, Prathima Institute of Medical Sciences, Naganoor, Karimnagar. Institutional Ethical approval was obtained for the current study. Written consent was obtained from all the participants of the study after explaining the nature of the study in the vernacular language.

Inclusion criteria

1. Consecutive patients diagnosed with Vitiligo by Dermatologists as per ICD-10
2. Aged above 20 years.
3. Males and females
4. Voluntarily willing to participate in the study.

Exclusion criteria

1. Patients with mental retardation and delirium
2. Patients with serious psychiatric illnesses
3. Patients with co-existing autoimmune diseases such as SLE, CLE
4. Not willing to participate in the study.

The demographic and socio-economic profile of all the cases was recorded. A detailed history of the disease was obtained using a pretested and structured proforma. A detailed physical examination including neurological evaluation and examination of mental status with help of a psychiatrist was done. VASI-Vitiligo area and severity Index to calculate clinical severity of Vitiligo. The subjects were administered the MINI International Neuropsychiatric interview and the Hospital Anxiety Depression Scale. All subjects were assessed with the presumptive stressful life event scale, Rosenberg Self-esteem scale, and the World Health Organization Quality of Life (WHOQOL)-BREF scale.

Statistical analysis: SPSS version 19.0 was used for the statistical analysis. Calculations were made for the central values and dispersion. Chi-square analysis and the student t-test were employed to compare the data for categorical and numerical variables, respectively. ANOVA and Scheffe Post Hoc tests were employed for multiple comparisons of more than two numerical variables. The Pearson correlation coefficient was used to study the correlation between variables. Then, Quality of Life was used as the dependent variable in a multiple linear regression analysis on all factors.

Results

A total of n=40 cases were included in the study based on the inclusion and exclusion criteria. Out of n=40 cases; n= 14(35%) cases were aged between 20 – 35 years, n=16(40%) of cases were aged between 36 – 50 years and n=10(25%) cases were aged above 51 years. Out these cases n=19(47.5%) were males and n=21(52.5%) were females. Out of the cases included in the study n=24(60%) cases were married and n=9(22.5%) were unmarried and n=7(17.5%) were widows/separated/divorcees. In most of the cases were belonging to 37(95.5%) belonged to the Hindu religion.

Table 1: Showing the type and duration of vitiligo in cases of the study.

<i>Variable</i>	<i>Frequency</i>	<i>Percentage</i>
Type of vitiligo		
Generalized	28	70
Localized	12	30
Duration of Illness (Years)		
1 – 3	23	57.5
4 – 6	10	25.0
> 7 years	07	17.5

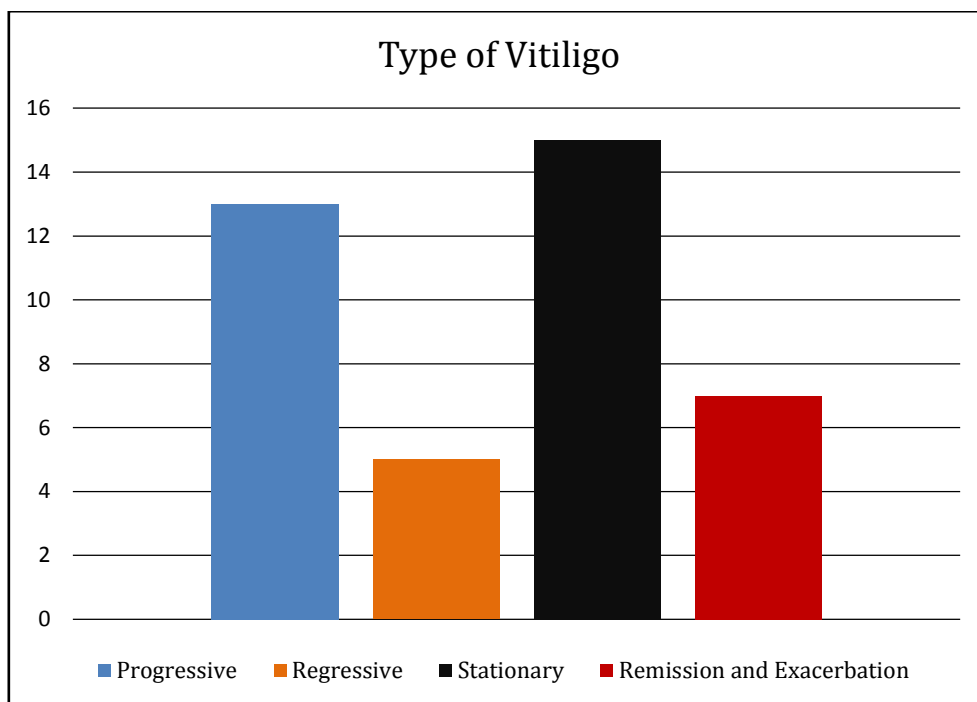


Figure 1: Type of vitiligo in the case of the study

The frequency distribution of the type of Vitiligo and duration of illness and course among the patients is shown in Table 1. From the table, we see that 70% of the sample had Non-segmental (Generalized) vitiligo and 30% localized/segmental type. The duration of illness was < 5 years in 80% of patients, 6-12 years in 12% of patients, and in 8%, it was > 13 years. The common type was at 37.5% stationary at 32.5% Remission and exacerbation at 17.5% and the Progressive type was in the least cases at 12.5% cases depicted in Figure 1.

In this study out of n=28(70%), cases had some form of psychiatric illness and n=12(30%) cases were without any psychiatric illnesses. Among the cases with psychiatric illnesses, it was found that major depressive disorder was in 30% of cases followed by a generalized anxiety disorder in 12.5% of cases, and dysthymic disorder, social phobia, mixed anxiety, and depressive disorder in 7.5% depicted in table 2.

Table 2: Type of Psychiatric Morbidity among Patients with Vitiligo

<i>Psychiatric Morbidity</i>	<i>Frequency</i>	<i>Percentage</i>
Major Depressive disorder	12	30.0
Generalized anxiety disorder	5	12.5
Dysthymic disorder	3	07.5
Social phobia	3	07.5
Mixed anxiety and depressive disorder	3	07.5
Adjustment disorder	2	05.0
No Illness	12	30.0

Table 3 shows the frequency and percentage scores of variables in the sample population. Concerning Hospital anxiety and depression scale – Anxiety (HADS-A) 45.0% for anxiety

and 47.5 for Hospital anxiety and depression scale – Depression (HADS-D). Among psychiatric Manifestations, Major depression contributes more than 30%.

Table 3: Type of Psychiatric Morbidity among Patients with Vitiligo

<i>Variable</i>	<i>Frequency</i>	<i>Percentage</i>
Hospital anxiety and depression scale – Anxiety (HADS-A)		
Normal	10	25.0
Borderline	12	30.0
Cases	18	45.0
Hospital anxiety and depression scale – Depression (HADS-D)		
Normal	13	32.5
Borderline	08	20.0
Cases	19	47.5

Rosenberg's self-esteem score was 55.5% score for low self-esteem. The majority of the sample population 57.5% scores were in the mild category in the VASI score given in table 4. From table 4, it can be seen that the majority of the sample population has intropunitive hostility than extra-punitive hostility.

Table 4: Rosenberg /VASI Scores In Patients With Vitiligo

<i>Variable</i>	<i>Frequency</i>	<i>Percentage</i>
Rosenberg Self-esteem scale		
Low Self-esteem	23	57.5
Normal	17	42.5
Vitiligo Area Scoring Index		
Mild	23	57.5
Moderate	09	22.5
Severe	08	20.0

Discussion

The purpose of this study was to determine the impact of vitiligo on psychiatric manifestations, to evaluate the frequency and pattern of psychiatric illness in vitiligo patients, and to evaluate the relationship between psychiatric illness, life stressors, hostility and direction of hostility, and quality of life in vitiligo patients. All of the patients' self-esteem was also evaluated. Based on the eligibility requirements, we selected n=40 Vitiligo patients who were receiving care at the Dermatology outpatient Department, and we evaluated them using the Hospital Anxiety and Depression Scale, the Presumptive Stressful Life Events Scale, the Rosenberg Self-Esteem Scale, and the Quality of Life Among Scale Questionnaire. Among the cases we found 70% suffering from Nonsegmental/generalized type of vitiligo and 30% cases from localized/segmental vitiligo. Among the nonsegmental type, we found 28.57% acrofacial cases, 32.14% vitiligo vulgaris cases, and 10.71% cases of Universalis type. In the localized cases, 16.67% were mucosal type, 25% were focal type, and the segmental type was 8.33% cases. Based on the course progressive was found in 32.5% of cases, Stationary in around 37.5% of cases, patients under remission and exacerbation were 17.5% and the Regressive course type is seen in 12.5% of the total cohort. The duration of illness of the sample population was less than three years in 57.5% of cases, between 4 – 6

years in 25% of cases, and above 6 years in 17.5% of cases. The mean duration of the disease in the study was 6.5 years. In a similar study Mattoo et al.,^[10] found a mean duration of 6.7 years, and Ongenae et al.,^[14] found the mean duration of disease as 10 years. The severity of cases was noted in the study out of n=40 cases n=23(57.5%) cases had mild severity, n=10(25%) had moderate severity and n=7(17.5%) had severe vitiligo. The results of this study are comparable to the study by Daniel SJ et al.,^[15] they found 61% of cases with generalized vitiligo and 18% with acrofacial vitiligo, and 1% of cases with segmental vitiligo and 20% of cases of localized vitiligo. CP Mason et al.,^[16] in a case review found Symmetrical and acrofacial types of vitiligo predominated but there were no segmental cases Age of onset was before 20 years in 17, with a mean of 28 years. The average duration of the disease was 16 years. Akrem J, et al.,^[17] found a localized type of vitiligo in 25% of cases acrofacial type in 12.5%, and a generalized type in 37.5% of cases. Another study by Gopal KV et al.,^[18] reported generalized vitiligo in 48% of cases, acrofacial form in 22.7%, localized type in 16%, and segmental type in 13.3%, according to research from South India. The current study found 70% of cases suffer from psychiatric morbidity. Ramakrishnan et al.,^[19] found the existence of psychiatric comorbidities in 79.2% of cases with vitiligo. Among the cases with psychiatric illnesses, it was found that major depressive disorder was in 30% of cases followed by a generalized anxiety disorder in 12.5% of cases and dysthymic disorder, social phobia, mixed anxiety, and depressive disorder in 7.5% of cases each. Matoo SK et al.,^[10] found the commonest psychiatric disorder in the cases was adjustment disorder in 56% of cases of vitiligo. Garg S et al.,^[20] found dysthymia (7–9%), depression (10%), depressive episodes (18–22%), sleep disturbance (20%), suicidal thoughts (10%), anxiety (3.3%) and suicidal attempts (3.3%) of cases of vitiligo. Although we found that anxiety condition is similar to depression, fewer people report having it, which is in contradiction to our study. Several socio-demographic factors, including mean age, sex, religion, marital status, and employment, were consistent with findings from a few earlier research. Although there is no link between gender and mental symptoms, a previous study identified a link between female gender and depression, meaning that women are more likely than men to report having the condition. No gender difference in depression was seen in our investigation, however, mental comorbidity was more frequently reported in both men and women. The assessment of the severity of vitiligo by VASI found mild cases in 57.5% of cases moderate in 22.5% and severe in 20% of cases. There was a significant difference found concerning the duration and severity of Vitiligo the case with a longer duration tends to have a more severe form of the disease. There was also a higher psychiatric association with a more severe form of the disease. Daniel SJ et al.,^[15] found patients with higher VASI severity had higher psychiatric comorbidity and a positive correlation between psychiatric morbidity and the duration of the disease. In this study, the findings regarding the number of stressful events and the severity of the Vitiligo region showed a positive association between the two variables. More stressful events increase the severity of Vitiligo. The analysis of Rosenberg's self-esteem ratings reveals no discernible gender differences in the overall results. While the presence of psychiatric illness is significantly linked to poor self-esteem ratings, the Generalized kind of vitiligo also has a substantially low score.

Conclusion

The important findings of this study are vitiligo patients commonly present with underlying psychiatric comorbidity. The common type of vitiligo diagnosed in the cases of the study was the Nonsegmental/Generalized type. The study found that the most common psychiatric disorder was major depression. A longer duration of vitiligo was associated with more severity of the disease and psychiatric manifestations. Based on the results of our study,

people with vitiligo have a significant chance of developing psychiatric manifestations, and their morbidity may rise if emotional issues are not appropriately handled. Early diagnosis and treatment of psychiatric manifestations may improve the course of the vitiligo illness as well as the general quality of life.

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