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Evaluation of psychological morbidity in patients with Vitiligo - a hospital based cross sectional study

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Abstract

Background: Vitiligo is a skin disease that causes white spots due to loss of skin pigment cells. Various Vitiligo patients undergo distressed and stigmatized by their condition. These patients often develop negative feelings about it, which are reinforced by their experiences over a number of years. The majority of patients with Vitiligo report feelings of embarrassment, which can lead to a low self-esteem and social isolation. To this purpose we have evaluated the psychiatric morbidity attributable to Vitiligo in patients attending dermatology clinics.

Methods: The presented study was a cross sectional descriptive study, conducted at Deccan College of Medical Sciences and OHRC, Hyderabad. Data was collected from dermatology Clinics of Owaisi Hospital and Research Centre and the Princess Esra Hospital. A serial sample of 53 patients with vitiligo and with age between 13 and 50 years. The study period of 9 months between January 2008 to October 2008. The subjects so chosen, were explained the nature of the study. Informed consent was then obtained from each subject. Each subject was then administered Mini International Neuropsychaitric Interview (M.I.N.I), Vitiligo Area Severity Index (VASI), Vitiligo Disease Activity Score (VIDA), in that order and they were rated on all the scales. Descriptive statistics were used to analyze socio demographic variables, type and extent of Vitiligo and psychiatric morbidity was done.

Results: A total of 53 participants were included in the study, out of which, majority (52.8%) were between 20 – 29 yrs. Out of 53 participants, 42 (79.2%) had some psychiatric illness associated with Vitiligo. The most common psychiatric illnesses reported were Social Phobia (67.9%), Major Depressive Disorder (56.6%) and Low risk suicide (20.8%). Panic disorder and obsessive compulsive disorder were present in 6 (11.3%) and 2 (4.8%) participants respectively. High risk suicide was reported by 4 (7.5%) participants.

Conclusion: In our study 79.2% of the patients had various psychiatric illnesses associated with Vitiligo. The most common psychiatric illnesses reported were Social Phobia (67.9%), next major illness was Major Depressive Disorder (56.6%). Panic disorder and obsessive compulsive disorder were also present in 6 (11.3%) and 2 (4.8%) participants respectively. High risk suicide

was reported in 7.5% participants. So, to conclude Vitiligo patients will have unambiguous psychiatric morbidity will be present.

Keywords: Vitiligo Area Severity Index (VASI), Vitiligo Disease Activity Score (VIDA), Social Phobia

Introduction

Vitiligo is a skin disease that causes white spots due to loss of skin pigment cells. In Vitiligo, melanocytes of the skin, mucous membrane, and the retina are damaged that causes white spots in different areas of skin. The symptoms of the disorder manifest in late childhood (before 20 yrs) through middle age. [(1)] Approximately, one-fifth of the family members of the patients are affected by Vitiligo. Commonly areas affected are skin include the face, lips, hands, arms, feet, and the genitals. Moreover, the color of the hairs that grow in the affected areas is usually white[(2)]. The disease affects all races and genders equally and common in people with other autoimmune disorders and incidence rate of 0.1% to 2% in different populations.[(4-5)] numerous Vitiligo patients undergo distressed and stigmatized by their condition. These patients often develop negative feelings about it, which are reinforced by their experiences over a number of years. The majority patients with Vitiligo report feelings of embarrassment, which can lead to a low self-esteem and social isolation.[(6)] To this purpose we have evaluated the psychiatric morbidity attributable to Vitiligo in patients attending dermatology OPD Clinics.

Materials and methods

The presented study was a cross sectional descriptive study, conducted at Deccan College of Medical Sciences and OHRC, Hyderabad. Data was collected from dermatology Clinics of Owaisi Hospital and Research Centre and the Princess Esra Hospital. A serial sample of 53 patients with vitiligo and with age between 13 and 50 years. The study period of 9 months between January 2008 to October 2008. Patients aged more than 16 years. Those persons or guardians (in case of minors), who are willing to give informed consent were included in the study. Patients with co-morbid skin and metabolic illnesses (inc. psoriasis, diabetes, CAD etc) and patients with communication difficulties e.g. mental retardation, speech disabilities were excluded from the study. Ethical committee has approved the study protocol and obtained informed consent from the study participants. These subjects were then screened using the inclusion and exclusion criteria.

The subjects so chosen, were explained the nature of the study. Informed consent was then obtained from each subject. Each subject was then administered Mini International Neuropsychaitric Interview (M.I.N.I) [(7)], Vitiligo Area Severity Index (VASI) [(8)],Vitiligo Disease Activity Score (VIDA) [(9)], in that order and they were rated on all the scales. The interview was completed in a single session of approximately 40 minutes.

Description of tools used

Mini International Neuropsychaitric Interview (MINI)

Developed by Sheehan DV (2002), from the University of Florida, the M.I.N.I. was designed as a brief structured interview for the major Axis I psychiatric disorders in DSM-IV and ICD-10. Validation and reliability studies have been done comparing the M.I.N.I. to the SCID-P114, 115 and the CIDI116. The results of these studies show that the M.I.N.I. has acceptably high validation and reliability scores, but can be administered in a much shorter period of time (mean 18.7 ± 11.6 minutes, median 15

minutes) than the above referenced instruments.

In order to keep the interview as brief as possible, patients are informed that the clinical interview is more structured than usual, with very precise questions about psychological problems which require a yes or no answer. The M.I.N.I. is divided into modules identified by letters, each corresponding to a diagnostic category. Clinical judgment by the rate is used in coding the responses. The rater asks for examples when necessary, to ensure accurate coding. The patient is encouraged to ask for clarification on any question that is not absolutely clear.

The clinician makes sure that each dimension of the question is taken into account by the patient (for example, time frame, frequency, severity, and/or alternatives). Symptoms better accounted for by an organic cause or by the use of alcohol or drugs are not coded positive in the M.I.N.I.

Vitiligo Area Severity Index (VASI)

The percentage of vitiligo involvement is calculated in terms of hand units. One hand unit (which encompasses the palm plus the volar surface of all digits) is approximately equivalent to 1% of the total body surface area. The degree of pigmentation is estimated to the nearest of one of the following percentages:

100% - complete depigmentation, no pigment is present;
90% - specks of pigment present;
75% - depigmented area exceeds the pigmented area;
50% - pigmented and depigmented areas are equal;
25% - pigmented area exceeds depigmented area; and
10% - only specks of depigmentation present.

The VASI for each body region is determined by the product of the area of vitiligo in hand units and the extent of depigmentation within each hand unit measured patch.

Body area (as a fraction of total body area):
Face and Neck- - 0.1
Upper Limbs - 0.2
Trunk - 0.3
Lower Limbs - 0.4
Total body VASI = Sum of each body part's (Area * Degree of pigmentation)

Vitiligo Disease Activity Score (VIDA)

A six-point scale to assess patient's own opinion of vitiligo disease activity. Active vitiligo involves either expansion of existing lesions or appearance of new lesions.

Grading is as follows: VIDA Score
+4 - Activity of 6 weeks or less duration;
+3 - Activity of 6 weeks to 3 months;
+2 - Activity of 3 - 6 months;
+1 - Activity of 6 - 12 months;
0 - Stable for 1 year or more; and
-1 - Stable with spontaneous repigmentation since 1 year or more.
A low VIDA score indicates less activity.

Statistical analysis

Descriptive analysis of the socio demographic variables, type and extent of Vitiligo and psychiatric morbidity was done. Categorical variables were presented as frequencies and percentages. Quantitative variables were presented as means and standard deviations. Occurrence of any psychiatric illness was taken as primary outcome measure. The association between the outcome and various exposure parameters was assessed by independent sample t-test. 95% confidence intervals and p- values of all the parameters were presented. IBM SPSS statistics, version 21 was used for statistical analysis.

Results

A total of 53 participants were included in the study, out of which, majority (52.8%) were between 20 – 29 yrs. The proportion of

subjects below 19 years and above 30 years was 13.2% and 34.0% respectively. The proportion of females (77.4%), was greater than males (22.6%). Majority of the participants (30.2%) belonged to the Upper lower socio economic status. Upper middle and Lower middle constituted 26.4% and 24.5% of the study population respectively. Only 7 participants (13.2%) belonged to Upper and 3 subjects (5.7%) belonged to the lower socio economic status (Table 1).

The most common type of Vitiligo observed in study population was Fitzpatrick type 4, which was seen in 35 (66%) of the study subjects. The other types observed were Type 5 and type 3 in 10 (18.9%) and 8 (15.1%) of the study subjects. Thirty nine (73.6%) of the study subjects had extensive Vitiligo by VASI score. Moderate and minimal Vitiligo was present in Seven (13.2%) subjects each (Table 2).

Out of 53 participants, 42 (79.2%) had some psychiatric illness associated with vitiligo. The most common psychiatric illnesses reported were Social Phobia (67.9%), Major Depressive Disorder (56.6%) and Low risk suicide (20.8%). Panic disorder and obsessive compulsive disorder were present in 6 (11.3%) and 2 (4.8%) participants respectively. High risk suicide was reported by 4 (7.5%) participants (Table 3).

Table 1: Socio demographic parameters of study population (N=53).

Parameter	Frequency	Percentage
Age group		
<= 19	7	13.2
20-29	28	52.8
30	18	34.0
Gender		
Male	12	22.6
Female	41	77.4
Socio economic status		
Lower (V)	3	5.7
Upper Lower (IV)	16	30.2
Lower Middle (III)	13	24.5
Upper Middle (II)	14	26.4
Upper (I) 7	7	13.2
Marital Status		
Married	25	47.2
Un married	25	47.2
Widowed	3	5.6

Table 2: Descriptive analysis of vitiligo related parameters (N=53).

Parameter	Frequency	Percentage
Fitzpatrick Skin Type		
Type 3	8	15.1
Type 4	35	66.0
Type 5	10	18.9
Vitiligo Area Severity Index (VASI)		
Extensive	39	73.6
Moderate	7	13.2
Minimal	7	13.2

Age of the patient, age at onset of illness and duration of treatment had no statistically significant association with risk of psychiatric morbidity in Vitiligo patients**.** People with shorter duration of illness had more risk of psychiatric morbidity, as the mean duration of disease was 42 months lesser in people with psychiatric morbidity (p value 0.024, 95% CI 5.78 to 78.33). Higher VASI score was also associated with higher risk of psychiatric morbidity (Mean difference 9.41, 95% CI 1.46 to 18.36, p value 0.04).

Discussion

Vitiligo is an annoying and frustrating skin disease. It even affects the patients' confidence and quality of life. Although various drugs are prescribed for these patients, no single drug that can reduce symptoms and skin lesions has been discovered.[10] Shahin Aghaei et al study indicated that mental health in Vitiligo patients is poor and it is strongly associated with their quality of life[11].

Porter et al [12] found that preponderance of Vitiligo patients experienced anxiety and embarrassment when meeting strangers or beginning a new sexual relationship and many felt that they had been the victims of rude remarks. Salzer and Schallreuter [13] reported that 75% of vitiligo patients found their disfigurement moderately or severly intolerable. Weiss et al [14] compared the difficulties faced by Vitiligo patients with Vitiligo with those with leprosy in India. A possible relationship between stress and the development of Vitiligo is under investigation.

Table 3: Descriptive analysis of the psychiatric morbidity among study population (N=53).

Parameter	Frequency	Percentage
Any Psychiatric illness	**42**	**79.2**
Social Phobia	36	67.9
Major Depressive Disorder	30	56.6
Low risk suicide	11	20.8
Panic disorder	6	11.3
High risk Suicide	4	7.5
OCD	2	3.8

Table 4: Factors associated with psychiatric morbidity in study group (N=53).

Parameter	Psychiatric Morbidity	n	Mean	Mean Difference	p value	95% CI	
						Lower	Upper
Age of Patient	Yes	42	27.67	-0.879	0.761	-6.656	4.899
	No	11	28.55				
Age at onset of illness	Yes	42	23.60	3.141	0.306	-2.963	9.244
	No	11	20.45				
Duration of illness	Yes	42	50.67	-42.061	0.024	-78.33	-5.78
	No	11	92.73				
Duration of treatment	Yes	42	27.71	-22.831	0.068	-47.45	1.79
	No	11	50.55				
Vitiligo Area Severity Index	Yes	42	17.60	9.413	0.040	1.46	18.36
	No	11	8.18				

Conclusion

In our study 79.2% of the patients had various psychiatric illnesses associated with Vitiligo. The most common psychiatric illnesses reported were Social Phobia (67.9%), next major illness was Major Depressive Disorder (56.6%). Panic disorder and obsessive compulsive disorder were also present in 6 (11.3%) and 2 (4.8%) participants respectively. High risk suicide was reported in 7.5% participants. So, to conclude Vitiligo patients will have unambiguous psychiatric morbidity will be present.

Conflict of Interest: NONE

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