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Original Research Paper

Comparison of Quality of Life, Depression and Self-Esteem in Patients of Vitiligo and Melasma

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Abstract
Background: *Skin is an important interface of a human being with the world. Pigmentary disorders have psychological impact as well as impact on well-being and body image. The quality of life is affected adversely in both vitiligo and melasma patients, but psychosocial factors at work are different,*
Aim: *To assess and compare quality of life, self-esteem, depression and socio-demographic variables in patients of vitiligo and melasma.*
Methodology: *50 consecutive patients each of vitiligo and melasma were interviewed in the Dermatology clinic. WHO QOL-BREF, Hamilton Depression Rating Scale & Rosenberg Self Esteem Scale were used for interview. Data obtained was analysed using statistical tests.*
Results: *The mean age was 34.8 (±13.34) & 39.78 (±7.65) years for patients of vitiligo & melasma respectively. The mean duration of illness was 8.04 (±7.95) years in Vitiligo and 4.36 (±4.15) years in melasma. 36% of vitiligo patients had changed their physician more than twice when compared to only 8% patients of melasma. Only 40% Melasma patients perceived it to be a major ailment, whilst 70% of Vitiligo patients reported it to be a major ailment and the difference was statistically significant (P-0.03). Female patients of vitiligo had significantly worse quality of life and self-esteem than female melasma patients. Depression was significantly worse in vitiligo patients.*
Conclusion: *Vitiligo has a more negative psychological impact especially on female patients than melasma.*
Keywords: *Vitiligo, Melasma, Quality of life, Depression, Self-esteem.*

Introduction

Skin is the largest organ of the body and an organ of expression. It is an important interface between the human being and the world. A healthy normal skin is an important aspect of one's sexual attractiveness, a sense of well-being and self-confidence and also unequivocally contributes to one's positive body image. Patients of dermatological disorders experience significant amount of emotional pain [1]and incidence of psychiatric disorders among dermatology patient varies from 30-60%. [2] A recent Indian study reveals majority of dermatology patients (89%) have depressive symptoms. [3] Pigmentary disorders such as melasma, vitiligo, and lentigo impact a person's health-related quality of life adversely. [4]

Vitiligo runs a chronic and unpredictable course requiring long term treatment but there is no uniform effective therapy and this is usually very demoralizing for patients.[5] They show indications of significant distress that are related to specific types of social encounters and emotional disturbances. [6] Melasma on the other hand is also a significant cosmetic problem and cause of emotional distress. [7] In a patient with chronic disfiguring skin disorder, perception of self-image may vary depending on nature of illness, appearance and visibility of skin lesions; and may lead to avoidant and concealment behaviours as well as compulsive rituals. Depression and social anxiety may also ensue. [8] Kellet S [9] described patient responses to disfigurement as a "dermatological shame" and patients' focus on the appearance of skin and relative attractiveness. None of these two dermatological disorders causes any physical pain but may have cosmetic impact enough to cause emotional pain and distress to the individual.

The psychological impact of pigmentary disorders needs to be addressed. The quality of life is affected adversely in both vitiligo and melasma patients, but psychosocial factors at work appear to be different, and need to be investigated further. Depression is common in skin disorders but perception of the two disorders by patient and society are different. The comparison between the two disorders is done so as to gain insight into psychosocial impact on these patients in an Indian setting due to stigma and/or disfigurement.

Materials and Method

This was a cross sectional single interview study conducted in a tertiary care municipal run hospital, Mumbai. After getting institutional ethics committee approval, 50 consecutive patients each of vitiligo and melasma from dermatology OPD were interviewed. Patients included were those between 18-60 years of age and willing to give informed consent. Patients suffering from already diagnosed psychiatric/neurological/chronic or critical illness or any comorbid dermatological disorder were excluded. The patients who were unable to answer the questions of the proforma, not willing or unable to provide consent were not included in the study. Written informed consent was obtained from each patient after they were provided information about the study and assured confidentiality.

We aimed to assess and compare quality of life, self-esteem, depression and socio-demographic variables in patients of vitiligo and melasma. Following tools were used for the study:

1. **Semi-structured Proforma:** to collect sociodemographic details of patients.
2. **WHO Quality of Life-BREF (WHOQOL-BREF):** The WHO Quality of Life – BREF is an abbreviated version of the WHO QOL-100. It is a self-administered instrument; however respondents who have difficulty due to illiteracy can be assisted by an interviewer who reads the question. It takes into consideration physical and psychological factors, social relationships and environmental domains of quality of life and gives sub scores on above mentioned domains ranging from 0 to 100. Internal consistency of WHO QOL-BREF for

Indian patients ranges from 0.63 to 0.84 and it performs well on preliminary tests of validity. [10]

3. **Hamilton Depression Rating Scale (HDRS):** is a multiple choice questionnaire that clinicians may use to rate the severity of a patient's depression. The questionnaire rates the severity of symptoms observed in depression such as low mood, insomnia, agitation, anxiety and weight loss. The scale contains 17 variables and score is calculated by adding the score on each variable. Score less than 8 is normal, 8-13 is suggestive of mild depression, 14-18 of moderate depression, 19-22 of severe depression and more than 22 of very severe depression Internal consistency of HDRS is reported 0.83 [11]and validity ranges from 0.65 to 0.90.[12]
4. **Rosenberg Self-Esteem Scale (RSES):** While designed as a Guttman scale, the SES is now commonly scored as a Likert scale. The 10 items are answered on a four point scale ranging from strongly agree to strongly disagree. The scale ranges from 0-30, with 30 indicating the highest score possible. Scores between 15 and 25 are within normal range; scores below 15 suggest low self-esteem. Internal consistency for the RSES range from 0.77 to 0.88 and criterion validity is 0.55.[13]

Statistical Analysis

The collected data was analysed using SPSS-20 software. Pearson chi-square test is used for comparing qualitative variables. Unpaired t test was used for comparing normally distributed quantitative variables, whereas Mann-Whiteny U test is used for data which failed normality test (Shapiro-Wilk). P value of less than 0.05 was considered statistically significant.

Results

In our study, there were 50 patients of vitiligo of which 50% were female; whilst out of 50 patients of melasma 80% were female. 62% of vitiligo patients were married compared to 92% that of melasma. The mean age was 34.8 (±13.34) & 39.78 (±7.65) years for patients of vitiligo & melasma respectively. Among vitiligo patients 36% had primary education or less, 50% had secondary education and 14% had at least bachelor's degree, whereas 24%, 60% & 16% among melasma patients had primary education or less, secondary education and at least bachelor's degree respectively.

The mean duration of illness was 8.04 (±7.95) years in vitiligo and 4.36 (±4.15) years in melasma which is a statistically significant difference (P-0.005). The change of physician was more in vitiligo patients, up to 19 physicians had been changed by a patient in pursuit of cure. 36% of vitiligo patients had changed their physician more than twice when compared to only 8% patients of Melasma (Table 1).Only 40% of melasma patients perceived it to be a major ailment, whilst 70% of vitiligo patients reported it to be a major ailment and the difference was statistically significant (P-0.03).

The severity of depression was graded on HDRS and it appeared that patients of melasma featured more in mild or moderate depression but vitiligo patients dominated the moderate to very severe grade of depression. (Table 2) Also, greater number of vitiligo patients had low self-esteem and a low quality of life than melasma patients. (Table 2)

The scores on all the scales were compared between the two disorders where the scores of melasma patients were persistently better than vitiligo patients with few significant differences noted especially when only female patients were compared. (Table 3)

Table 1: Change of physicians by the patients.

Diagnosis	Number of physicians changed										Pearson Chi-Square
	0	1	2	3	4	5	6	7	10	19	43.255
Vitiligo	30%	12%	22%	14%	06%	04%	04%	04%	02%	02%	P value
Melasma	02%	70%	20%	04%	00%	02%	00%	02%	00%	00%	0.00*

*P<0.05 (Pearson Chi Square test)

Table 2: Distribution of patients according to scoring by HDRS, SES and WHO QOL-BREF

	Vitiligo (N-50)	Melasma (N-50)	P value
Total Quality of Life			
≤200	19	15	0.398
>200	31	35	
Severity of Depression on HDRS			
Normal	03	08	0.04*
Mild	17	22	
Moderate	10	13	
Severe	08	04	
Very Severe	12	03	
Self Esteem			
Low	13	11	0.640
Normal	37	39	

*P<0.05 (Pearson Chi Square test)

Table 3: Comparison of scores of WHO QOL-BREF, HDRS and SES in patients of vitiligo&melasma

		Total patients		Female patients		Male patients	
Parameter		Vitiligo (N-50)	Melasma (N-50)	Vitiligo (N-25)	Melasma (N-40)	Vitiligo (N-25)	Melasma (N-10)
Physical QOL	Median (IQR)	63 (25)	63 (25)	56 (25)	63 (24)	69 (13)	69 (12)
	Mann Whiteney U	1110.5(P-0.33)		401 (P-0.19)		108 (P-0.53)	
Psychological QOL	Median (IQR)	50 (38)	56 (25)	31 (38)	56 (19)	56 (25)	63 (13)
	Mann Whiteney U	1037(P-0.14)		311 (P-0.01*)		119 (P-0.83)	
Social Relationship QOL	Median (IQR)	50 (25)	56 (25)	50 (25)	56 (25)	69 (25)	63 (19)
	Mann Whiteney U	996(P-0.08)		357 (P-0.05)		99 (P-0.33)	
Environmental QOL	Median (IQR)	56 (19)	59.5 (19)	50 (19)	59.5 (19)	63 (13)	60 (13)
	Mann Whiteney U	994 (P-0.07)		343 (P-0.03*)		106 (P-0.48)	
Total QOL	Median (IQR)	226 (107)	250.5 (70)	187 (113)	244 (73)	239(62)	257 (49)
	Mann Whiteney U	1049 (P-0.17)		336.5 (P-0.03*)		114 (P-0.69)	
HDRS Score	Median (IQR)	17 (13)	12 (9)	20 (14)	12 (9)	14 (10)	10 (7)
	Mann Whiteney U	902 (P-0.02*)		302 (P-0.01*)		79.5 (P-0.1)	
Self esteem	Median (IQR)	16.5 (5)	18 (4)	16 (5)	18 (3)	17 (4)	16 (6)
	Mann Whiteney U	1020.5 (P-0.11)		335 (P-0.049*)		112 (P-0.63)	

QOL- Quality of life, IQR- Interquartile range.*P<0.05

Discussion

In our study, there were equal number of patients of vitiligo from both genders; whilst of 50 patients of melasma only 20% were male, rest 80% were female. Higher percentage of female patients in melasma sample is probably a reflection of the fact that it is more common in female patients. [14]Though vitiligo and melasma do not cause any physical pain or discomfort, the cosmetic disfiguration due to the pigmentary abnormality is a common concern for the patients. Melasma causes predominantly facial blemish whereas

vitiligo evokes greater social stigma against the individuals who suffer from it. Significantly more number of patients with vitiligo perceive the disorder to be a major ailment and significant problem than those with melasma. Despite cosmetic impact being a concern in both disorders, the social stigma leads to a graver perception of the ailment by vitiligo patients. The patients of vitiligo ended up changing their physician more frequently than melasma patients for want of cure. The possible reasons were slow response to treatment in vitiligo, lack of patience and high frustration with disorder among the patients of vitiligo.

Quality of life is indicative of well-being of an individual and is affected by multiple factors in individual's psychological, physical & social space to name a few. The quality of life was persistently lower in patients of vitiligo than that of melasma and was significantly worse when only female patients were considered. The difference is significant predictably in psychological and environmental domain of quality of life in female patients but surprisingly analysis of social relationship domain revealed no significant difference between patients of vitiligo and melasma either in total sample, or when analysed separately for male and female patients. It is thought that because of the negative effect on physical appearance, vitiligo may act as a potential barrier to social relationships and quality of life is impaired. [15]

Also no significant difference was noted in physical domain of quality of life between patients of two disorders. In India individuals with vitiligo face severe psychological and social problems owing to some religious beliefs attributing vitiligo to past life sins. [5] This social discrimination is more in dark skinned people because of strong contrast between normal and vitiligo affected skin. [16] Pawaskar et al. [17] reviewed that melasma in Hispanic women does affect quality of life adversely. Quality of life takes a harder hit in women than in men suffering from vitiligo. [18]Also number of consultations and subjective disease severity independently influence the quality of life. The quality of life impairment in women affected with vitiligo equals the impairment caused by psoriasis. [19]

Analysis of HDRS score revealed 94% of vitiligo patients were depressed, 40% of which were severely or very severely depressed and 54% mildly to moderately depressed on HDRS. Vitiligo patients are stared at, whispered about or subjected to antagonism, insult, isolation and are greeted differently. [5]An Indian study reveals the prevalence of adjustment disorder (56%), depressive episode (22%) and dysthymia (9%) in vitiligo. [20] The disfigurement of vitiligo can be psychologically distressing leading to anger, shame and depressed feelings even without any physical discomfort. [21] Patients find themselves little able to improve their condition [22] and they tend to feel more hopeless with time.[23] The self-image of vitiligo patients deteriorates and may eventually lead to depression.[5] Major depression and anxiety are the most common psychiatric morbidities in these patients. [24]

84% of melasma patients were depressed in our sample. Only 14% of melasma patients were severely or very severely depressed and 70% of patients were mildly or moderately depressed by HDRS. This was more than in a Pakistani study done in a dermatology outpatient clinic by Bashir et al.[25]who found that frequency and percentage of depression is 37.5% in melasma patients. Our findings support views of Cayce et al. [26] that melasma has negative psychological consequences and can cause a significant effect on individual emotional well-being.[27]

Vitiligo patients were significantly more depressed than melasma patients, more so when only female patients were considered for comparison. The disorder was perceived as a major ailment by more patients of vitiligo than those of melasma. The social stigma of vitiligo in India is very likely to be a significant factor at play here. The social stigma of vitiligo adds to the distress of having a cosmetic disorder. Since ancient times patients with vitiligo suffered the

same societal abuses as lepers. In women, anxiety and depression occurs more frequently than in men with dermatological disorders. [28]The fact that female patients have more depression can be attributed to the fact that more importance is given to the appearance of females by society and by patients themselves as well as the patriarchal society in India which unfortunately leaves little space for imperfections of females. The cosmetic imperfections of females tend to invite criticism and apathy rather than understanding by male as well as female members of society. This lack of acceptance in the outer world may be perceived as a flaw in one's self. This creates a fertile breeding ground for depression and can have catastrophic consequences.

Appearance-related distress occurs not only because of a change of appearance but also because it is a persistent reminder of the disease. Conditions that are highly visible to strangers, cause more distress than those that are hidden. [29] This distress is so pervasive and persistent that over and above the state of mind that is mood, it also takes a toll on the self-esteem of patients of cosmetic disfigurement. The median self-esteem score of the patients in our sample was 16.5 for vitiligo and 18 for melasma. A score of less than 15 is defined as low self-esteem on Rosenberg self-esteem scale. The self-esteem in vitiligo patients was lower than that of melasma and the difference was statistically significant when only female patients were compared. Vitiligo patients suffer from low self-esteem, poor body image and poor quality of life.[18] The self-esteem is lower in female patients than male patients of vitiligo. [30]Low self-esteem leads to a lack of confidence in oneself and to be critical about oneself, paving the way for failures and blaming oneself for them.

Conclusion

Despite cosmetic impact being a concern in both disorders the social stigma leads to more grave perception of the ailment by vitiligo patients and more frequent change of physicians. The quality of life was persistently lower in patients of vitiligo than that of melasma. The psychological and environmental domain of quality of life as well as total quality of life is worse in female patients of vitiligo and melasma whereas for males suffering from these disorders there was no significant difference. The patients of vitiligo were depressed more frequently and more severely than patients of melisma, however that was not true when only male patients are considered. The self-esteem was generally lower in patients of vitiligo and especially in female patients. It appears that the psychological outcome is graver in female patients of vitiligo than males as compared to patients of melasma.

Limitations

1. The study was done in a tertiary care institute and samples were selected consecutively.
2. Most of the patients were from urban area and very few from rural area.
3. The sample size was small.
4. The gender and length of illness was not matched in the two groups.
5. The clinical types of disorder were not considered for comparisons.

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