ASSOCIATION OF LEUCODERMA AND PSYCHIATRIC ILLNESS!

Dr. Prabhat Kumar Agrawal [1*]

1. Assistant Professor, Department of BRD Medical College, Gorakhpur

*Corresponding author – **Dr. Prabhat Kumar Agrawal**
Email id – prabhatbhalotia06@gmail.com

ABSTRACT

Background: Leucoderma is an acquired disorder of pigmentation which is identified by depigmented patches of various sizes on the skin due to the defects of melanocytes. Since the generalized visibility of skin diseases, self-esteem is first to compromised. Skin diseases that affect the general appearance and leaves ugly skin patches and scars are indirectly affect the personal and social interactions, self-esteem along with their career as well. **Material & Methods:** A total of 50 patients were enrolled for study, which were attending the dermatology department of our hospital and suffering from leucoderma. These diagnosed patients with leucoderma were enrolled for study by simple random sampling. The control group consisted of 50 healthy subjects without leucoderma or any psychiatric illness. **Results:** Depression was the most common finding present in 38% of patients with leucoderma and17% had anxiety symptoms while among control group depression was absent and anxiety symptoms present in 6% of subjects. Severity of leucoderma had statistically non-significant association with psychiatric illness. Among the leucoderma group the mean BSA score was 18.25 with psychiatric illness in comparison to 11.53 in those without psychiatric illness **Conclusion**: Prevalence of psychological illness among the patients of leucoderma was found to be non-significantly associated in comparison to healthy controls. There was negative correlation found between the severity of leucoderma and the psychiatric illness. Patients of leucoderma reported to had high prevalence of psychiatric illness and poorer QOL.

Key words: Leucoderma, psychiatric illness, anxiety, depression.

INTRODUCTION

Leucoderma is an acquired disorder of pigmentation which is identified by de-pigmented patches of various sizes on the skin due to the defects of melanocytes. De-pigmented skin patches may found in a localized manner or present as random distribution (**1**). Leucoderma affects 1 to 2% of the population worldwide with a nearly same prevalence among male and female in all different geographical regions. Multiple researches had been conducted on the subject of the pathogenesis of the leucoderma (**2**). Recent studies reported that leucoderma results from the complex web causation of autoimmunity, oxidative stress and genetics. Current studies reported that the role of the cytokine signaling pathway interferon-γ CXCL10 and lymphocytes

(CD8) in the pathogenesis of destruction of melanocytes among patients with leucoderma (**3**).

Since the generalized visibility of skin diseases, self-esteem is first to compromised. The thought of being not skin patch and loss of beauty and became undesirable had been observed in patients with various cutaneous diseases for example alopecia areata to leucoderma (**4**). Since ancient times there was profound significance on appearance, pigmentation and esthetics in many cultures and societies all around the globe. Any disease or condition that alters the physical appearance may be result in loss of opportunities, privilege and also upward societal mobilisation. Therapeutic measures

for leucoderma focused upon the stabilization of the active disease along with the repigmentation of the depigmented skin patches. Treatment that alters the disease progression includes oral mini-pulse corticosteroid therapy or systemic steroid therapy, methotrexate and minocycline **(5)**. First-line treatment for repigmentation of the depigmented skin patches includes topical corticosteroids, narrowband ultraviolet B phototherapy and calcineurin inhibitors **(6)**.

Skin diseases that affect the general appearance and leaves ugly skin patches and scars are indirectly affect the personal and social interactions, self-esteem along with their career as well. Various researches have reported that the psychological comorbidities like depression, stigmatization, isolation and self-consciousness in persons who had leucoderma. Similarly many other studies worldwide reported that very low self-esteem and poor quality of life (QoL) index among patient with leucoderma **(7)**. Hence, we conducted present study to know the association of psychiatric morbidity and leucoderma.

MATERIALS & METHODS

The present case-control study was conducted our tertiary care hospital. A total of 50 patients were enrolled for study, which were attending the dermatology department of our hospital and suffering from leucoderma. These diagnosed patients with leucoderma were enrolled for study by simple random sampling. The control group consisted of 50 healthy subjects without leucoderma or any psychiatric illness. Clearance from Institutional Ethics Committee was taken before start of study and written informed consent for the study purpose was obtained from all the patients. All the patients were subjected to a pretested proforma and demographic data recorded such as age, gender, educational and marital status along with detailed clinical examination. Body Percentage of Surface Area (BSA) used to know the extent of leucoderma according to the rule of nines. Patients who had chronic debilitating diseases such as diabetes, cardiac diseases, hypertension, liver and renal diseases, cancer and pregnant or lactating women were excluded from the study.

Hamilton Rating Scale for Anxiety and Depression (HAM-A and HAM-D) were applied for evaluating the severity of anxiety and severity of depression. The HAM-A scale includes 14 items and used for measuring both psychic anxiety and somatic anxiety. Scoring was done as 0 (not present) to 4 (severe) and total score is 0 to 56, where less than 17 denotes mild severity, 18 to 24 denotes mild to moderate severity and 25 to 30 denotes moderate to severity. The HAM-D scale includes 21 items but only 17items used for clinical trials in depression. Total score is 0 to 54, scores between 0 and 6 denotes no depression, scores of 7 to 17 denotes mild depression, scores of 18 to 24 denotes moderate depression and scores more than 24 denotes severe depression. The data were analyzed using MS Excel 2010, Epi Info v7 and SPSS v22.

RESULTS

Present study consists of 50 patients of leucoderma and 50 healthy controls. The mean age of the leucoderma patients was 34.20 years and mean age of controls was 31.92 years respectively. In the leucoderma group males and females composition was 48% and 52%, while in control group the male and female composition was 36% and 64% respectively. The majority of religion in study subjects was hindu but it did not have any significant association with study results. There were 61% and 65% married participants in leucoderma and control groups respectively.

In the leucoderma group the mean years of education was 10.62 while in control group it was 11.56 years. Among the female participants in both the groups' majority of them were housewives i.e. 58% and 61% in leucoderma and control group respectively.

The mean time duration of comorbities among patients with leucoderma was 5.24 years (ranges from 1-14 years) with the mean BSA score of 18.25 (ranges from 1-56). 41% patients with leucoderma were suffered from psychiatric illness while only 9% of healthy control group were suffered from psychiatric illness but this difference was statistically not significant (p > 0.05). Among the symptoms depression was the most common finding present in 38% of patients with leucoderma and17%

had anxiety symptoms while among control group depression was absent and anxiety symptoms present in 6% of subjects.

Table 1: Comparison of psychiatric illness in patients suffering from leucoderma.

Duration of leucoderma	Psychiatric illness		
	Present (n=10)	Absent (n=40)	P value
Mean	5.24	6.47	.801
SD	2.61	3.98	
BSA	Psychiatric illness		
	Present (n=10)	Absent (n=40)	P value
Mean	18.25	11.53	.589
SD	12.66	10.42	

Among the leucoderma group there was one patient had schizophrenia. Severity of leucoderma had statistically non-significant association with psychiatric illness. Among the leucoderma group the mean BSA score was 18.25 with psychiatric illness in comparison to 11.53 in those without psychiatric illness (Table 1).

Among the leucoderma group the substance use were reported in 19% of patients where none was reported in control group. The mean WHO-Quality of life scores was found low in leucoderma group in comparison to control group and this difference was statistically significant (p=0.012). WHO-QOL was reported poorer in leucoderma patients having psychiatric illness (p<0.01) and it affects all the 4 domains and had negative correlation with HAM-A, HAM-D and GHQ and also the severity scores and the observations were statistically non-significant (p > 0.05) (Table 2).

Table 2: Correlation of quality of life with psychiatric illness and severity of leucoderma.

WHO-QOL score	GHQ total	HAM A	HAM D	BSA score
Leucoderma (n=50)	-.523	-.460	-.448	-.517
P value	0.012	0.738	0.568	0.023

DISCUSSION

In the present study patients of the leucoderma group were in the age group of 15 -65 years with the mean age group of 34.20 years and this was nearly similar to the results reported in studies conducted in recent years, where the mean age was in late second decade of life (8). In the present study there was more number of females enrolled among both the groups. This was also comparable to the results of studies conducted in recent years (9). In the present study the duration of leucoderma was much less than results reported in studies conducted in recent years (10). This less mean duration of leucoderma in case group might be due to high awareness among patients and also by increased concern about the disease and about their skin and looks as they were females and belongs to younger age group (11).

In the present study, among the symptoms depression was the most common finding present in 38% of patients with leucoderma and17% had anxiety symptoms while among control group depression was absent and anxiety symptoms present in 6% of subjects. A study conducted by Saleh HM et al reported that psychiatric morbidities in 34% of the leucoderma patients along with anxiety found in 12% and depression found in 22% of the patients (12). A study conducted by Sharma N et al reported that the prevalence of psychiatric illness as assessed in patients of leucoderma was observed to be 16.2%; prevalence of depression was found to be 10% and of anxiety, it was 3.3% (13). A study conducted by Mattoo SK et al reported that an average of 34 patients who had leucoderma was diagnosed with psychiatric illness. They reported 56% of them had adjustment disorder, 22% had depressive episodes

and 9% of them had dysthymia **(14)**. Another study conducted by Martan MR et al, among 180 patients of leucoderma, reported the clinical prevalence of 48% of psychiatric illness **(15)**. Another study conducted by Ahmed et al reported that the 42% of patients had psychiatric illness along with major depression and anxiety disorders with leucoderma **(16)**. Another study conducted by Rashid et al reported psychiatric illness of 24% in study subjects. These results were nearly similar to the results of the present study **(17)**.

The present study reported that quality of life was found poorer in patients with psychiatric illness as compared to healthy controls which not having it and also the quality of life was influenced by severity of psychiatric comorbidities. Nearly similar findings were reported by studies conducted in recent years **(18)**. This poorer quality of life might be result of dark skin complexion with light colored leucoderma patches which was causing guilt and much stress among cases and feeling shame in facing public contact due to skin disfigurement. Also, the leucoderma is considered to be as white leprosy (Sewta Kushtha) or unclean disease by some people **(19)**. The limitation of present study was its cross-sectional nature and also loss to follow up of the patients hence; the effects of drug therapy of psychiatric illness were not evaluated. Also the healthy control group of present study was comprised of attending persons and their psychological profile might be influenced or affected by the health status of the patient.

CONCLUSION

We concluded from the present study that the prevalence of psychological illness among the patients of leucoderma was found to be non-significantly associated in comparison to healthy controls. There was negative correlation found between the severity of leucoderma and the psychiatric illness. Patients of leucoderma reported to had high prevalence of psychiatric illness and poorer QOL.

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