

Original Research

Prevalence of anxiety and depression in patients with tinea in a tertiary care centre

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ABSTRACT:

Background: Central nervous system and skin are derived from ectoderm and due to same origin are known to have co-morbid conditions. Psychological stress may lead to skin conditions and primary dermatological diseases may lead to depression and anxiety due to visible cosmetic flaws. Poor self-care due to other psychiatric conditions may lead to skin problems. The study was done to study correlation between tinea and anxiety and depression.

Method: The study was conducted in Dermatology department with department of Psychiatry of a tertiary care hospital where patients were recruited after consent, with convenience sampling. 60 patients, after being diagnosed with tinea were screened for anxiety and depression using HAM-A and HAM-D respectively.

Results: 60 patients were recruited out of which 40 were females. Mean age was 40.05 years. 25% were illiterate. Majority in the considered sample population were married (66.7%), unemployed (78.3%) and only 21.7% were employed. Mean duration of tinea in patients is 18.9 months. 61.7% of the study population had anxiety and depression. Out of them mild anxiety (48.3%) and mild depression (61.7%) was found in majority.

Conclusion: Correlation of anxiety and depression with tinea has been found high with increased emphasis on duration of tinea infection. Advanced age does not increase the presence of psychopathology in later age group. Anxiety was more in females with tinea. Significant correlation between depression and anxiety was found in unemployed patients.

Key words: Anxiety, Depression, Tinea versicolor

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INTRODUCTION:

Central nervous system and skin have same mode of generation as epidermis and neural plate are embryonically derived from embryonic ectoderm.¹ Psychiatry and dermatology together have been studied to analyse the correlation between psychiatric and dermatological disorders. Dermatological conditions have been criticised by the society since time immemorial leading to self-stigmatisation and stigmatisation by others taking a toll on mental health. Patients with psychiatric conditions like depression, schizophrenia, catatonia etc. have difficulty in maintaining self-care due to decreased energy, loss of interest and lack of reality contact and therefore may lead to various dermatological

conditions especially fungal infections. Psychotropic drugs may lead to dermatological side effects such as acne and sometimes metabolic side effects thus exposing the patients to various dermatological infections. Susceptibility to infection also increases due to lowered immunity in psychiatric disorders.² 25-43% of patients presenting to a Dermatology set up are known to have Psychiatric issues co-morbidly.^{3,4} Fungal infections are the most common type of cutaneous infections. Tinea versicolor is a very common fungal infection of skin leading to scaly hypo/hyperpigmented lesions mostly over trunk and upper limbs. It is a recurrent skin condition and because of the visibility of the lesions leads to impact

on mental health and development of psychiatric disorders.

The study was conducted to find correlation between tinea and depression and anxiety disorders.

METHOD:

The research was started in the dermatology outpatient department in liaison with department of psychiatry of a tertiary care hospital. The study was cross sectional where patients were recruited via convenience sampling. Patients diagnosed as having cutaneous and/ or mucosal fungal infection were recruited. Patients with diabetes mellitus were excluded. The patients were informed about the details of the study and informed consent was obtained from those who were willing to participate in the study. Data collection was done in 60 patients having different types of fungal infections. Sociodemographic data was noted and detailed

dermatological evaluation was done. The patients, after establishing a diagnosis of tinea versicolor were sent to outpatient department of psychiatry. There they were screened for the presence of depression or anxiety disorders with the help of Hamilton Depression Rating Scale (HAM-D) and Hamilton Anxiety Rating Scale (HAM-A). The data was analysed on SPSS version 24.

RESULTS:

In Table 1 analysis of the demographic details of the study population are shown. 60 was the total sample size of the study. Out of which females being in majority (66.7%) and mean age being 40.05 (SD=12.45) years. Out of the total, 33.3% read till secondary school and 25% were illiterate. Majority in the considered sample population were married (66.7%), unemployed (78.3%) and only 21.7% were employed.

Table 1: Socio-demographic profile

Variable	Mean (SD)/ Frequency (Percentage)
Age (years)	40.05 (12.45)
Gender	
Male	20 (33.3%)
Female	40 (66.7%)
Education	
Illiterate	15 (25%)
Primary school	5 (8.3%)
Secondary school	20 (33.3%)
Higher secondary school	8 (13.3%)
Graduate	8 (13.3%)
Postgraduate	4 (6.7%)
Employment	
Employed	13 (21.7%)
Farmer	4 (6.7%)
Labourer	4 (6.7%)
Others*	5 (8.3%)
Unemployed	47 (78.3%)
Housewife	36 (60%)
Student	11 (18.3%)
Marital status	
Married	40 (66.7%)
Unmarried	20 (33.3%)

- Others employed*- includes salesman, clerk and supervisor jobs

Table 2 shows the mean duration of tinea infection in the sample population was 18.9 (SD=13.34) months.

Table 2: Clinical Profile

Variable	Mean (SD)/ Frequency (Percentage)
Duration of tinea infection (in months)	18.9 (13.34)

As shown in Table 3, the mean HAM-A and HAM-D scores are 9.20 (SD=5.23) and 7.97 (SD=4.64) respectively. 61.7% of the study population had anxiety and depression as shown in Table 3. Out of them mild anxiety (48.3%) and mild depression (61.7%) was found in majority.

Table 3: Prevalence of anxiety and depression

Variable	Mean (SD)/ Frequency (Percentage)
HAM-A score	9.20 (5.23)
Anxiety	
Yes	37 (61.7%)

No	23 (38.3%)
HAM-A interpretation	
No anxiety	23 (38.3%)
Mild anxiety	29 (48.3%)
Moderate anxiety	8 (13.3%)
Severe anxiety	0
HAM-D score	7.97 (4.64)
Depression	
Yes	37 (61.7%)
No	23 (38.3%)
HAM-D interpretation	
No depression	23 (38.3%)
Mild depression	37 (61.7%)
Moderate depression	0
Severe depression	0

Table 4 shows the correlation and comparison of various demographic and phenomenological factors with HAM-A and HAM-D scores. Duration of tinea infection had statistically significant correlation with HAM-D score. Higher level of mean scores of HAM-A was found in females and these were statistically significant. Also, unemployment had statistically significant correlation with HAM-A and HAM-D scores. There was no statistically significant correlation in any other factor.

Table 4: Correlation of anxiety and depression (Pearson correlation)

	HAM-A	HAM-D
Age	-0.225 (0.084)	-0.074 (0.572)
Duration of tinea infection	0.220 (0.091)	0.355** (0.005)

Correlation of anxiety and depression (t-test)

	HAM-A	HAM-D
Gender (Male/Female)	-2.159* (0.035)	-1.387 (0.171)
Marital status (married/unmarried)	-0.104 (0.918)	0.078 (0.938)
Employment (Employed/ Unemployed)	3.046** (0.003)	2.824** (0.006)
Region (Urban/Rural)	0.31 (0.75)	0.49 (0.63)

*p<0.05

**p<0.01

***p<0.001

DISCUSSION:

The study was conducted on 60 patients to assess the correlation between anxiety and depressive disorders and tinea. 37 patients were found to have anxiety out of which 29 had mild and 8 had moderate anxiety. 37 patients were found to have depression, all of whom were diagnosed with mild depression. Delgard FJ et al established a correlation between anxiety and depression and skin diseases with anxiety being 17.2% and depression being 10.1%.⁵In another study in South-Asia on 350 patients with fungal infections, 36.571% had depression.⁶Most common mental disorder with co-morbidity with skin diseases is depression.⁷The mean duration of tinea infection was 18.9 months which might be suggestive of the fact that patients with chronic tinea develop depression and anxiety more, as compared to those in whom duration of tinea is lesser. No statistically significant correlation was found between age of the patients and presence of depression or anxiety suggesting that advanced age does not increase the presence of psychopathology in later age group. In a study by Sun et al, it was concluded that chances of anxiety in

dermatosis decreased as the age progressed.⁸Anxiety was more in females, results of which were statistically significant. 47 out of 60 patients in our study were unemployed and significant correlation between depression and anxiety was found in unemployed patients. This may be because of poor resources leading to poor self-care leading to development of tinea and may be a stress factor for development of anxiety and depression. In a study on psychological and social impact of skin diseases, it was found that, patients with dermatological diagnoses were less likely to be employed and faced financial problems alongwith depressive symptoms, aloofness and social isolation.⁹Further studies are required to establish a strong correlation between the two. Further studies are also required to establish correlation between tinea and Psychotic illnesses. Other studies should also be about establishing correlation between other dermatological conditions and depression, anxiety and other psychiatric illnesses. Our study strengthens the correlation between Psychiatric disorders and Dermatological diagnoses. Thus, clinicians need to be aware of such co-morbidities for early diagnosis, complete treatment

and better improvement of patients. It was not studied whether Psychiatric illness lead to dermatological problems or vice versa. Psychiatric disorders as mentioned earlier, lead to poor self-care due to multiple reasons leading to development of dermatological conditions and dermatological conditions lead to development of Psychiatric disorders due to cosmetic reasons. The study had small sample size.

Correlation of psychological stressors with psychiatric diagnoses or anxiety and depression occurring due to other reasons were not ruled out. Confounding effect of diabetes mellitus with fungal dermatological illnesses and psychiatric disorders. Overlap of anxiety and depression in a patient of tinea is not established.

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