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Original Research Article

An observational study on prevalence of skin diseases in psychiatric patients

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ABSTRACT

Background: Skin diseases and psychiatric disorders are related to each other because of common ectodermal origin. The aim of this study was to study the prevalence and distribution of skin diseases in patients with primary psychiatric disorders.
Methods: The 100 patients diagnosed with primary psychiatric disorders who gave consent were studied for dermatological diseases.
Results: Of these 100 patients, 36 (36%) were diagnosed with schizophrenia, 24 (24%) with bipolar disorder, 14 (14%) with major depressive disorders, 14 (14%) with anxiety disorders and 12 (12%) with obsessive-compulsive disorder. Of these patients, 72 (72%) had dermatological disorders. Non-infectious dermatological disorders constituted 59.72% of the total skin diseases and infectious 40.28% of the total patients. Amongst non-infectious dermatoses, eczematous disorders were most prevalent (13.88%), while amongst infectious dermatoses, folliculitis and furunculosis were most commonly encountered (9.72% each).
Conclusions: Infectious and non-infectious skin diseases were common in patients with primary psychiatric diseases.

Keywords: Infectious dermatological diseases, Psychiatric disorders, Psychodermatoses

INTRODUCTION

Psychocutaneous medicine encompasses disorders prevailing on the boundary between psychiatry and dermatology. The relationship between the brain and skin exists because both have the exact ectodermal origin during embryogenesis and are affected by the same hormones and neurotransmitters.[1] This interplay may be due to excessive stimulation of the stress pathway (hypothalamic-pituitary-adrenal axis) in addition to the effect of glucocorticoids and catecholamines, which regulate primary immune functions such as antigen presentation, leukocyte proliferation, secretion of antibodies and cytokines, and Th1 and Th2 responses, thus having the potential to affect skin diseases.[2] Moreover, the patients with psychological illness are incapable of performing their day to day hygiene and health care responsibilities which is also responsible for skin diseases among these patients.[3]

While many dermatologists underestimate the psychological backgrounds of their patients' skin disorders, patients with psychiatric disorders tend to deny their psychopathology and seek help from dermatologists for their skin manifestations of psychiatric diseases, making management of these patients challenging for both dermatologists and psychiatrists.[4] Approximately 30 to 40 per cent of patients seeking treatment for skin disorders have an underlying psychiatric illness that either causes or exacerbates a skin problem.[5]

There are very few studies in the literature regarding the prevalence of dermatological diseases among patients with primary psychiatric disorders. Patients with body dysmorphic disorder, acne and psoriasis are more likely to have reactive depression and have a high risk of suicide.[6] Moreover, the drugs used in the treatment of dermatological diseases, such as steroids and retinoids, also lead to psychiatric symptoms.[7] The aim of the present study was to detect the prevalence and patterns of different skin diseases in patients with primary psychiatric disorders at a tertiary care centre in the Kashmir division of Jammu and Kashmir in North India.

METHODS

This was a hospital-based cross-sectional study in which 100 patients aged 18 and older, with primary psychiatric disorders who consented to participate were recruited from the psychiatry disease hospital, associated hospital of government medical collage Srinagar, for a period of 6 months from November 2016 to April 2017.

A certified dermatologist performed a comprehensive dermatologic examination, which began with visual observation of the whole skin. The diagnosis was mainly clinical, except in a few cases where Skin scrapings and a skin biopsy were needed.

The data regarding sociodemographic characteristics of patients, such as sex, age, residence, occupation, and marital status, in addition to the psychiatric and dermatological diagnosis was recorded in a pre-formed proforma. Pregnant women and diabetics were excluded from the study.

Data were analysed using the SPSS software and then processed and tabulated. Frequency distribution with its percentage and descriptive statistics with mean and SD were calculated. $\chi 2$-test, t test, and correlations were done whenever needed. P values of less than 0.05 were considered significant.

RESULTS

The present study was a hospital-based cross-sectional study in which 100 patients with primary psychiatric disorders were studied. The 54 (54%) women and 46 (46%) men (male: female ratio 1:1.17). The age of the patients ranged between 18 to 68 years, with mean age being 33.9±12.3 years. Less than half of the patients were married (48%), most of them were living in urban areas (61%) and 84% were unemployed (Table 1 and 2).

The 30% had a history of smoking. Of the100 patients examined, 72 (72%) had some or the other dermatological disease. Among those with a diagnosed dermatological disorder, 36 (36%) were diagnosed with schizophrenia (27 with skin diseases and 9 without), 24 (24%) with bipolar (16 with skin diseases and eight without), 14 (14%) with major depressive disorder (9 with skin diseases and five without), 12 (12%) with obsessive-compulsive disorder (6 with skin diseases and six without), and 14 (14%) with anxiety disorders (8 with skin diseases and six without) (Table 3).

Table 1: Demographic characteristics of patients.

Variables	Male (n=46)	Female (n=54)	Total (n=100)	P value -
Marital status				
Married	32	16	48	0.6
Unmaried	14	38	52	
Rural	13	26	39	0.02
Urban	33	28	61	
Employed	12	04	16	0.0001
Unemployed	34	50	84	

Table 2: Age distribution of patients.

Age group (in years)	Male	Female
<20	03	01
21-40	24	36
41-60	12	13
>60	07	04
Total	46	54

Table 3: Prevalence of non-infectious dermatological diseases amongst psychiatric patients.

Variables	N	Percentages (%)
Non-infectious diseases	43	59.72
Eczema	10	13.88
Papulosquamous disorder	7	9.72
Acne and acneiform eruptions	6	8.33
Chronic urticaria	4	5.55
Diffuse hair loss	4	5.55
Xerosis	3	4.17
Facial melanosis	3	4.17
Neurotic excoriations	2	2.77
Dermatitis artefacta	2	2.77
Trichotillomania	1	1.38
Hyperhidrosis	1	1.38

Among dermatological diseases, non-infectious dermatoses were seen in 43 (59.72%) patients and infectious dermatoses in 29 (40.28%) patients. Among non-infectious dermatosis, eczemas (n=10, 13.88%) and papulosquamous disorders (n=7, 9.72%) were most common, followed by acne and acneiform eruptions (n=6, 8.33%) (Table 4). Among eczematous disorders, seborrheic dermatitis and lichen simplex chronicus were most common followed by discoid eczema. Among papulosquamous disorders, psoriasis was the most common diagnosis followed by lichen planus and pityriasis rosea, while, among infections, bacterial

infections were the most common (n=14, 19.44%), followed by fungal infections (n=9, 12.5%) parasitic (n=6, 8.33%). Among fungal infections, dermatophytosis (n=5, 6.94%) was the most commonly encountered, followed by pityriasis versicolor (n=4, 5.5%); among bacterial infections, folliculitis (n=7, 9.72%) and furunculosis (n=7, 9.72%) were most common, and among parasitic infections, scabies (5.55%) and pediculosis capitis (2.77%) were most frequent.

Table 4: Prevalence of infectious dermatological diseases amongst psychiatric patients.

Variables	N	Percentages (%)
Infectious diseases	29	40.28
Fungal		
Dermatophytosis	5	6.94
Pityriasis versicolor	4	5.55
Bacterial		
Folliculitis	7	9.72
Furunculosis	7	9.72
Parasitic		
Scabies	4	5.53
Pediculosis capitis	2	2.77

DISCUSSION

In the present study, female (54%) preponderance was seen, consistent with many previous studies.[8] Kuruvila et al also found female preponderance in their study, as 56% of their patients were females.[9] In the present study, schizophrenia, anxiety disorders and major depressive disorders were the most frequently encountered psychiatric diagnosis, which was similar to the findings of Mostafa et al were schizophrenia (36.7%) and major depressive disorder (30.2%) were most common primary psychiatric disorders seen.[10] However, in a study by Kuruvila et al manic depressive psychosis and depression were the most common psychiatric diseases.[9]

In the present study, 72 (72%) patients with psychiatric disorders showed dermatological manifestations. This prevalence is consistent with many previous studies.[10,11] Moftah et al in their study of 200 patients with primary psychiatric disorders, found skin diseases in 71.5% of them.[11] Mookhoek et al studied 91 psychiatric patients in the Netherlands, and skin diseases were found in 77% of them.[12] Mostafa et al conducted their study on 302 patients with primary psychiatric disorders and found dermatological manifestations in 267 (88.4%) patients.[10]

Patients suffering from schizophrenia and depression may not carry out their regular daily activities and usually do not seek help, making them more liable to get infectious and non-infectious skin diseases. In the present study, infections were seen in 29 (40.28%) patients, consistent with the study of Mostafa et al infections in dermatological diseases were seen in 49.8% of patients.[10] Similarly, a low rate of infectious dermatoses was seen in a study by Mookhoek et al in the Netherlands, which found even fewer infections (17.6%) in their study.[12] In contrast, most other studies found infectious skin diseases in more than 50% of their patients.[9] A study by Kuruvila et al found a higher prevalence of infectious skin diseases in psychiatric patients in India than in controls (68.7% in cases VS 50.3% in controls).[9] The comparatively lower prevalence of infectious skin disease in our study could be due to the good socioeconomic status in Kashmir and more urban patients included in our study. The higher prevalence of infections in psychiatric diseases has been attributed to the fact that psychiatric diseases are associated with chronic stress, which results in decreased lymphocyte proliferation and natural killer cell activity, leading to higher chances of infectious skin diseases, in addition to a lack of care and negligence.[13]

In this study, bacterial infections were most commonly seen, with most common diagnosis being folliculitis and furunculosis (n=7, 9.72%), followed by fungal infections (16.66%), out of which, dermatophytic infections (6.94%) were the most common, followed by pityriasis versicolor (5.55%). Scabies (5.55%), among parasitic diseases was the most common, followed by pediculosis capitis (2.77%). These findings were in alignment with the previously conducted studies.[9] In a study by Kuruvila et al fungal infections were most common, and dermatophytosis (24.3%) was the most common infectious dermatological diagnosis made, followed by pityriasis versicolor (23%).

In our study, non-infectious dermatological diseases were more commonly seen than infectious ones. Among these, eczema (13.88%) was most common, followed by papulosquamous diseases (9.72%), acne and acneiform eruptions (8.33%), chronic urticaria (5.55%), diffuse hair loss (5.55%), xerosis (4.17%), facial melanosis (4.17%), and neurotic excoriations (2.77%). Among eczematous dermatitis, seborrheic dermatitis (5.55%) and lichen simplex chronicus (5.55%) were most frequent, and among papulosquamous disorders, psoriasis (5.55%) was the most common, followed by lichen planus.

Lichen simplex chronicus is aggravated or produced by repeated self-induced itching or trauma with an approximate incidence of 11.4%. It is commonly associated with anxiety disorders and neurotic depression.[8,14] Our study showed lichen simplex chronicus in 5.55% of patients. The low incidence could be because only primary psychiatric disorders were taken. Seborrheic eczema is one of the most common in patients with psychiatric disorders. In the present study, the incidence of seborrheic eczema was also low (5.55%) for the similar reasons.

Several studies have supported the importance of psychosocial factors in the onset and exacerbations of psoriasis. Also, psoriasis has been seen to be associated with many psychiatric comorbidities.[15-17] In the present

study, psoriasis was the most common papulo squamous disease (5.55%).

Dermatitis artefacta is an appeal for help and is most commonly associated with personality disorder.[18] Dermatitis artefacta is more common in females and is mainly seen in adolescence and early adulthood. In our study, dermatitis artefacta was seen in 2 (2.78%) patients with similar patterns of age and sex. Similar findings were seen by Kuruvila et al in their study on 300 patients.[9] The neurotic excoriations are induced and exacerbated by stress. 2 (2.78%) patients in our study had neurotic excoriations. Psychosocial stresses have been reported to precede exacerbations of excoriations in 30-98% of patients.[19] Trichotillomania is a self-induced hair loss with a bimodal age of presentation. Patients mostly deny self-induced nature.[20] In the present study, trichotillomania was seen in one of our patients.

Limitations

The sample size in our study was small and only primary psychiatric disorders were taken into account.

CONCLUSION

Skin diseases, both infectious and non-infectious, are common in patients with primary psychiatric disorders. A dual approach of assessment for both dermatological and psychiatric disorders should be considered. Psychiatrists and dermatologists should be able to counsel and initiate essential pharmacological treatment and must know the ideal time to refer patients to dermatologists and psychiatrists, respectively, for better management.

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