

Frequency of various skin disorders among patients attending outpatient department of a tertiary care hospital

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Abstract

Background Skin diseases have a high prevalence worldwide and these greatly affect an individual's quality of life.

Objective The aim of this study is to observe the frequency of various skin disorders among patients attending outpatient department of a tertiary care hospital. This will be of help in understanding the increasing incidence of such disorders and also the possible preventive measures that should be taken in order to minimize their existence.

Methods An observational study was carried out on all the patients attending the Outpatient Department of Dermatology, Shaikh Zayed Hospital, Lahore, during a period of one year. A thorough medical history along with detailed cutaneous examination was performed on every patient. Lab investigations and skin biopsies were restricted to those cases where confirmation of diagnosis was required.

Results A total of 26,880 patients presented in the outpatient Department of Dermatology, Shaikh Zayed Hospital, Lahore. Out of these cases, 5523 came repeatedly to the hospital for a follow up visit related to their problem while 21,357 were considered as new cases. There were 55% females and 45% males. Most of patients were in the 20-40years age group. Out of 21,357, skin infections were diagnosed in 6215 (29.1%) cases followed by eczema 4400(20.6%), sebaceous & sweat gland disorders 2605 (12.2%), infestations 1602 (7.5%), papulosquamous disorders (5.7%), pigmentary disorders 1004 (4.7%) drug reactions 833 (3.9%), hair & nail disorders 790 (3.7%), vascular disorders 726 (3.4%), bullous disorders 555 (2.6%) and connective tissue disorders in 363 (1.7%) patients. In addition, there was a miscellaneous group of 1047 (4.9%) patients with different diseases in small numbers.

Conclusion Skin Infections were the most common skin disorder seen in our study, followed by eczema. The huge burden of these skin diseases poses a challenge to our society and effective measures are required to limit further increase.

Key words

Skin disorders, tertiary care, infections, eczema.

Introduction

There is a rising magnitude of skin diseases worldwide.¹ These disorders range from simple

acne to some serious ones like toxic epidermal necrolysis & paraneoplastic pemphigus.^{2,3} The pattern of skin diseases in a certain area is dependent upon a number of factors such as geographical location, genetics, hygienic & living standards, nutrition and the social practices.¹⁻³ Although mortality caused by skin diseases is not significant but its effect on the

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overall quality of life & psychological health of the patients is profound.³⁻⁵ Many a times cutaneous manifestations are the sole representation of a person's internal disease prompting him to see a doctor thus leading to diagnosis and treatment of the original cause. Improvements in the overall hygienic standards, public awareness and a balanced diet can help in reducing the incidence of skin diseases in an area.^{1,2,4,6} The aim of present study is to have an insight into the frequency and types of various skin disorders appearing in a tertiary care hospital. This will help us in determining the burden presented by such diseases and in defining measures that should be taken to minimize their spread, limiting the associated morbidity and finally the improvement of overall quality of life.

Material and Methods

This was an observational study that was conducted at the Outpatient Department of Dermatology, Shaikh Zayed Hospital Lahore, for a period of one year from January 1 to December 31, 2019 after taking permission from Institutional Ethical Review Committee. All the patients presenting for their skin problems during this period were included in the study. A detailed medical history along with a thorough cutaneous examination was performed on every patient. Various investigations and skin biopsies were performed, where required, for confirmation of diagnosis and any co-morbidity. Frequency of various skin disorders was noted and the results compared with similar local & international studies.

The data were entered into SPSS version 21 for analysis. Study variables such as age, gender and skin diseases were included. Mean and standard deviation were calculated for quantitative variables such as age, while the frequency and percentages were used to report qualitative

variables like gender and diagnoses of various skin disorders. The statistical analysis was performed, and a p-value of <0.05 was considered statistically significant.

Results

A total of 26,880 patients presented in our Department and out of them, 5523 patients repeatedly came to the hospital for a follow-up visit related to their problem, while 21,357 were enrolled as new cases. There were 45% males and 55% females, with a male to female ratio of 1:1.2, the difference was statistically insignificant. The age range noted was 5 days to 88 years with a mean of 32.2±5.4 years. Most of patients belonged to the 20-40 years of age range. The pattern of skin diseases observed in our study is shown in **Figure 1**. Out of 21,357 cases, skin infections were seen in 29.1% (6215) of patients. Fungal infections were the most common type of infection observed, accounting for 62.3% (3874) of cases, including tinea corporis, cruris, pedis, capitis, faciei, pityriasis versicolor, onychomycosis and candidal infections. Fungal infections were noted more in the adult age group and associated with diabetes mellitus in 58 cases. Bacterial infections were seen in 21.8% (1353) of patients with 19.1% (1185) impetigo, folliculitis, furunculosis, cellulitis, ulcers and ecthyma. The mycobacteria tuberculosis skin infections including scrofuloderma, lupus vulgaris and tuberculosis verrucosa cutis were seen in 2.3% (143) of cases while STIs (sexually transmitted infections) e.g. syphilis in 0.4% (25) of patients. Viral infections were noted in 15.9% (988) of patients and included viral warts, herpes zoster, herpes simplex, chicken pox, measles, molluscum contagiosum and few viral exanthems. Bacterial and viral infections were mostly seen in children while STI cases were found in the adult age group.

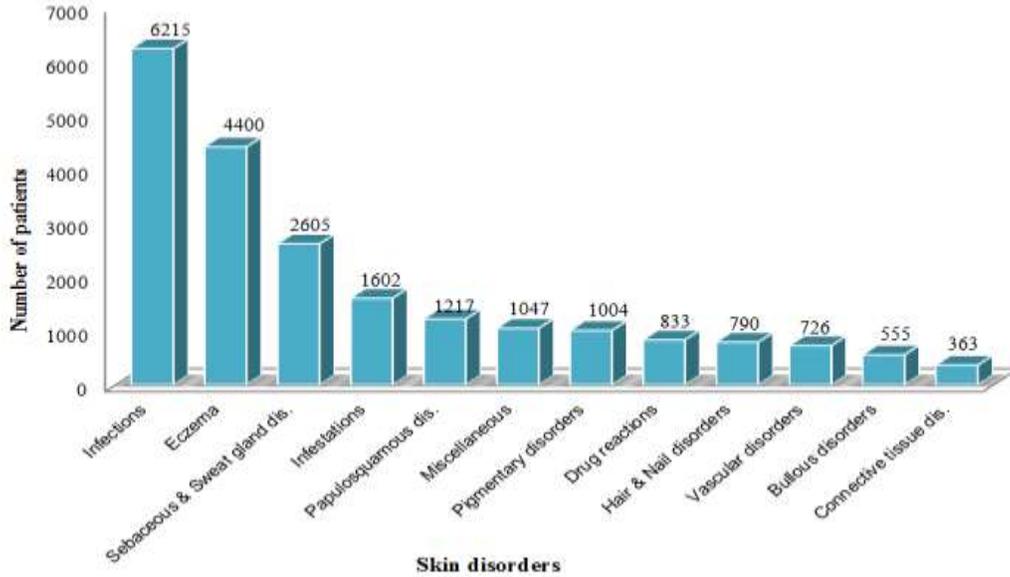


Figure 1 Frequency of skin disorders (n = 21,375)

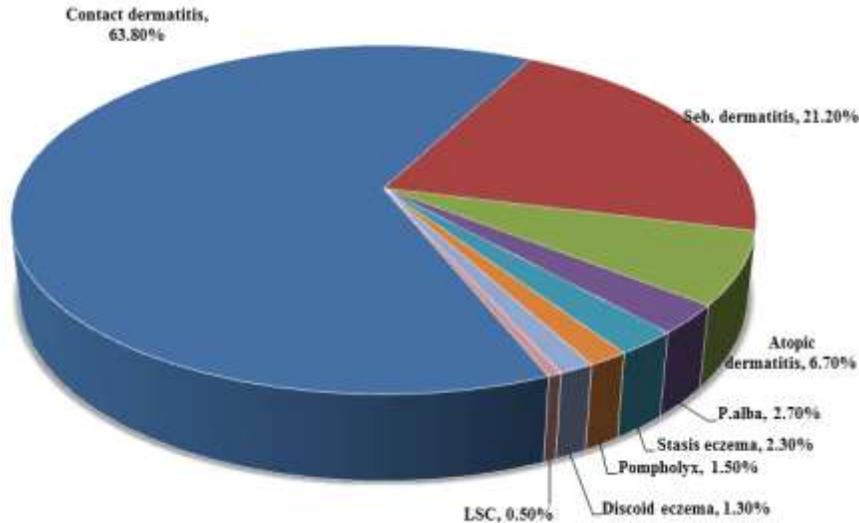


Figure 2 Different types of Eczema

Eczema was seen in 20.6% (4400) of patients. Among these patients, contact dermatitis accounted for the majority of cases 63.8% (2809), followed by seborrheic dermatitis 21.2% (933), atopic eczema 6.7% (296), pityriasis alba (P. alba) 2.7% (120), stasis eczema 2.3% (99), pompholyx 1.5% (66), discoid eczema 1.3% (55) and lichen simplex chronicus (LSC) 0.5% (22), as shown in **Figure 2**. Contact hand eczema was comparatively more common in

females, seborrheic and atopic eczema in children while discoid eczema, pompholyx, lichen simplex chronicus and stasis eczema were mostly seen in adults.

Sebaceous and sweat gland disorders were observed in 12.2% (2605) of patients. Acne was the most common in 98.0% (2553) of above cases and seen in young adults. The types seen were acne vulgaris, steroid-induced acne and

nodulocystic acne. Hyperhidrosis and hidradenitis suppurativa were the other diseases found in this group. Infestations were seen in 7.5% (1602) of individuals with scabies in 92.7% (1485) of patients followed by pediculosis 5.5% (88) and insect bite reaction (IBR) in 1.8% (29) of cases. Papulosquamous disorders were observed in 5.7% (1217) of patients with psoriasis 58.7% (714), lichen planus 25.9% (315), keratoderma 10.3% (126) and pityriasis rosea 5.1% (62). Psoriasis vulgaris, pustular psoriasis, psoriatic erythroderma and psoriatic arthritis were the different types of psoriasis observed in our study. Pigmentary disorders were seen in 4.7% (1004) of cases and included vitiligo, melasma, lentigenes & post inflammatory hyperpigmentation. Drug reactions were seen in 3.9% (833) of patients. Fixed drug eruptions, Erythema multiforme, toxic epidermal necrolysis, Steven-Johnson syndrome & lichenoid eruptions were noted with sulphonamides, penicillins, anticonvulsants and NSAIDs.

Hair and nail disorders were found including alopecia areata, telogen effluvium, hirsutism, paronychia and onycholysis in 3.7% (790) of cases. Vascular disorders seen in our study were in 3.4% (726) and included urticaria, chilblains, Henoch-Schönlein purpura, pyoderma gangrenosum, erythema nodosum, perniosis, Schamberg disease and sweet syndrome. Bullous disorders were noted in 2.6% (555) of patients. The most common variety seen was pemphigus vulgaris followed by pemphigus foliaceus, bullous pemphigoid, chronic bullous disease of childhood, epidermolysis bullosa and dermatitis herpetiformis. Connective tissue disorders were seen in 1.7% (363) of patients; these diseases included systemic lupus erythematosus, systemic sclerosis, dermatomyositis, localized morphea and lichen sclerosis et atrophicus. Miscellaneous group comprised of 4.9% (1047) of patients including

skin manifestations of systemic disorders 46.1% (483), various genodermatoses 25.7% (269), naevi 19.8% (207), skin malignancies like basal cell carcinoma, squamous cell carcinoma, Bowen disease & melanoma 1.2% (13), metabolic skin diseases 1.2% (12), sarcoidosis 0.5% (5), amyloidosis 0.2% (2), and few other skin disorders 5.3% (56). The risk factors associated with these skin problems noted in our study were houses with inadequate sunlight & ventilation, more use of carpets, unhygienic standards and overcrowding due to joint family system & poor socioeconomic status.

Discussion

The burden of rising magnitude of cutaneous diseases is enormous nowadays while literature regarding these diseases with associated risk factors is sparse.^{4,7} Shaikh Zayed Hospital is a tertiary care hospital present in the center of Lahore, where a large number of patients from the city and nearby areas come for consultation. The mean temperature of Lahore is 24.3°C (75.7°F), with annual rainfall being 628.8 mm while population of the Lahore district is approximately 12,188,000.^{8,9} The present study showed that female patients outnumbered males and it is similar to various other studies^{1,2,5,10,11} which may be due to more consciousness of females to health-related issues particularly skin diseases. However, few Indian studies show a male preponderance.^{6,12,13} Most of our patients presented between ages 20 to 40 years which is similar to different studies.^{5,10,11,14} It may be due to health awareness among young generation & their eagerness to seek medical advice. In the present study, skin infections were found to be the most frequently observed skin disorders accounting for 29.1%. The hot & humid climate, unhygienic status and overcrowding of this region may account for the high prevalence of this disorder in our society and this is in accordance with other studies.^{2,11,13,15,16} Fungal

infections were the most common type of infection seen in present study, which is comparable with many studies.^{3,6,10,15,17} These may be associated with wet daily work and traumatic injuries in routine life. Bacterial infections were relatively more in our study as compared to viral infections and the result is similar to various studies.^{11,17,18} The incidence of STIs (0.4%) was found to be low and is comparable with other studies^{10,19} the reason may be the limited number of patients attending public hospitals and most of them prefer to visit private clinics due to associated social stigma with such problems.

Eczema was the second most commonly found disorder (20.6%); this finding was in accordance with previous studies.^{1,3-5,11,13} Contact dermatitis (CD) was the most common type of eczema seen (accounting for 63.8% of patients). Females were observed to be more affected. This result is similar to the study by Aman *et al.*¹⁰ In our opinion, use of detergents, artificial jewelry and footwear allergy may be the causative factors among females.

In our study, acne was found in 98% of the total 12.2% (2553 out of 2605) cases of sebaceous and sweat gland disorders. It is mostly seen among adolescents and comparatively predominant in females which is comparable to various studies both local and international.^{1,2,10,11,19,20} Hormonal changes during puberty, psychological stress, easy access to steroid based formulations and immoderate use of cosmetics may be few reasons of its high prevalence in our community.

Infestations (7.5%) consisted mainly of scabies, a contagious disease caused by a mite (*Sarcoptes scabiei*); and was seen in 92.7% (1485) of patients in our study. The high prevalence of scabies is in accordance with various studies.^{11,14,20,21} Some studies showed scabies to

be the most common type of skin disorder. The increased number of cases of scabies may be due to overcrowding and poor socioeconomic status of patients. Among papulosquamous disorders (5.7%), psoriasis was found to be most common followed by lichen planus, keratoderma and pityriasis rosea and the results are comparable with the study done in Bangladesh.¹¹

Pigmentary disorders accounted for 4.7% of all cases; with melasma being the commonest entity observed especially among adult females.^{10,22} This may be associated with sun exposure and hormonal changes. Drug eruptions were seen in 3.9% of patients. Self-medication and quackery are major predisposing factors in such cases. The present study is comparable with the work done in Greece while a higher figure was noted in studies in Africa, Bangladesh and Denmark.^{5,11,15,23} The slightly low figure in our study maybe due to cases presenting in the medical emergency rather than outpatient department of dermatology. Hair and nail disorders (3.7%) and vascular disorders comprised of 3.4% of cases with urticaria being most common. Both acute and chronic urticaria were seen significantly affecting the quality of life, the results being comparable with previous studies.^{2,11,19} Bullous disorders 2.6% and connective tissue disorders 1.7% is comparable with studies done by Aman *et al.* and Tameezuddin *et al.*^{10,20}

Most of patients in miscellaneous group presented with cutaneous manifestations of systemic diseases. The low prevalence (0.06%) of cutaneous malignancies in our study is comparable to other studies in the subcontinent region^{10,15-17} while it is in contrast to the studies performed in Greece (2.7%) and UK.^{5,24} This difference might be attributed to the fact that most of our patients have dark complexion which provides sufficient protection from sun light while dissimilarity in lifestyle and genetics

of every particular region are other contributory factors.^{5,10,15} The risk factors noted in our study were similar to few previous studies and these should be conveyed to the health department to formulate a plan for prevention of such diseases.

Conclusion

Cutaneous infections were the most commonly seen skin disorder followed by eczema in our study. Health awareness regarding controllable risk factors along with timely initiation of treatment is essential to curtail skin diseases with high morbidity.

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