Original Article

Pattern of Skin Diseases in University Students Presenting in Out Patient Department of University of Lahore Teaching Hospital

Syed Atif Hasnain Kazmi and Aisha Malik

ABSTRACT

Objective: To assess the pattern of skin diseases in patients and to determine their relation with demographic characteristics.

Study Design: Cross sectional study.

Place and Duration of Study: This Study was conducted at the Dermatology Department at University of Lahore from January 2019 to December 2019.

Materials and Methods: One thousand, nine hundred and ninety-two students were enrolled.

Results: In our study 1308 (65.7%) were females and 684 (34.3%) were males with M:F ratio 1.0:1.9. According to age the participants were divided into 3 groups. Late-teens: total 610 (30.6%) of total participants) 473 (23.7%) were females and 137(7%) were males. Early -twenties: The largest group comprising of 51% of total participants total 1018, (51%); 629 (31.5%) were females and 389 (19.5%) males. Mid-twenties: the smallest group total364 (18.2%): 206 (10.3%) were females and 158 (8%) were males

Conclusion: Acne vulgaris is the most common lesion seen in the OPD with females being most likely affected gender. Stress, hormonal, dietary factors, sedentary life style play a vital in the causation and progression of dermatoses.

Key Words: Acne vulgaris, Hirsutism, Androgenetic alopecia, Warts, Scabies

Citation of article: Kazmi SAH, Malik A. Pattern of Skin Diseases in University Students Presenting in Out Patient Department of University of Lahore Teaching Hospital. Med Forum 2021;32(5):66-68.

INTRODUCTION

Although skin disorders are very common worldwide they are more prevalent in the underdeveloped world.[1] The disorders are protean ranging from simple scabies to life threatening erythema multiform major staphylococcal toxic skin syndrome. epidermal necrolysis and purpura fulminans.[2,3] Skin diseases can cause high morbidity but apparently less mortality.[4-5]The pattern of skin diseases varies even from urban to rural population and from one province to other. This signifies the origin of the skin manifestation is dependent on many factors some but not of them include soil, genetics, poor hygienic and social norms.[1-3] Not necessarily every skin disorder is a skin disease, most of the systemic diseases have pathognomonic skin leison. Proper early diagnosis of skin disease is important as it be a public notifiable communicable disease.[1]

Department of Dermatology, The University of Lahore.

Correspondence: Dr. Aisha Malik, Assistant Professor of Dermatology, The University of Lahore.
Contact No: 0311-6623111
Email: aishamalik03@hotmail.com

Received: November, 2020
Accepted: February, 2021
Printed: May, 2021

Proper sanitation, public awareness and healthy eating habits can significantly reduce the spread of skin disorders in a population.[1-6]

Teen-age is associated with major endocrinal, psychosomatic alteration in the body due to transition from childhood to adulthood. The pituitary is master gland to govern these changes. ACTH stimulates adrenal cortex to secret cortisol, fludrocortisone, and is held responsible for skin pigmentation.[7,8,9] Ovarian developments in females occurs under the action of FSH and LH. The ovary in turn secret estrogens that is responsible for menarche. There are multiple phenotypic changes in the body at the time of puberty: growth and development of sebaceous and apocrine glands, pubic and axillary hair, moustache and beard, seborrhea, dandruff thinning of scalp hair increased terminal hair in androgen sensitive area and acne.[8] Other dermatosis in the adolescents resulting from constitutional and exogenous factors having psychosomatic influence include eczema, folliculitis, bacterial and viral infection increase consciousness of looking young and beautiful all factors contributes to anxiety in this age group.[7,8]

As there is very little data available in the local population about prevalence of skin diseases.[10,11] The present study was planned to have insight into the frequency and types of skin disorders especially among university students in the OPD of a tertiary care

hospital to determine the burden of these diseases in the students.

MATERIALS AND METHODS

A total 1992 students of both genders who presented in Out-patient Department were included. Demographics: age, sex and pattern of skin lesions were recorded and summarized as tables. Patients were prescribed treatment and advised follow up.

RESULTS

Table No.1: Gender distribution of students (n=1992)

Gender	No.	Percentage
Male	684	34.0
Female	1308	66.0
M:F ratio	1.0:1.91	

Table No.2: Stratification of age according to gender (n=1992)

	Age (years)	Male	Female	Total
Group A: Late teens group	17-19	137 (6.87%)	473 (23.74%)	610 (30.6%)
Group B: Early twenties group	22-22	389 (19.52%)	629 (31.57%)	1018 (51%)
Group C: Mid-twenties group	23-25	158 (7.93%)	206 (10.34%)	364 (18.2%)
Mean±SD	20.69±2.07			

Table No.3: Stratification of skin diseases according to gender (n=1992)

Skin diseases	Male	Female
Acne vulgaris	215 (10.79%)	640 (32.0%)
Melasma/Freckles	36 (1.80%)	133 (7.0%)
Hirsutism	-	98 (5.0%)
Androgenetic alopecia	65 (3.26%)	15 (0.75%)
Diffuse Hairloss	15 (0.75%)	50 (3.0%)
Warts	55 (2.76%)	34 (1.70%)
Dermatophyte infection	50 (2.51%)	40 (2.0%)
Pityriasis versicolor	14 (0.70%)	10 (0.50%)
Scabies	28(1.40%)	15 (0.75%)
Eczemas	81 (4.06%)	150 (7.53%)
Onychomycosis	10 (0.50%)	12 (0.60%)
Urticaria	30 (1.50%)	45 (2.25%)
Chicken pox	4 (0.20%)	3 (0.15%)
Herpes zoster	5 (0.25%)	4 (0.20%)
Herpes simplex	10 (0.50%)	8 (0.40%)
Bacterial infections	15 (0.75%)	13 (0.65%)
Keloids	20 (1.0%)	12 (0.60%)
Alopecia Areata	16 (0.80%)	10 (0.50%)
Other dermatoses	10 (0.50%)	15 (0.75%)

In our study 1308 (65.7%) were females and 684 (34.3%) were males with M:F ratio 1:1.9. According to age the participants were divided into 3 groups.

Group A: Late-teens: total 610(30.6%) of total participants) 473 (23.7%) were females and 137(7%) were males.

Group B: Early -twenties: The largest group comprising of 51% of total participants total 1018, (51%);629 (31.5%)were females and 389 (19.5%) males.

Group C: Mid-twenties: the smallest group total 364 (18.2%): 206 (10.3%) were females and 158 (8%) were males.

DISCUSSION

Skin disease is one of the presentation of the systemic illness. Our study highlights the skin lesions attributed to adolescents and early twenties. In university students, female students are more likely to present with dermatoses than their sex counterparts with a ratio of 1:1.9.

This male to female ratio in our study is in contrast to the similar study published in 2017 done on 95,983 patients. This group comprised 42% males and 58% females, with a male to female ratio of 1:1.4 the difference was statistically insignificant ($p > 0.05$). The mean age was 30.4 ± 9.2 years.[12] The gender difference in our study may be because of either or all: our participants were university students the mean age was 20.69±2.070 years In this age group dermatoses are more prevalent in females. The students in university may have more stressful environment than the general public.

The most common age of presentation is early twenties as this group comprises of almost half of the total studied group. The reason may be multifactorial, this age group may be comprising maximum no of university students or may be more prone to stress due to environmental, exam period.[12]

The most common lesion is acne vulgaris. Almost one third of the female students (32%) had this lesion at presentation while only 10% of the total studied males had this lesion at presentation. The reason may be multifactorial and include some if not all, stress, hormonal changes, dietary habits, sedentary life style and family history.[12]

Although, significant impact these social factors have on the life of an individual, his family and social norms and economic burden related to its sequela, the public health importance of these diseases is neglected and under reported.[8]

In contrast to our study in which Acne is most common in female students in a study done elsewhere .though there was no significant difference between the proportion of males and females with acne, they found the difference of pattern between 2 genders. White/black heads were seen significantly more among

females while papule and pustule were seen significantly more males. This was similar to the observation made in another study carried out in New Zealand where severe type of acne was seen more among males.[13] Severity of this condition among males could be because of hormonal factors.[14]

The controversy from our study can be explained by dietary habits, life style and genetics.

In our study Freckles and eczema is the second most diagnosis of the skin lesions. It involved 7-7.5% of females in the group but only 1-4% of male students had presented with these. These gender based differences may be because of variant sex hormonal profile and gonado-pituitary -hypothalamic axis.

Hirsuitism was the 3rd most common lesion in females (5%), that may be a phenotypic presentation of polycystic ovaries.

Maria et al conducted a study and found that infectious skin diseases (rather than acne or eczema) comprise of 42.68% of the total skin diseases.[6] The reason of this difference can be that our study covers only students between a specific age in contrast to this study that studied age group 10–29 years.[6,7]

There are a few limitations to this study. The present study may not be generalized to other social groups because of different factors associated with dermatoses. Also it doesn't reveal the true burden of skin disorders among young adults as here only a special population is studied. If this study had been multi centered the results would have been more inferential.

CONCLUSION

Skin diseases especially acne vulgaris is the most common lesion seen in the OPD with females being most likely affected gender. Stress, hormonal, dietary factors, sedentary life style play a vital in the causation and progression of dermatoses.

Author's Contribution:

Concept & Design of Study:	Syed Atif Hasnain Kazmi
Drafting:	Aisha Malik
Data Analysis:	Aisha Malik
Revisiting Critically:	Syed Atif Hasnain Kazmi, Aisha Malik
Final Approval of version:	Syed Atif Hasnain Kazmi

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES

1. Al-Zoman AY, Al-Asmari AK. Pattern of skin disease at Riyadh Military Hospital. Egypt Dermatol Online J 2008; 4(2): 4e14.
2. Noorbala MT, Kafaie P. Pattern of skin diseases in the Central Iran, Yazd Province. J Pak Assoc Dermatol 2010; 20: 137e141.
3. Sarkar SK, Islam AKMS, Sen KG, Ahmed ARS. Pattern of skin diseases in patients attending OPD of Dermatology Department at Faridpur Medical College Hospital, Bangladesh. Faridpur Med Coll J 2010; 5(1): 14e16.
4. Najdawi F, Fa'ouri M. Frequency and types of skin disorders and associated diabetes mellitus in elderly Jordanians. La Rev St Mediterr Orient 2002;8:574-78.
5. Rao GS, Kumar SS, Sandhya. Pattern of skin diseases in an Indian village, Indian J Med Sci 2003; 57:108-10.
6. Symvoulakis EK, Krasagakis K, Komninos ID, Kastrinakis I, Lyronis I, Philalithis A, et al. Primary care and pattern of skin diseases in a mediterranean Island. BMC Fam Pract 2006; 7: 6.
7. Rao GS, Kumar SS, Sandhya. Pattern of skin diseases in an Indian village. Indian J Med Sci 2003;57:108-10.
8. Memon **KN**, Soomro **RA**, Ansari **MS.** Pattern of skin diseases in patients visiting a tertiary care health facility at Hyderabad, Pakistan. J Ayub Med Coll Abbottabad 2011;23(4):37-9.
9. Wilson JD, Foster DW, Kronenberg HM, Larsen PR. William's Textbook of Endocrinology, 9th edition. London: WB Saunders; 1998.
10. Ebling, FJG, Hale PA, Randall VA. Hormones and hair growth. In: Goldsmith L, editor. Biochemistry and Physiology of the Skin, 2nd ed. New York: Oxford University Press; 1991.
11. Narwane SP, Patel TC, Shetty YC, Chikhalkar SB. Drug utilization and cost analysis for common skin diseases in dermatology OPD of an Indian Tertiary Care Hospital-A prescription survey. Br J Pharma Res 2011;1(1): 9-18.
12. Walker SL, Shah M, Hubbard VG, Pradhan HM, Ghimire M. Skin disease is common in rural Nepal: results of a point prevalence study. Br J Dermatol 2008;158:334-338.
13. Aman S, Nadeem M, Mahmood K, Muhammad B. Ghafoor MB. Pattern of skin diseases among patients attending a tertiary care hospital in Lahore, Pakistan. J Taibah University Med Sci 2017; 12:392-96.
14. Lello J, Pearl A, Arroll B, Yallop J, Birchall NM. Prevalence of acne vulgaris in Auckland senior high school students. N Z Med J 1995;108:287-9.
15. Paik JH, Yoon JB, Sim WY, Kim BS, Kim NI. The prevalence and types of androgenetic alopecia in Korean men and women. Br J Dermatol 2001;145:95-9.