

Epidemiological Study of Skin Diseases in Patients Referred to the Skin Clinic of Baqiyatallah Hospital during 2016 and 2017

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Abstract

Background: Investigating the frequency pattern and types of skin diseases is considered to be extremely important in order to improve the diagnosis process and patients' conditions.

Objectives: The aim of this study was to investigate the epidemiological pattern of skin diseases in patients referred to the skin clinic of Baqiyatallah Hospital.

Methods: This cross-sectional study was conducted on 400 patients who had referred to the skin clinic of Baqiyatallah Hospital during 2016 and 2017. These participants were selected using a convinced sampling model. The type of skin diseases were determined in patients and then collected data were analyzed using the SPSS(V-22) software.

Results: Out of the 400 patients who had referred to the abovementioned clinic, 281 (70.3%) were women and 119 (29.7%) were men. The most common reasons for visiting the skin clinic were acne, warts, wrinkles and acute eczema, respectively. The most affected area was the face. The skin disease diagnosed in patients had a significant relationship with patients' age ($P = 0.001$), gender ($P = 0.001$), and education ($P = 0.011$).

Conclusion: According to the findings of the present study, acne, warts, and wrinkles are the most common skin problems in patients who had referred to the skin clinic of Baqiyatallah Hospital, respectively. Demographic and background factors have a significant effect on the type of skin disease.

Keywords: Skin, Disease, Epidemiology, Acne, Warts

1. Background

Skin disorders are one of the most common causes of visiting doctors, so that they account for about 7% of outpatients.¹ Every year in America, one out of every three people get a skin problem,² which is one out of five people in England,³ despite the fact that 60% of skin patients refer to a general practitioner instead of a dermatologist.⁴ In Iran, due to the geographical extent and the abundance of environmental climates and the diversity of people's life culture in different provinces, skin diseases have various distributions.^{5,6} This is why knowing the common skin diseases in a region, their symptoms, their causes and their relationship with factors such as age, gender, is very important to create appropriate planning and preventive programs in various regions. There are different categories that help to explain different skin diseases.⁷ Infectious diseases are the most

important categories of diseases that can affect specific regions such as scabies, leishmaniasis, some viral diseases such as warts, sexually transmitted diseases such as genital warts, syphilis, and genital herpes.⁸ In a cross-sectional study in the form of a four-year study at the Pathology Center in Delhi, 56% of adnexal skin lesions were sweat glands, 28% of hair follicle origin and 16% of sebaceous origin. In total, 97% of skin problems were benign.⁹ In previous studies, the most common cause of hospitalization in Iran was pemphigus with 12.5%, drug rash with 11.7%, and eczema with 10.5%.¹⁰ The most common skin disease in the rural region was pityriasis alba with a prevalence of 21%, followed by melasma at 18.5%, dermatitis at 16.5%, nail disorders at 13%, and acne at 11.7%.¹¹ In urban regions, infectious diseases with a rate of 23.4% and dermatitis with a rate of 19.2%

were the most common reasons for skin visiting.¹²

2. Objectives

Assessing the skin diseases pattern and their frequency based on categories, can promote need-based planning to improve the provision of services to patients. The aim of this study was to investigate the epidemiological pattern of skin diseases in patients referred to the skin clinic of Baqiyatallah Hospital.

3. Methods

The population of this cross-sectional study included all patients with skin diseases diagnosed by a dermatologist who visited the skin clinic of Baqiyatallah Hospital from 2016 to 2017.

The inclusion criteria in the study were patients' consent to participate in the research, having a skin disease. The exclusion criteria included diseases other than skin diseases, referrals from medical commissions, and prescription renewal cases.

The data collection tool was a two-part checklist where the first part included demographic information of patients and the second part included information related to skin disease and diagnosis and the results of paraclinical examinations which was completed by a dermatologist. A total of 400 people were examined in this study, who were included in the study as a census

sampling. It should be noted that all the archived files of the studied skin patients had the international ICD-10 classification.¹³ Furthermore, this study has been approved by the ethics committee of Baqiyatallah University of Medical Sciences and the registration code was IR.BMSU.REC.1399.386.

Data Analysis Method: The SPSS version 22 statistical software was used for data analysis. Descriptive statistics for qualitative variables were in the form of frequency and percentage and for quantitative variables in the form of mean and standard deviation. ANOVA test was used for age variable and Chi-square test was used for other variables and the significance level was 0.05.

Ethical Considerations: Verbal and written informed consent was obtained from all volunteers participating in the study in accordance with the principles of the Helinsky statement.

4. Results

Out of 400 patients referred to the clinic, 281 (70.3%) were women and 119 (29.7%) were men. Table 1 shows the frequency of descriptive variables in the studied patients. Table 2 shows the main reasons why patients came to the clinic. The most common reasons for visiting skin clinics were acne, warts, wrinkles and acute eczema. The most affected areas were the face and hair, followed by the limbs.

Table 1. Descriptive Variables in Patients Referred to Skin Clinic

		Frequency	Percentage
Gender	Female	281	70.3
	Male	119	29.7
Age	Child	20	5
	Young	143	35.8
	Adult	188	47
	Elder	49	12.2
Marital status	Single	115	28.7
	Married	285	71.3
Education	Less than a diploma	94	23.5
	Diploma	99	24.8
	Above diploma	207	51.7
Comorbidity	Diabetes	8	2
	Blood pressure	97	24.1
	Diabetes and blood pressure	27	6.8
	Thyroid disorder	14	3.5
	etc	7	1.8

The results of the Chi-score statistical analysis test and the relationship between the descriptive variables and the frequency of skin diseases showed that there was a statistically significant difference in the type of skin diseases in different ages ($P = 0.001$) and eczema in children, acne in teenagers, and wrinkles in adults. In the elderly, malignancies were significantly higher than other problems. Also, men and women had statistically significant differences in the type of common diseases ($P = 0.001$). In fact, acne and warts were more common in male patients and melasma and wrinkles were more common in females.

In addition, education was related to the frequency of

skin diseases ($P = 0.011$). Accordingly, eczema was most common in people with low education and acne and hair loss were more frequent in people with higher education levels. Marital status and underlying diseases had no significant effect on the frequency of skin diseases ($P > 0.05$).

5. Discussion

In 2010, Noor-Bala et al. conducted a study titled "examining the pattern of skin diseases in central Iran in Yazd province".¹² Based on this study, infection was the most common cause of referral with a rate of 23.4%, which was viral infection 8%, fungal infection 6.4%, bacterial

Table 2. Main Diseases/Problems Frequency in Patients Referred to Skin Clinic

Disease/Problem	Frequency	Percent
Nevus	14	3.5
Acne	50	12.5
Hair Loss	19	4.8
Psoriasis	11	2.8
Seborrheic Dermatitis	16	4.0
Androgenic Alopecia	19	4.8
Wart	30	7.5
Hirsutism	11	2.8
Alopecia Areata	4	1.0
Acute Eczema	26	6.5
Chronic/Subacute Eczema	20	5.0
Xeroderma	4	1.0
Pediculosis	2	.5
Melasma	7	1.8
Lentigo	6	1.5
Contact Dermatitis	2	.5
Pamphigus Vulgaris	1	.3
Seborrheic Keratosis	2	.5
Lichen Planus	4	1.0
Generalized Eczema	3	.8
Corn	10	2.5
Skin Tag	7	1.8
Vitiligo	6	1.5
Pytiasis Versicolor	8	2.0
Wrinkle	29	7.3
Open Facial Fenestra	12	3.0
Dermatophyte	7	1.8
Wrinkle+Melasma	14	3.5
Syringoma	2	.5
Telogenic Alopecia	4	1.0
Melanoma	3	.8
BCC	5	1.3
Onychomycosis	2	.5
Hyperkeratosis	5	1.3
Other Eczemas	12	3.0
Others	23	5.8
Total	400	100.0

Table3. Body Distribution of Skin Problems in Patients Referred to Skin Clinic

	Frequency	Percent
Genital area	3	0.8
Head	4	1
Hair	83	20.8
The face	180	45
Neck	6	1.5
Upper limb	31	7.8
Lower limb	37	9.3
Trunk	27	6.8
Multiple organs involved	24	6
Nail	5	1.3
Total	400	100.0

infection 5.4%, and protozoan infection 3.6%. In the present research, considering the infectious origin of acne and warts, infectious diseases can be considered in the first place. In addition, other infectious diseases such as dermatophytes and pediculosis were also present in our study, which is added to this group. In the next frequency rank in the mentioned study, dermatitis had a rate of 19.2%, of which contact dermatitis accounted for 12.6%, seborrheic dermatitis 3.6%, and atopic dermatitis 2.9%, and the rank of eczema in our study was almost second, considering infectious cases (acne and wart) as the first place. Among all patients, 44.1% were men and 55.9% were women, and melasma was 80% more common in women than in men, which is similar to the results of our study. Based on age, there were infectious diseases in the

age group of less than 15 years, and in our research, eczema cases were more common in this age group. At the age of 15-24 years, acne and dermatitis were the most common diseases, which is consistent with the findings of our study. In the age group of more than 35 years, contact dermatitis was the most common, and the highest average age was seen in patients with malignant cancer at the age of 56,¹² which confirms the results obtained in our research.

In another study conducted by Badri et al. in 2013 with the aim of investigating the spectrum of skin diseases in rural areas, the most common skin disease was pityriasis alba with 21%, followed by melasma with 18.5%, dermatitis with 16.5%, nail disorders with 13% and acne was 11.7%. In general, findings are different from the results of our study, and the reason for this difference is due

to studying non-urban people in the mentioned research.¹¹

Bilgili conducted a study in 2013 on the frequency of skin diseases in a skin clinic in Turkey. The most common disease among the studied subjects was acne with a rate of 13.1%, followed by dermatophytosis with a rate of 8.5% and contact dermatitis with a rate of 8.5%, which was different from the findings of the present research.¹³ In 2014, Dastgheib et al. conducted a study with the aim of investigating the frequency of skin diseases in patients admitted to a hospital in Shiraz.¹⁰

The most common reason for hospitalization of patients was pemphigus with 12.5%, drug rash with 11.7%, and eczema with 10.5%. Chronic wounds had the longest hospital stay with 27 days. The most common disease in women was pemphigus and urticaria, while in men it was psoriasis and eczema.¹⁰

In a cross-sectional study in the form of a four-year study in a pathology center in Delhi, among axillary skin lesions, 56% were of sweat glands, 28% were of hair follicle origin and 16% were of sebaceous origin. In total, 97% of skin problems were benign,¹⁴ which is consistent with the results of our research.

The comparison of skin diseases in different studies shows that the prevalence pattern of skin diseases is influenced by the region and socio-economic factors, although in most regions, infectious diseases are still the most common diseases, followed by hypersensitivity diseases. In addition, data related to skin beauty are also becoming one of the main reasons for visiting skin clinics.

6. Conclusion

Acne, warts, and wrinkles are the most common skin problems in patients who had referred to the skin clinic of Baqiyatallah Hospital, respectively. It is worth mentioning that the demographic and background factors have an effect on the type of skin disease. It is suggested to conduct more research with a larger sample size and in a multicenter manner and by examining the effect of other contextual variables in order to help in better decision making in this field.

Research Highlights

What Is Already Known?

Skin diseases have various distributions in different regions, environmental climates and the diversity of people's life culture and the study of common skin diseases in a region is very important to create appropriate planning and preventive programs.

What Does This Study Add?

Acne, warts, and wrinkles are the most common skin problems in patients who referred to the skin clinic of Baqiyatallah Hospital, respectively. In addition, the demographic and background factors have an effect on the type of skin disease.

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Conflict of Interest Disclosures

All authors declared that they have no conflict of interest.

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