

The pattern of skin diseases in Karbala city: A retrospective study

Ali Tariq Abd Al Hassan*

الخلاصة

ان معرفة أنماط الأمراض الجلدية هي خطوة حيوية في تعليم أطباء الرعاية الصحية الأولية وكذلك في وضع المناهج الدراسية لتدريس طلاب الطب. وعلاوة على ذلك هذه الأنواع من الدراسات ضرورية لتوفير الخدمات العلاجية المناسبة.

الهدف تحديد نمط الأمراض الجلدية لجميع المرضى الذين زاروا العيادة الخارجية للأمراض الجلدية في مستشفى الحسيني التعليمي في مدينة كربلاء المقدسة.

أجريت دراسة وصفية إستيعادية لوصف أنماط الأمراض الجلدية. جرى مراجعة السجلات الطبية للمرضى الذين حضروا العيادة الخارجية للأمراض الجلدية من كانون الثاني 2009 الى كانون الثاني 2010. واستند التشخيص أساساً على الصورة السريرية، ولكن مع مزيد من الفحوصات المناسبة عند الحاجة.

وكانت النتائج شوهة 4169 مريضاً خلال هذه الفترة، تراوحت أعمارهم بين 4 أيام إلى 85 سنة. كانت هناك 2267 (54.4%) من الذكور والإناث 1902 (45.62%) فكانت نسبة الذكور إلى الإناث 2.1:1. أكبر عدد من المرضى في هذه الدراسة كان يتراوح بين 5 سنوات إلى 35 سنة من العمر أي حوالي 61.4% من المجموع.

ومثلت أعلى نسب الأمراض: الأكزيما (28%)، العدوى الفيروسية (20.5%)، الالتهابات البكتيرية (13.7%)، الالتهابات الطفيلية (10.8%)، حب الشباب الشائع (7.02%) والشرى (6.23%)، وكان المرض الأكثر شيوعاً في كل من الذكور والإناث هو الأكزيما (15.3%) و (12.7%) على التوالي.

أظهرت النتائج التي توصلنا إليها أن الأكزيما هي المرض الأكثر شيوعاً في كل من الذكور والإناث تليها العدوى الفيروسية والعدوى الطفيلية وخاصة في محافظة كربلاء المقدسة. ينبغي التركيز على هذه المجموعة من الأمراض الجلدية الشائعة في جميع مستويات الرعاية الصحية وينبغي أن تؤخذ بنظر الاعتبار عند إعداد برامج التدريب المناسبة لتشخيصها وعلاجها لتقليل الإحالة إلى العيادات الخارجية في المستشفى.

Abstract

Background: Knowing the patterns of skin diseases is a vital step in the education of primary health care physicians and in planning curriculum for teaching medical students. Moreover, these types of studies are necessary to provide adequate therapeutic services to those suffering from these diseases.

* Department of Medicine / College of Medicine /University of Karbala.

Objective: To determine the characteristic pattern of various skin disorders for all the patients who visited the dermatology outpatient clinic at Al Husseiny Teaching Hospital, in Karbala City.

Patients and methods: A retrospective and descriptive study was conducted in order to describe the skin diseases patterns. The medical records of patients attending the dermatology outpatient clinic from January 2009 to January 2010 were reviewed. Diagnosis was mainly based on clinical findings, but supplemented by further investigations when needed.

Results: A total of 4169 patients were seen during this period and the ages ranged from

4 days to 85 years. They represent 30.4 % of the total patients visited the outpatient clinics at our hospital. There were 2267 (54.4%) males and 1902(45.62%) females giving a male: female ratio of 1.2:1.

The highest number of people in this series was between the ranges 5-35 years of age making 61.4% of the total. The top six skin diseases were eczema/ dermatitis (28%), viral infections (20.5%), Bacterial infections (13.7%), parasitic diseases (10.8%), Acne vulgaris (7.02%) and Urticaria (6.23%). The major disorder in males and female was eczema/ dermatitis (15.3 %) and (12.7%) respectively

Conclusions: Our results showed that eczema/dermatitis, is the most common disease in both male and female followed by infection especially viral infection and parasitic disease in our region. Emphasis should be placed on this group of common skin diseases at all levels of health care system and should implement appropriate training programs for diagnosis and management to decrease referrals to dermatology clinics.

Keywords: Pattern, Skin disease, Karbala, Iraq

Introduction

Skin diseases are very common; probably everyone has experienced a skin disorder one time in his life, such as irritation, dry skin, acne, warts or pigment changes.¹ A major reason for targeting skin diseases in the developing world is that the majority are transmissible and therefore potentially preventable and controllable.²

The burden of skin disease can refer to disease occurrence using terms such as prevalence or incidence (epidemiological burden), the effects of skin disease on a person's well-being (quality of life burden) or the direct and indirect costs associated with skin disease (economic burden).³ Skin disease is a common problem in developing countries and accounts for great morbidity and a large portion of the workload in outpatient clinics.⁴ The literature concerning the patterns of both general and specific skin diseases is rather scanty, especially in our country. Our survey indicated a prevalence rate of skin diseases in population based studies conducted throughout the world which varies from 4.9 % to 50 %. (^{5, 6, 7, 8, 9})

While the overall prevalence of skin diseases in Iraq was 27%. The rate was similar in males (27%) and females (27%), and in rural (28%) compared with urban (26%) areas.⁸ So, it is important to know the pattern of skin diseases and which one is the most frequent as this will make it easy for those concerned with establishing plan for education of both primary care health physician practitioners and medical students.

Patients and Methods

Hospital based retrospective study was conducted at Al Hussein Teaching Hospital in Karbala City in order to describe the skin diseases pattern. The medical records of all patients attending the dermatology outpatient clinics from January 2009 to January 2010 were reviewed. Clinical diagnoses were made by the dermatologists and were confirmed by skin biopsies and other investigations when necessary. The diseases were classified into different groups in accordance with the International Classification of Diseases (ICD-10) and the frequency of cases in each group was studied. Descriptive statistics were used to analyze the data. The data thus obtained from the records was compared with studies from other parts of the world and from other regions of Iraq.

Results

During the 12-months study period, the total number of patients who attended the Dermatology Outpatient Clinic at Al Hussein Teaching hospital was 4169. There were 3319 adult (>12 years) patients (79.6%) and 850 children (<12 years) (20.4%). There were 2267 males (54.4%)

and 1902 females (45.62%), with a female/male ratio of 1.2:1 The different skin diseases seen at Al-Husseiny Teaching Hospital were classified into 13 groups in order of their frequency of occurrence, as shown in Table-1 and Figure-1. When these groups of diseases were analyzed according to sex and frequency of occurrence (Table-2), eczema topped the list (1166(28%) %), followed by viral infections 854(20.5%), bacterial infections 571 (13.7%), parasitic diseases 448(10.75), acne vulgaris 293 (7.02%) urticaria 260(6.23%) fungal infections and others. Noninfective dermatoses, namely eczema, acne, alopecia, pigmentary disorders and papulosquamous disorders, accounted for nearly 2133 (51.2%) of all the dermatoses, whereas skin diseases primarily due to infective etiology (viral, bacterial, fungal and parasitic), accounted for nearly 2036 (48.8%) of all the skin diseases.

Table-1. Frequencies and types of skin disorders observed.

Disease groups (in order of frequency)	Total no. of cases	Percentage %
Eczemas	1166	27.96%
Viral infections	854	20.48%
Bacterial infections	571	13.69%
Parasitic infections	448	10.75%
Acne vulgaris	293	7.02%
Urticaria	260	6.23%
Sup. fungal infections	156	3.74%
Papulosquamous disorders	142	3.41%
Pigmentary disorders	125	2.99%
Hair disorders	116	2.78%
Epidermoid cyst	28	0.67%
STD	7	0.16%
Icthyosis vulgaris	3	0.07%
Total	4169	

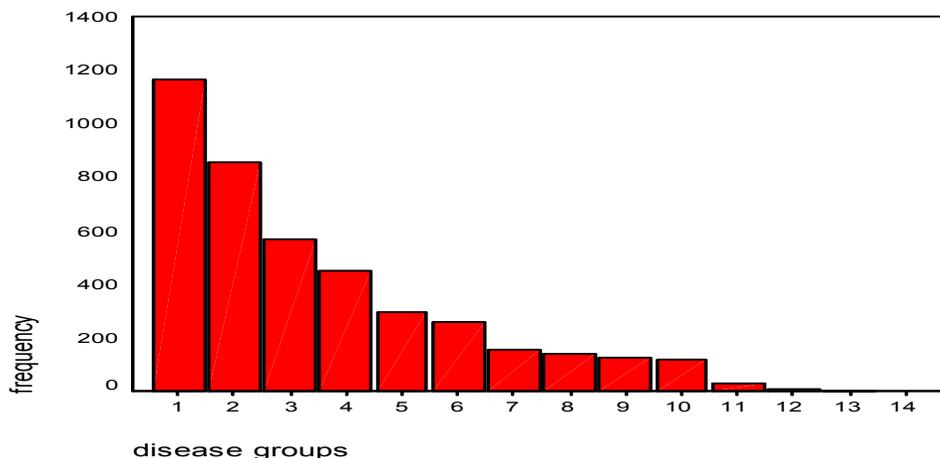


Figure. 1: The Frequency of skin diseases among the study groups in Karbala city.

Three groups of diseases (eczema, viral infections, and bacterial infections) accounted for 65.2% of the male and 58.1% of female attendance to the clinic.

Regarding parasitic infection, scabies were the most frequent (6.8%), leishmaniasis accounted for (3.9%). These figures are higher than those found by Alsamarai which were 1.9% and 1.1% respectively.⁸ Health education is therefore necessary to curb their spread, reduce the associated morbidity, and improve the health status of the population. A concerted effort should be made to train health workers in the diagnosis and treatment of the more common dermatologic conditions.

Eczema, viral infections, bacterial infections and parasitic diseases, accounted for 90.7% of all the dermatoses seen in children (Table-3). Eczema, viral warts, superficial mycoses and pyodermas were more prevalent in male patients compared to females.

In the eczema/dermatitis group, atopic eczema was the most common (68%), and children accounted for almost 69.8% of the total number of cases. Contact dermatitis was seen more frequently in female (6.4%). Among the infective dermatoses group, viral infections (48.8%) were the most common, with STD infections (0.4%) being the least common. Viral warts accounted for 53.5% of the viral infections, followed by Molluscum contagiosum (26.5%) and chickenpox (15.2%).

Scabies was the most common parasitic disease, accounting for 63.8% of the cases; it also constituted 6.86% of all skin diseases. Cutaneous leishmaniasis were (36.8%) of parasitic diseases and accounted for 4% of total skin diseases and they were more frequent in males.

Superficial mycosis constituted 3.74% of all dermatoses and was more frequent in males. Melasma accounted for (72%) of the pigmentary disorders while vitiligo accounted for 28%.

Alopecia areata accounted for (66.4%) of all the hair disorders while telogen effluvium accounted for 33.6%. Melasma and telogen effluvium were more prevalent in females, while alopecia areata and vitiligo were more prevalent in males. Psoriasis was the most common papulosquamous disorder, accounting for 63.3% of the cases in that group, followed by pityriasis rosea (21.1%), which was two times more common in females than in males. Urticaria accounted for 6.23% of all the dermatoses, were seen more commonly in females. Only 7 cases of sexually transmitted diseases (0.82%) were recorded, which were genital warts (5 cases) and genital molluscum (2 cases).

In conclusion, eczema/dermatitis, infections, pilosebaceous disorders, urticaria and papulosquamous disorders ranked as the top five skin diseases. Generally, our study results are closely comparable to other studies in the country with higher frequencies of eczema, viral and bacterial infection

Table-2. Skin disorder frequencies by sex.

Skin conditions	Male (54.4%) %)	Female (45.6%)	% in group	% of total cases	Prevalence per 100,000 cases
Eczemas					121.2514
Atopic dermatitis	415(35%)	380(33%)	795 (68%)	1166 (28%)	
Seborrheic eczema	185(15%)	76(6.5)	261 (22%)		
Contact dermatitis	35(3%)	75(6.4)	110 (9.4%)		
Viral infection					88.8068
Warts	247(28.9%)	210 (24.5%)	457	854 (20.5%)	
Molluscum contagiosum	115(13.4%)	112 (13.1%)	(53.5%)		
Chicken pox	70(8.1%)	60 (7.02)	227(26.5%)		
Herpes Zoster	18(2.1%)	12 (1.4%)	130(15.2%)		
			40 (4.68%)		
Bacterial infections	391(68.5%)	180 (31.5%)		571 (13.7%)	59.3779
Parasitic diseases					46.5872
Scabies	193(43.1%)	90(20.1%)	286	448 (10.75)	
Cutaneous leishmaniasis	75(16.74%)	90(20.1%)	(63.8%) 165(36.8%)		
Acne vulgaris	190(64.84%)	103(35.15%)	293(7.02%)		30.4688
Urticaria	90(34.6%)	170(65.3%)	260(6.23%)		27.0372
Fungal infections	80(51.3%)	76(48.72%)	156(3.74%)		16.2223
Papulosquamous disorders					14.7665
Psoriasis	30(21%)	60(42%)	90(63.3%)	142(3.41%)	
Pityriasis rosea	10(7%)	20(14%)	30(21.1%)		
Lichen planus	9(6%)	13(9%)	22(15.6%)		
Pigmentary disorders					12.9987
Melasma	10(8%)	80(64%)	90(72%)	125(2.99%)	
Vitiligo	15(12%)	20 (16%)	35(28%)		
Hair disorders					12.0628
Alopecia areata	44(37.9%)	33(28.5%)	77(66.4%)	116(2.78%)	
Telogen effluvium	9(7.8%)	30(25.9%)	39(33.6%)		
Epidermoid cyst	20 (71%)	8 (29%)	28 (0.67%)		2.9117
STD	7 (100%)	0	7 (0.16)		7279.
Ichthyosis vulgaris	2 (66.7%)	1(33.3%)	3 (0.07)		3120.
Total	2267(54.4%)	1902(45.62%)	4169		

Table-3. Distribution of skin diseases by age groups (n=4169)

Skin conditions	< 5years (n=642)	5-14 years (n=1386)	15-34years (n=1175)	35-44years (n=642)	45-54years (N=324)
Eczemas					
Atopic dermatitis	130(20.3%)	465(33.6%)	130(11.1%)	50(7.7%)	20
Seborrheic eczema	50(7.8%)	10(0.72%)	98(8.3%)	82(12.7%)	21
Contact dermatitis	10(1.6%)	2(0.14%)	50(4.2%)	30(4.6%)	18
Viral infection					
Warts	80(12.5%)	163(11.8%)	110(9.4%)	70(10.9%)	34
Molluscum contagiosum	80(12.5%)	82(5.9%)	50(4.25%)	10(1.5%)	5
Chicken pox	46(7.2%)	58(4.2%)	15(1.3%)	8(1.2%)	3
Herpes Zoster	0	0	5(0.42%)	10(1.5%)	25
Bacterial infections	180(28.04%)	196(14.1%)	80(6.8%)	61(9.5%)	45
Parasitic infections					
Scabies	10(1.6%)	70(5.1%)	93(7.9%)	70(10.9%)	40
Cutaneous leishmaniasis	20(3.11%)	40(2.9%)	60(5.10%)	30	15
Acne vulgaris	0	160(11.5%)	130(11.1%)	3(0.4%)	0
Urticaria	20(3.11%)	40(2.9%)	78(6.64%)	92(14.3%)	30
Fungal infections	10(1.6%)	30(2.16%)	58(4.9%)	38(5.9%)	20
Papulosquamous disorders	2 (0.3%)	8(0.5%)	55(4.7%)	15(2.3%)	10
Psoriasis	1 (0.16%)	15(1.1%)	12(1.02%)	2(0.3%)	0
Pityriasis rosea	0	1(0.07%)	15(1.27%)	4(0.6%)	2
Lichen planus					
Pigmentary disorders					
Melasma	0	0	62(5.3%)	20(3.1%)	8
Vitiligo	2(0.3%)	6(0.43%)	15(1.3%)	8(1.2%)	4
Hair disorders					
Alopecia areata	0	35(2.52%)	27(2.3%)	10	5
Telogen effluvium	0	3(0.07%)	15(1.3%)	17(2.6%)	4
Epidermoid cyst	0	0	12(1.02%)	10	6
STD	0	0	5(0.42%)	2	0
Icthyosis vulgaris	1(0.16%)	2(0.144%)	0	0	0

Table -4 Comparative prevalence (%) of a few common dermatoses.

Diseases group	Karbala, Iraq	Samara Iraq ⁶	Iraq ⁸	AlFarwaniya, Kuwait ²²	Al-Jouf-Saudi Arabia ¹⁸
Eczemas	27.96%	32.7%	31.6%	23.41%	34.14%
Viral warts	20.5%	2.2%	3.3%	7.59%	2.85%
Bacterial infections	13.7%	8.3%	13.5%	4.71%	10.87%
Acne	7.02%	9.1%	8.6%	9.62%	9.57%
Superficial Mycosis	3.7%	15.7%	11.1%	7.53%	7.81%
Psoriasis	2.15%	2.7%	2.3%	5.61%	5.33

Discussion

This study is the first publication describing the spectrum of skin diseases in patients attending Dermatology Outpatient Clinic at Al Hussein Teaching Hospital in Karbala City. Al Hussein Teaching Hospital is a referral center for primary health clinics in Karbala City. Although this study was limited to our hospital, we believe that the results represent a rough estimate of the prevalence of skin diseases in the Karbala populations. In this study Eczema emerged as the single largest group of disorders. Similar findings were also reported by other researchers.¹⁰⁻¹³ Viral infections were the second largest group of disorders. This is consistent with our high frequency of atopic dermatitis in our patients (19.1%) which predisposes to viral infections.¹⁴

Many epidemiological studies around the world, including a few from Saudi Arabia, have claimed that female patients predominate at dermatology clinics due to the greater sensitivity of women to health-related issues.^(15, 16, 17) In contrast, our study indicated that male patients attended dermatology clinics more frequently (54.4%). This finding is also supported by many other studies from Saudi Arabia.^(18, 19, 20) The higher prevalence of male patients at dermatology clinics may be attributed to under-representation of females at Karbala City due to socioeconomic reasons.

We believe that this study provides useful information about the prevalence of dermatological disorders in patients seeking medical advice at specialized dermatologic clinics. It is hoped that this study of the spectrum of skin diseases will contribute to proper health care planning and the establishment of appropriate educational and research programs tailored to Karbala environment. But further study in the community level is suggested to review the actual picture of dermatoses at Karbala City.

All primary health care physicians and general practitioners should be able to diagnose and manage these common skin disorders. All the cases that were seen in the dermatology clinics of our hospital were referred from primary health care clinics.

We recommend that a series of training programs for diagnosing and managing common skin disorders be initiated for primary health care physicians and other general practitioners. This will result in a decrease

in referrals to the dermatology clinics and provide cost-effective and efficient dermatology-related health services at the primary health care level. This study gives us a fair picture of the conditions on which the training of primary health care physicians should be focused. These conditions are eczema (mainly atopic dermatitis), skin infections (mainly viral), acne vulgaris, melasma, alopecia areata and diffuse hair loss.

We draw a comparison with result from other Iraqi cities in addition to other Arabian countries including Al-Farwaniya, Kuwait; Al-Jouf, Saudi Arabia and Abu-Dhabi, (UAE) as in Table-4.

The results of the present study are consistent with those published previously from Iraq. The most common disease group which was observed in Samara district was infection and dermatitis. However, in a study reported for Tikrit, the leading cause was dermatitis followed by infection which is similar to our study.

Furthermore, the same pattern was reported in Arabian countries, ^(17-21, 30) and developing countries. ⁽²¹⁻²⁴⁾

The low prevalence of venereal diseases recorded in our study may not reflect the true prevalence, as most patients with sexually transmitted diseases prefer to go to private practitioners. As well, tracing such patients is difficult as they generally hide the facts of the disease, but does reflect the general trend seen in other industrialized countries, where genital warts and genital herpes lesions predominate.

Conclusions

It is generally agreed that the pattern of skin diseases differs in different countries and within various regions of a country depending on social, economic, racial and environmental factors. According to WHO, prevalence studies of the general population in developing countries reported high prevalence figures for skin diseases (21-87%) ¹. On the basis of the present data, the training of primary health care providers in dermatology should emphasize these common conditions, with the aim of improving primary care and alleviating the burden on hospital care.

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