

The Epidemiology of Dermatological Diseases in Al- Nasiriya City 2018

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Abstract

Background: Skin diseases are a common problem wide world affecting both sex and all age groups, there are many factors contribute to cause skin diseases such as contact with infectious patients, contact with an allergen or other irritant materials, overcrowding, and poor hygiene.

Aim: To study the epidemiology of common dermatological diseases in Al-Nasiriya city in 2018.

Methods and materials: Cross-sectional hospital based study from first of March 2018 to September 2018. This work tried to study socio-demographic, determinant, specific laboratory investigation of common dermatological diseases under a well-prepared questionnaire. The analysis of data was done by-SPSS version 25

Result: A total of 1048 patients had been studied where the extent of eczema/dermatitis 38.3%, viral infection 20.4%, and protozoal infection 14% regarding to the socio-demographic age had a significant association in multivariate analysis.

Conclusion: eczema /dermatitis, viral infection, protozoal infection had most extent of dermatological diseases.

Recommendation: further studies are required to identify preventive measures and establishment of the dermatological center.

Key ward

Iraq, Nasiriya, 2018, dermatological diseases.

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Introduction

The pattern of skin diseases is variable from region to region, from country to other also variable with the same country because of different etiological factors.¹ Many causes contribute to skin disorders including infectious agent such as (bacterial, fungal, viral, protozoal), contact to irritant material and weak immune system,² in addition, there are other factors contribute to increasing burden of skin diseases such as sharing bed, malnutrition, overcrowding, frequent population movement, lack access to health care³ Skin diseases become one of the 15th top most common medical diseases.⁴ In developing countries because of overcrowding; low level of hygiene, difficulties accessing water the Skin infection most frequent disease.⁵ Contact dermatitis is the most common skin disease, it is caused by contact with irritant, allergen, or chemical substance that lead to inflammation of the only superficial layer of skin.⁶ Skin cancer is two types of melanoma and non-melanoma, the non-melanoma less common type of skin cancer and not spread to other area and involved squamous cell carcinoma and basal cell carcinoma.⁷ Skin diseases cause a burden in the global context of health and remain the 18th leading cause of health burden worldwide⁸. In Iraq, the overall prevalence of skin diseases at 2010 27% equally for both male and female,⁹ and another study in al Najaf city the most common diseases inflammatory disease with prevalence

rate 55.35%, skin infection, eczema had highest prevalence 33.7%, skin infection and parasitic infestation with prevalence rate 28.37% and 16.28% among the studied population¹⁰. Despite skin diseases, nonlethal but can caused economic and psychosocial impact.¹¹

Methodology

Type of study

The study was a cross-sectional hospital based observational, analytical, study. The duration of the study was extended from the first of March 2018 to the first of September 2018.

Study population

The study population includes the attendants to the dermatology outpatient clinic in AL-Hussein teaching hospital in AL-Nasiriya city. The cases were diagnosed depending on specialists of dermatology for five days per week.

Inclusion criteria

All patients with skin disorder attendants to the dermatology outpatient clinic regardless of age and gender.

Exclusion criteria

Exclusion postponing cases, other cases not dermatology and referral to another specialist, and undiagnosed cases.

Refusal rate

Number of refusal patient to participate in our study are 21 patients

Refusal rate =1.9%

Sample size and sampling process

A. Sample size;

It was calculated by the following formula^[12]

$$N = \frac{(1.96)^2 * P(1-P)}{(0.04)^2}$$

N=sample size

P=prevalence of disease depending on the prevalence of dermatological diseases on the previous study in AL-Najaf city at 2016 55.35% [10]

D=maximum tolerated error (0.04) was chosen as the accepted limit

Sample size=1069 exclusion 21 patients

B. Sampling process

The proposal had been introduced on the first of March of 2018 and after the legislation of the ethical and scientific committee in Thi-Qar university –a college of medicine, the researcher try to get consent from Thi-Qar health directorate and Al-Hussain teaching hospital manager and outpatient clinic of dermatology department. The researcher engages in data collection that continuity for 3months which involving 5days per week (Sunday, Monday, Tuesday, Wednesday, and Thursday). The researcher attends the outpatient at 8:30 AM and interviewed 15 patient per day minimally and 30 patient per day maximally, Systematic randomly method was performed to collect data from one every two attendants to an outpatient clinic in AL-Hussein teaching hospital according to inclusion and exclusion criteria by direct interviewer

questionnaire including identity information and clinical history and examination.

Study tools

The questionnaire

Special form of the questionnaire was designed to collect information. The forma consists of four sections.

Section 1: include information about name, age, gender, address, occupation, educational level, socio economic status, and marital status.

Section 2: include past medical, surgical, and family history, and chief complaint and duration of disease, family history of similar condition and self-medication before the consultation.

Section 3: include history of exposure (chemical, drug, physical, and others) and ask about sun exposure, number of bathes and type of water.

Section 4: include examination of the lesion (site, size. Color, and configuration of the lesion), and investigations if needed.

Statistical analysis.

Data analysis was done by statistical package for social sciences (SPSS) for percentage and frequencies, Chi- square test or Fisher exact test were used for study association, logistic regression was performed to recognize the independent predictor of dermatological diseases .p value <0.05 considered statistically.

Epidemiology analysis

1. Point prevalence rate (PNPR): it measures the probability of disease

existence at a point in time in a given population.

PnPR=

$$\frac{\text{number of existing cases (old \& new) in a given population at a point in time}}{\text{total population in the same place and the same point in time}} \times 1000^{[13]}$$

2. Ratio which is express the number of persons with characteristics relative to the number of persons without the characteristics; the numerator is not part of the denominator. [13]

Result

hospital based Cross-sectional study had been implanted to include (1048) patients with the main of age 22.2±16.63 and male to female ratio 1.1:1, more than third of participant falling within age group (1-14) years old in which 44.6% male and 39.9% female minimum of them falling within age group >65 2.2% male and 1.1% female. Table(1) show the age had a significant association with skin disease p-value is less than 0.05, within (1-14) age group infectious diseases are most common than an inflammatory disease which about 54.7%, inflammatory about 44.4%. While other age groups the inflammatory most common than infectious diseases about (50.0%, 51.7%, 58.4%, 64.7%) in the age groups (15-29), (30-44), (44-65), >65 in respectively.

regarding the gender female affected by inflammatory diseases more than infectious which are about 51.0% and infectious 45.7%, while male infectious diseases are most common than inflammatory which are about 50.3%, and inflammatory about 47.5%.

regarding the resident had no significant association P-Value more than 0.05 regarding to the occupation had a significant association P value less than 0.05, the inflammatory diseases are more than infectious diseases in the self-employed, governmental employed, student, housewife, about 52.8%, 47.5%, 53.9%, 52.6%, in respectively while in children the infectious diseases are common than inflammatory which are 54.9%.

There is no significant association between skin disease and education, marital status, and socioeconomic status, and habit.

Table (2) show the most common prevalence diseases contact dermatitis 15.6%, 9.5% scabies, viral wart 9.2%, and 7.8% for molluscum contagiosum, urticaria , and atopic dermatitis, 5.8 for acne vulgaris, followed by 3.5% tinea versicolor, cutaneous leishmaniasis 3%, 2.8% impetigo, and 2.3% for folliculitis. Herpes simplex, herpes zoster, chickenpox, and alopecia areata (0.2%, 1.6%, 1.7%, 1.4%) respectively. And 0.1% for each (drug allergy, epidermoid cyst, epidermolysis bullosa, erythema annular centrifugum, cutaneous TB, hematoma, pityriasis lichenoid Chronica, lice).

the eczematous and Papulosquamous diseases are the most common about 38.3% followed by viral infection 20.4%, 14% protozoal infection, 7.8% urticaria and erythema. 7.5% fungal infection, 6.1% bacterial infection and less prevalence diseases 0.1 % for malignant skin diseases and autoimmune bullous diseases as in figure (1). Figure

(2) show the frequency of the main classification of skin diseases in which the inflammatory are most frequent

followed by infectious and then neoplasm and miscellaneous.

Table 1: distribution of socio-demography according to skin diseases

Variable	Infectious disease No. (%)	Inflammatory disease No. (%)	Neoplasm No. (%)	Miscellaneous No. (%)	Total No. (%)	X ² , P-Value
Age						
1-14 years	223(54.7%)	181(44.4%)	3(0.7%)	1(0.2%)	408(100.0%)	*34.133 0.001
15-29 years	148(46.5%)	159(50.0%)	1(0.3%)	10(3.1%)	318(100.0%)	
30-44 years	79(43.9%)	93(51.7%)	2(1.1%)	6(3.3%)	180(100.0%)	
45-65 years	47(37.6%)	73(58.4%)	3(2.4%)	2(1.6%)	125(100.0%)	
>65 years	5(29.4%)	11(64.7%)	1(5.9%)	0(0.0%)	17(100.0%)	
Gender						
Male	254(50.3%)	240 (47.5%)	5 (1.0%)	6 (1.2%)	505 (100.0%)	3.926^a
Female	248(45.7%)	277(51.0%)	5 (0.9%)	13 (2.4%)	543 (100.0%)	0.270
Resident						
Rural	44 (54.3%)	36 (44.4%)	0 (0.0%)	1 (1.2%)	81 (100.0%)	3.203a 0.783
Urban	444 (47.4%)	465 (49.6%)	10 (1.1%)	18 (1.9%)	937 (100.0%)	
Semiurban	14 (46.7%)	16 (53.3%)	0 (0.0%)	0 (0.0%)	30 (100.0%)	
Occupation						
Self-employed	63 (43.8%)	76 (52.8%)	2 (1.4%)	3 (2.1%)	144 (100.0%)	32.231 0.008
Governmental employed	25 (42.4%)	28 (47.5%)	1 (1.7%)	5 (8.5%)	59 (100.0%)	
Student	55 (43.0%)	69 (53.9%)	1 (0.8%)	3 (2.3%)	128 (100.0%)	
Soldier	11 (50.0%)	11 (50.0%)	0 (0.0%)	0 (0.0%)	22 (100.0%)	
Housewife	119(43.8%)	143 (52.6%)	3 (1.1%)	7 (2.6%)	272 (100.0%)	
Child	224 (54.9%)	180 (44.1%)	3 (0.7%)	1 (0.2%)	408 (100.0%)	
	5 (33.3%)	10 (66.7%)	0 (0.0%)	0 (0.0%)	15 (100.0%)	
Education						
Illiterate	38 (49.4%)	36 (46.8%)	1 (1.3%)	2 (2.6%)	77 (100.0%)	6.046* 0.094
Primary	177 (48.2%)	178 (48.5%)	4 (1.1%)	8 (2.2%)	367 (100.0%)	
Secondary	130 (46.1%)	145 (51.4%)	2 (0.7%)	5 (1.8%)	282 (100.0%)	
Basic college and above	30 (40.0%)	40 (53.3%)	1 (1.3%)	4 (5.3%)	75 (100.0%)	

Marital Status						
single	126 (44.8%)	147 (52.3%)	1 (0.4%)	7 (2.5%)	281 (100.0%)	13.352
married	153 (42.5%)	190 (52.8%)	6 (1.7%)	11 (3.1%)	360 (100.0%)	390
widow	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)	1 (100.0%)	
divorced	2 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (100.0%)	
Socio Economic Status						
Low	39 (56.5%)	29 (42.0%)	1 (1.4%)	0 (0.0%)	69 (100.0%)	8.905 ^a
middle	448 (48.0%)	460 (49.3%)	9 (1.0%)	17 (1.8%)	934 (100.0%)	0.172
High	15 (33.3%)	28 (62.2%)	0 (0.0%)	2 (4.4%)	45 (100.0%)	
Habit						
Smoker	25 (44.6%)	29 (51.8%)	0 (0.0%)	2 (3.6%)	56 (100.0%)	8.094 [*]
Non-Smoker	252 (43.4%)	306 (52.8%)	6 (1.0%)	16 (2.8%)	580 (100.0%)	0.363 ^b
Ex-Smoker	1 (20.0%)	3 (60.0%)	1 (20.0%)	0 (0.0%)	5 (100.0%)	
Total	502	517	10	19	1048 (100.0%)	

*Fisher exact test

Table (2): Extent of skin diseases in the participant's population

Diagnosis	No.	Percent	Diagnosis	No.	Percent
Abscess	1	0.1	Scabies	100	9.5
Acne form	7	0.7	Scarlet Fever	1	0.1
Acne vulgaris	61	5.8	seborrheic dermatitis	11	1.0
alopecia areata	15	1.4	skin tag	6	0.6
Atopic dermatitis	82	7.8	SLE	2	0.2
basal cell carcinoma	1	0.1	steroid induced acne	2	0.2
Boil	8	0.8	tinea alba	5	0.5
Candidiasis	1	0.1	tinea capitis	12	1.1
chicken pox	18	1.7	tinea corporis	16	1.5
chronic bullous(childhood)	1	0.1	tinea Faciei	4	0.4
contact dermatitis	164	15.6	tinea pedis	4	0.4
Corn	3	0.3	tinea versicolor	37	3.5
cutaneous leishmaniasis	31	3.0	Urticaria	82	7.8
cutaneous TB	1	0.1	Vitiligo	11	1.0
dominant epidermolysis bulosa trophica	2	0.2	Wart	96	9.2
drug allergy	1	0.1	Keloid	3	0.3

epidermoid cyst	1	0.1	Lice	1	0.1
Epidermolysis bullosa	1	0.1	lichen planus	12	1.1
Erythema annular centrifugum	1	0.1	lichen simplex chronicus	5	0.5
Folliculitis	24	2.3	Melasma	8	0.8
Hematoma	1	0.1	Miliaria	5	0.5
herpes simplex	2	0.2	molluscum contagiosm	82	7.8
herpes zoster	17	1.6	Morphea	1	0.1
Impetigo	29	2.8	insect bite	13	1.2
Paronychia	6	0.6	Psoriasis	22	2.1
Photosensitivity	4	0.4	pyogenic granuloma	2	0.2
pityriasis lichenoid chronica	1	0.1	Rosacea	10	1.0
pityriasis rosea	11	1.0	Total	1048	100.0

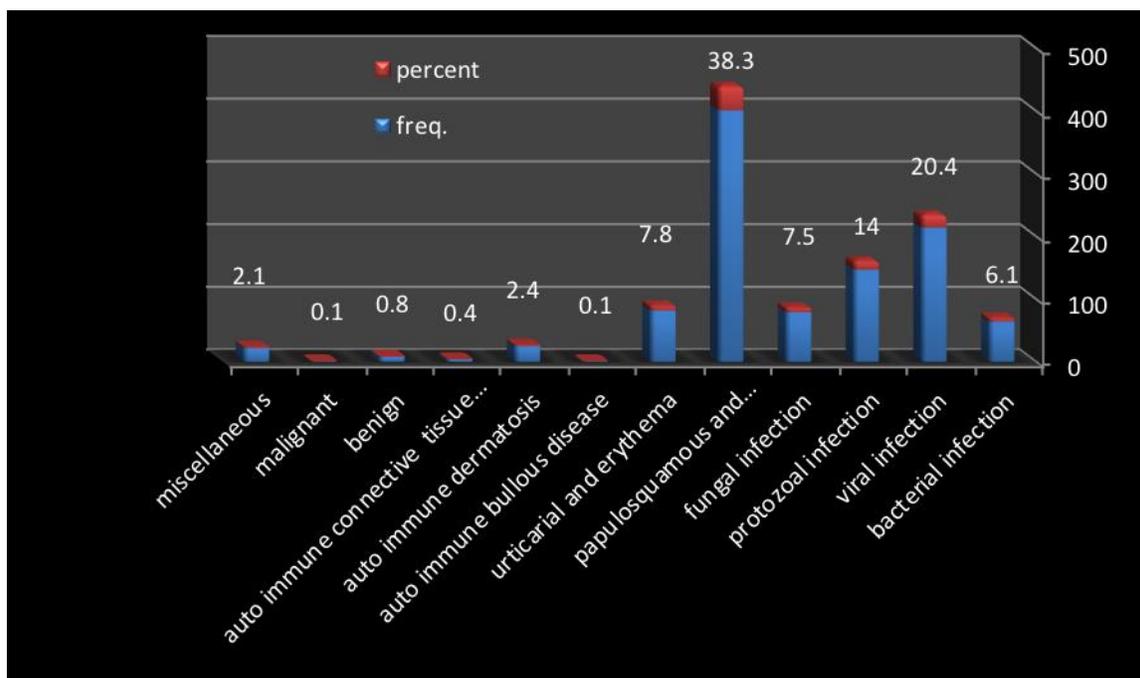


Figure (1): Extent of skin diseases according to causes

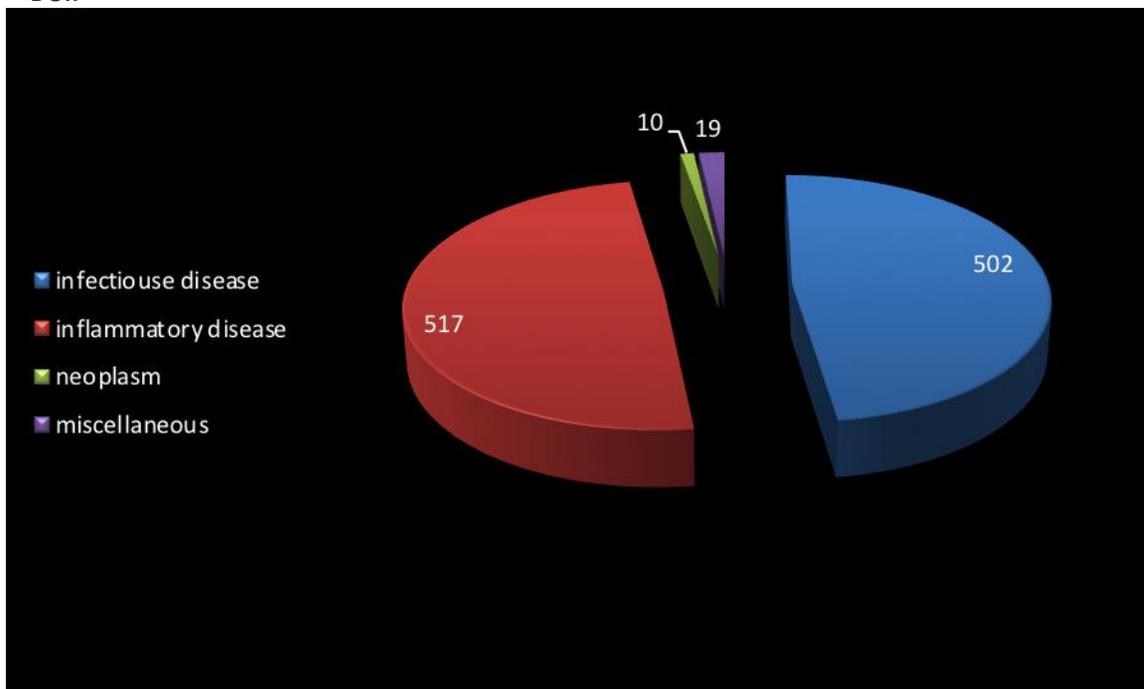


Figure (2): Frequency of the main classification of skin diseases

Discussion

the current study shows the inflammatory diseases are most frequent, the eczematous/dermatitis consist the majority 38.3%, in which the eczema type is most common 24.4% comparable to others study in Karbala, Najaf, turkey, Kuwait, [14,10, 15,16].

In eczema, contact dermatitis is most frequent 15.6% as compared with others study in Al Najaf, turkey, Karbala [10, 15, 14], followed by urticaria 7.8% and acne 5.8% as compared with study in al Najaf [10].

In infectious diseases, viral infections are most frequent 20, 4% which comparable with others study in Karbala

[14]. Followed by protozoal infection 14% compared with others study [10], fungal, bacterial (7.5%, 6.1%) respectively which are comparable with study in Saudi [17]. Viral wart most frequent viral infection 9.2% comparable with others study [18] followed by molluscum contagiosum, herpes zoster, chickenpox, and herpes simplex (7.8%, 1.9%, 1.7%, and 0.2%) respectively comparable to study in Karbala but in Karbala higher percentage this difference may be related to differences in sample size. [14].

Scabies considers the most frequent protozoal infection 9.5% followed by cutaneous leishmaniasis comparable to

other study but higher than them which may be reflected overcrowded and poor hygiene [15].

Less frequent presented diseases include, alopecia areata, vitiligo, folliculitis, impetigo, psoriasis, benign, malignant, muscilaneous (1.4%, 1%, 2.3%, 2.8%, 2 %, 0.8%, 2.1%, 0.1%) respectively.

Socio demographical data

A cross-sectional study hospital based had been implanted to include 1056 patients in Al-Nasiriya city to estimated prevalence and determinant of common skin diseases, with the main of age 22.2 ± 16.63 female to male ratio 1.1:1 and most of the participant population falling in age group (1-14).

The univariate analysis shows age has a significant statistical association with skin diseases and in the multi-variant analysis also show statistically significant association p-value less than 0.05 which indicate age is a strong predictor of skin diseases which comparable to other studies in Pakistan, Riyadh [19, 20].

Gender had no significant statistical association p-value more than 0.05, but females presented more than males as compared with others study [19,20,21], which may reflect an awareness of female for health access in general.

The inflammatory most prevalent in females while infectious skin diseases most prevalent in males as compared with other studies [22]. Our study shows

no significant statistical association between socioeconomic status and education level which does not agree with others' studies [23].

A resident had no significant association and diseases are more frequent in urban not agree with the study in Al Najaf city [10] in which most common in a rural area this reflects the urban population consists of the majority of the studied population. The occupation had no significant association.

Conclusion

1. The most affected age group 1-14 years 44.6% male and 33.7% female.
2. Dermatologic al diseases consider a big burden on an outpatient clinic and health sector so they consume health access, cost, laboratory investigation
3. Dermatological diseases presented in high frequency because of hot weather in Al-Nasiriya and because of exposure to a large amount of allergen, dust, and chemical irritant. And due to overcrowding and lack the education among the population.

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الانماط الوبائية للأمراض الجلدية في ذي قار

د.زهراء جابر أ.د.علي عبد سعدون أ.م.د.احمد عبد الحسين خيون

الخلفية: الأمراض الجلدية هي مشكلة شائعة تؤثر على كل من الجنسين وجميع الفئات العمرية، العديد من العوامل تسهم في إحداث الأمراض الجلدية مثل التلامس مع المريض المعدي، والاتصال مع المواد المثيرة للحساسية أو غيرها من المواد المهيجة، والاحتفاظ وسوء النظافة.

الهدف: دراسة وبائيات الأمراض الجلدية في مدينة الناصرية في عام 2018 المواد والطرق: دراسة مقطعية للمرضى الوافدين الى العيادة الاستشارية للأمراض الجلدية في مستشفى الامام الحسين التعليمي في مدينة الناصرية من شهر شباط 2018 الى شهر أيلول 2018. بموجب استبيان تم إعداده بشكل جيد وبعض الفحوصات المختبرية

النتيجة: تم دراسة مجموع 1048 مريضاً حيث بلغت نسبة الأكزيما / التهاب الجلد 38.3%، والعدوى الفيروسية 20.4%، والطفيليات 14%. فيما يتعلق بالفترة الاجتماعية والديموغرافية كان للعمر ارتباطاً كبيراً في التحليل متعدد المتغيرات وغير ذلك من محددات التاريخ الطبي السابق كان لديه ارتباط كبير.

الخلاصة: كان مدى الأكزيما / التهاب الجلد، والعدوى الفيروسية ، وعدوى الطفيليات أكثر مدى الأمراض.

توصية: مطلوب دراسة اخرى لتحديد التدابير الوقائية , وبسبب الانتشار الواسع للأمراض الجلدية يتطلب انشاء مركز خاص للأمراض الجلدية..

الجناح الرئيسي

الناصرية، 2018 ، الأمراض الجلدية العراق