

Socio-demographic and clinical characteristics of psoriatic patients attended dermatology clinics in Mosul city

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ABSTRACT

Background: Psoriasis affects 0.5-0.7% of Iraqi people making it one of the significant dermatological problems. Despite the extent of this problem, little information regarding its epidemiology is available in this country.

Objectives: To define the socio-demographic and clinical characteristics of psoriatic patients attended dermatology clinics in the four major governmental hospitals in Mosul city.

Patients and methods:

Study setting: Dermatology clinics in the 4 major governmental hospitals (Al- Jamhuri, Ibn Sina, Al-Salam, and Al- Mosul) in Mosul.

Study design: Cross-sectional study.

Study period: 1st October 2101 to 25th of February 2011.

Participants: Patients with psoriasis of both sexes, and all ages, who attended the dermatological clinics. Each patient was subjected to detailed history and clinical examination. Data collection form included various demographic and clinical characteristics.

Results: The sample of the study included 154 patients with psoriasis, comprising 50.6% males ranging in age from 3-62 years. The mean age±SD at presentation was 30.2±15.1 years; the mean age±SD at onset was 22.8±12.0 years. The mean duration of the illness was 7.4 years. A unimodal distribution curve of age at onset was noticed with a peak at the third decade. Early onset of psoriasis before 30 years was significantly associated with family history. Severity of psoriasis was mild in 74 (48.1%) of cases and it was more severe in elderly with longstanding disease. Itching and disfigurement were the main complaints especially the young and female patients. Plaque type (64.9%) was the most common variant, arms (52.6%) were the most commonly affected body site, and the scalp (27.9%) was the most common initial site affected by psoriasis. Nail involvement was seen in 30 (19.5%) patients especially fingernails.

Conclusions and recommendation: The study revealed that psoriasis is a heterogeneous disease affecting all ages, genders and socio-economic strata. Further researches to study the relationship and the impact of these characteristics on the life of sufferers is recommended.

الخلاصة

الخلفية: يصيب داء الصدف ٠,٥-٠,٧% من السكان في العراق مما يجعل هذا المرض من المشاكل الجلدية الرئيسية. وبالرغم من ذلك يتوفر القليل من البيانات الخاصة بوبائية هذا المرض في هذا البلد.

الأهداف: تحديد الصفات الاجتماعية والديموغرافية والسرييرية لمرضى داء الصدف المراجعين لمستشفيات الموصل الأربعة الكبرى.

طرق البحث:

موقع الدراسة: عيادات الأمراض الجلدية في المستشفيات الأربعة الرئيسية (الجمهوري، ابن سينا، السلام والموصل) في مدينة الموصل.

مدة الدراسة: للفترة من ١-١٠-٢٠١٠ ولغاية ٢٥-٢-٢٠١١.

تصميم الدراسة: طريقة الدراسة المقطعية.

المشاركون في الدراسة: ضم البحث مرضى داء الصدف الذين راجعوا عيادات الأمراض الجلدية من كلا الجنسين وبكل الأعمار. أجري البحث بطريقة المقابلة المباشرة والفحص السريري تم من خلالها جمع المعلومات الاجتماعية والديموغرافية والفحص السريري للمريض.

النتائج: أجري البحث على ١٥٤ مريضا مصابا بداء الصدف شكل الذكور نسبة ٥٠,٦% وقد تراوحت أعمارهم بين ٣-٦٢ عاما وبمتوسط عمر قدره ٣٠,٢±١٥,١ سنة. وكان متوسط عمر بداية ظهور داء الصدف هو ٢٢,٨±١٢ سنة ومتوسط مدة المرض هي ٧,٤ عاما. أظهرت النتائج أن توزيع عمر بداية ظهور داء الصدف هو أحادي القمة عند العقد الثالث من العمر. وقد ارتبط العمر المبكر للمرض بالتاريخ العائلي للمرض خصوصا. وكانت شدة داء الصدف خفيفة لدى ٧٤ (٤٨,١%) مريضا. ولوحظ زيادة في شدة المرض مع زيادة عمر المريض أو مدة المرض. وكان الحك والتشوه الجلدي المعاناة الأكثر شيوعا بين المرضى خصوصا الشباب والنساء. وكان النوع أَلصفيحي أكثر أنواع داء الصدف شيوعا (٦٤,٩%) والأطراف العليا الأكثر إصابة (٥٢,٦%) وفروة الرأس أول المناطق إصابة عند بداية ظهور المرض (٢٧,٩%) وقد عانى ٣٠ (١٩,٥%) مريضا من حالة صدف الأظافر متزامنا مع داء الصدف الجلدي خصوصا أظافر أصابع الكفين.

الاستنتاج والتوصيات: أظهرت الدراسة شدة تباين مرض داء الصدف وان كلا الجنسين وكافة الفئات العمرية والاجتماعية معرضة للإصابة بهذا المرض ويوصى بأجراء المزيد من البحوث لدراسة العلاقة بين هذه الصفات وتأثيرها على حياة المصابين.

P soriasis is a common, incurable, inflammatory cutaneous disease. According to National Psoriasis Association (NPA), 125 million people suffer from psoriasis worldwide.⁽¹⁾ Psoriasis shows wide geographic variations in clinical features and prevalence, ranging from 3% in Scandinavians to absent among Aborigines (natives of Australia).⁽²⁾ In Iraq, prevalence of psoriasis varies from 0.5% to 0.7%^(3,4). This figure puts psoriasis in list of major dermatological problems in Iraq. Unfortunately, epidemiologic studies of psoriasis conducted in this locality do not parallel the magnitude of the problem. The scanty available epidemiologic data prompt to conduct this demographic and clinical study hoping that results will form a baseline data for health professionals, decision makers, and academics⁽⁵⁾. The obtained data will also offer a baseline for study on quality of life of patients who suffer from psoriasis.

Objectives

1. To define the socio-demographic characteristics of patients with psoriasis.
2. To demonstrate the clinical characteristics of patients in the study sample.

PATIENTS AND METHODS

This work was carried out as a cross-sectional study on patients with psoriasis who attended dermatology clinics in four major hospitals (in Mosul (Al-Jumhuri, Al-Salam, Ibn Sina and Al-

Mosul General Hospitals). The study was conducted during the period of 1st October 2010 to 25th January 2011.

After identifying eligible patients with psoriasis and invited to participate in the study, each patient was exposed to the following:

- Oral consent.
- Filling demographic data form (age, gender, education level, occupation, marital status, and socioeconomic status).
- Assessing of clinical information (age at onset, duration of disease, site of lesions, and the types of psoriasis).
- Determining clinical severity using the extent of body surface area involved by psoriatic lesions. The area of lesions covered by single palm will be equal to 1% of body surface area involvement (BSA). The disease will be classified into mild (<5% BSA), moderate (5-10% BSA) and severe (>10% BSA)⁽⁶⁾.

Descriptive statistical methods were used to summarize and tabulate the different socio-demographic and clinical parameters of the studied sample. Inferential statistics was performed by the use of Z- test of one proportion for dichotomous variables (gender, age at onset and family history of psoriasis). The other multiple variables were assessed simply by the percentages. The significance was considered at (0.05). Statistical processing of data were conducted by the use of

statistical package SPSS ver.13 (SPSS Inc, Chicago ILL).

RESULTS

During study period the proportional morbidity rate of psoriasis from all the cases recorded in the consultation clinics of dermatology was 5.26%.

A total of 154 patients suffering from psoriasis agreed to participate and were enrolled in the current study. They were 78 (50.6%) males and 76 (49.4%) females with male to female ratio about 1:1.

Minimum and maximum age at presentation were 3 years and 62 years respectively with mean and standard deviation of 30.2 ± 15.1 years. After tabulating the age into 15 years intervals, highest proportion was found among age group 15-29 years (36.4%).

The demographic characteristics of the studied sample were shown in **Table 1**.

Table 1. Socio-demographic characteristics of psoriasis in study subjects.

Characteristics	Number	%	P-value
Age group			
1-14 year	28	18.2	
15-29 year	56	36.4	
30-44 year	42	27.3	
45+ year	28	18.2	
Gender			
Male	78	50.6	0.936
Female	76	49.4	
Marital status			
Single	66	42.9	
Married	84	54.5	
Widow	4	2.6	
Occupational-Social class*			
Class I	-		
Class II	24	15.6	
Class III	72	46.8	
Class IV	48	31.2	
Class V	10	6.5	
Educational level			
Illiterate	24	15.6	
Primary	62	40.3	
Secondary	48	31.1	
High	20	13.0	
Residence			
Urban	118	76.6	
Rural	24	15.6	
Recent urbanization	12	7.8	

*Class I= professional, class II= intermediate, class III=skilled, class IV= partially skilled, & class V= unskilled⁽¹⁹⁾.

The results revealed that largest proportion of the studied sample were from class III, smallest proportion were from class V, while none from class I. The largest proportion of patients had a low education in comparison, only 15% of patients were graduates. The analysis of educational level showed that 90% of illiterate were females while 70% of graduate were male patients. About 3/4 of the patients reside city while the rest quarter were either inhabitants of rural areas or recently immigrated to urban areas.

The clinical characteristics of the studied sample are shown in **Table 2**. In this study, psoriasis onset ranged from 3 to 50 years with mean and SD of 22.8 ± 12.0 years. Fifty-three patients (34.4%) had a positive family history of psoriasis in one or more of their relatives was statistically very highly significant (p-value =0.001).

The duration of the disease extended from recently diagnosed cases to 33 years with mean of 7.4 years. The result revealed that around 2/3 of patients suffered from psoriasis for a period less than 5 years while in the remaining 1/3 of patients duration of illness exceeded 5 years.

Based on percentage of body surface area involved by psoriatic lesions, patients were classified as mild in 74 (48.1%) of cases, moderate in 54 (35.1%), and severe in 26 (16.8%).

Table 2. Clinical characteristics of psoriasis in the study subjects.

Characteristics	Number	%	P-value
Age at onset			
<30 year	108	70.1	0.001
30 +	46	29.9	
Duration of psoriasis			
<1 year	36	23.3	
1-5 year	54	35.1	
> 5 year	64	41.6	
Family history of psoriasis			
Negative	101	65.6	0.001
Positive	53	34.4	
Chief complaint			
Itching	68	44.2	
Disfigurement	52	33.8	
Pain	6	3.9	
Discomfort	28	18.2	
Severity of cutaneous lesions			
Mild	74	48.1	
Moderate	54	35.1	
Severe	26	16.8	

Mild to moderate itching was the main complaint of 68 (44.2%) of patients and 52 (33.8%) complain from cosmetic disfigurement.

Discomfort was reported by 28 patients (18.2%) and pain (due to arthralgia or cracked skin) was the least frequent complaint and it was suffered by only 6 (3.9%) cases. The most important determinant of itching was duration of diseases while disfigurement was more among females and in those whose lesions involving visible and sensitive sites (like genitalia).

The results of clinical examination are shown in **Table 3**. The most frequent variants of psoriasis were plaque 100 cases (64.9%), guttate in 24 (15.6%), palmoplantar in 18 (11.7%), flexural in 6 (3.9%), generalized pustular in 3 (1.9%), and erythroderma in 3 (1.9%).

Table 3. Variants and area of body commonly affected with psoriasis.

Characteristics	Number	%
Variants of psoriasis		
Plaque	100	64.9
Guttate	24	15.6
Palmoplantar	18	11.7
Flexural	6	3.9
Generalize pustular	3	1.9
Erythroderma	3	1.9
Nail involvement		
Absent	124	80.5
Present	30	19.5
Site of cutaneous lesions*		
Arms	81	52.6
Legs	67	43.5
Trunk	24	15.6
Scalp	16	10.4
Hands	12	7.8
Genitalia	8	5.2
Soles	7	4.5
Face	3	1.9
Site of initial lesion		
Scalp	43	27.9
elbow	33	21.4
leg	21	13.6
feet	20	13.0
palms and soles	15	9.7
arms	10	6.5
trunk	6	3.9
axillae	3	1.9

*Percentage may exceed 100% because psoriasis can affect more than one site in the same patient at the same time.

The nails were involved in 30 (19.5%) cases. Among the 30 patients with nail changes 16 (10.4%) had their fingernails involved, 9 (5.8%) suffered from toenails psoriasis while the remaining 5 (3.2%) had both finger and toe nails involved.

Six (3.9%) patients complained from arthralgia and in 2 (1.3%) frank arthritis was elicited.

The most common sites affected by psoriasis were the arms 81 (52.6%), followed by legs 67 (43.5%), trunk 24 (15.6%), scalp 16 (10.4%), hands 12 (7.8%), genitalia 8 (5.2%), soles 7 (4.5%), and the least were the face which was involved in 3 (1.9%).

Scalp was the most common initial site affected by psoriasis accounting for 27.9% of the patients followed by elbows (21.4%), knees (13.6%), feet (13%), palms and soles (9.7%), arms (6.5%), trunk (3.9%), and axillae (1.9%).

DISCUSSION

The present study showed that 6.5% of patients were under 10 years and the percentage raised to 18.2% of the sample in those 15 year old or younger. This result was consistent with the findings of a survey on childhood psoriasis conducted in Kuwait⁽⁷⁾. The mean age at presentation (30.2 years) found in the current study was in agreement with previous epidemiologic studies conducted locally⁽⁸⁾ and internationally⁽⁹⁾.

There is remaining controversy regarding psoriasis gender preponderance and it lies between no difference⁽²⁾ to male preponderance⁽¹⁾. The current study supports the opinion of equal male and female ratio which was 1.03:1.00.

Although psoriasis may occur from birth to advanced ages, most of reviewed literature⁽¹⁰⁾ including the present study suggested that third decade to represent peak of onset. Determination of age at onset is a problematic issue for researchers due to the followings: first, it relies on patient 's recall; second, date of first diagnosis doesn't reflect the onset as many patients suffer long time before seeking medical care⁽¹¹⁾.

Smith et al⁽¹¹⁾, postulated that psoriasis has a bimodal peak of activity. They stated that the bimodal distribution in psoriasis incidence represented two clinical presentations of psoriasis, so called type I (genetically determined) and type II (environmentally determined). The current study

did not show any indication of bimodal prevalence. The distribution of age at onset of psoriasis in the current study showed only one peak in the age group 20-29 years.

Familial clustering in psoriasis had been observed for many years⁽¹²⁾. A positive family history in 34.4% of the studied sample provided another support of this concept. Moreover, it confirmed the important role of genetics in the etiology of psoriasis especially in those with early onset⁽¹³⁾. This figure was also in agreement with the figure reported few years ago in the same locality (Mosul city) which was (38.5%).⁽⁸⁾

The clinical manifestations of psoriasis are heterogeneous, ranging from limited to very extensive disease⁽¹⁴⁾. The severity yielded from studied sample was compared with a recent study of psoriatic patients selected from USA population via random digit dialing which show the followings: 57.4% had mild psoriasis, 38.8% had moderate, and the remaining were considered as severe cases⁽¹⁵⁾. The present study to some extent is in agreement with US study. Minor difference may be due to variation in the severity assessment between researchers (due to lack of standardized severity assessment method)⁽⁶⁾ and variation in the course of disease (due to the nature of psoriasis to wax and wane)⁽¹⁶⁾.

Nail changes are relatively common in psoriasis yet often an overlooked aspect of the disease⁽¹⁷⁾. Findings in this study reflected similar results as reported in previous literatures. A notable difference was noticed in the frequency of nail involvement between the current study (19.5%) and other studies (58%)⁽¹⁸⁾. This discrepancy may be due to difference in case definition (minor roughing of nail, which was omitted in the current research while considered significant change by other researchers) or difference in population (percentage of severe cases).

In conclusion, the study revealed that psoriasis is a heterogenous disease affecting all ages, genders and socio-economic strata. Further researches to study the relationship of these characteristics on the life of sufferers are recommended.

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