Research Paper

Clinical and Epidemiological Profile of a Sample of Psoriatic Patients with Different Severities from Al-Imamein Al-Kadhimaein Medical City

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ABSTRACT:

BACKGROUND:
Psoriasis is a long lasting autoimmune disease characterized by patches of abnormal skin. Psoriasis varies in severity from small, localized patches to complete body coverage.

OBJECTIVE:
To determine the phenotypes and severity of psoriasis with its relation to some socio-demographic characteristics of a sample from a teaching hospital.

PATIENTS AND METHODS:
A Cross sectional study conducted in the dermatology clinic of Al-Imamein Al-Kadhimaein Medical City during the period from March 15th till August 15th 2019. A consecutive sample of psoriatic patient at age above 18 years from both sexes was included. Every patient was interviewed by the investigator using a specially prepared questionnaire for this study as well as to the standardized Psoriasis Area and Severity Index (PASI) Score.

RESULTS AND CONCLUSION:
The study included 107 psoriatic patients nearly half of them (47.7%) were under 35 years of age, with males and females were equally distributed. The commonest phenotype of psoriasis was plaque psoriasis mostly affecting the limbs, followed by scalp psoriasis. Less than quarter (21.5%) of the participants had moderate to severe psoriasis according to PASI Score. Almost all the patients use both topical and systemic treatment and positive family history of psoriasis was reported in 31.8% of the participants.

KEYWORDS: Psoriasis; PASI; phenotypes; socio-demographic characteristics; Iraq

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INTRODUCTION:

Patches of abnormal skin are a defining feature of the chronic autoimmune disease psoriasis. (1); the skin condition causes red, flaky, crusty patches of skin covered with silvery scales. Psoriasis varies in severity from small, localized patches to complete body coverage [2]. It is a chronic, non-communicable, painful and disabling disease for which there is no cure and with negative impact on patients' quality of life (QoL) [3].

The diagnosis of psoriasis is usually based on the appearance of the skin, and no blood tests and imaging studies that can aid in the diagnosis, however, a skin biopsy or scraping may be performed to rule out other disorders and to confirm a diagnosis [4-5].

There are several ways to determine its severity including measuring Body Surface Area (BSA), Physician's Global Assessment (PGA), Psoriasis Area and Severity Index (PASI), and Dermatology Life Quality Index (DLQI) [6].

There are three major forms of therapy for psoriasis: Topical therapy, phototherapy, and systemic therapy. The treatment is based on its severity at the time of presentation. In many countries, other treatments may play a role, like traditional Chinese medicine, self-treatment with over the counter products (nonprescription drugs) and climatotherapy [7].

OBJECTIVES:

1. To determine the clinical profile of psoriasis of the selected sample.
2. To measure the rate of different phenotypes and severity of psoriasis.
3. To identify the relation of some socio-demographic characteristics of the participants with psoriasis severity.

PATIENTS AND METHODS:

Study design: Cross sectional study.

Study setting: The sample was collected from the dermatology clinic of Al-Imamein Al-Kadhimaein Medical City during the period from March 15th till August 15th 2019.

Study Sampling: A non-random consecutive sample of psoriatic patient during the time frame mentioned. Patients at age above 18 years among males and females with psoriasis were included. All pregnant and lactating women were excluded from study.

Study tools:

Every patient was interviewed by the investigator using a specially prepared questionnaire for this study as well as the standardized PASI Score was adopted.

A: The designed questionnaire included three parts covering in the first part the socio-demographic information includes (age, sex, occupation, address, education, smoking, alcoholic intake). The second part was concerned with psoriasis clinical profile including (sites of lesion, duration of disease, character of lesion include redness, thickness, scale, itchy, bleeding, pain), any joint pain or swelling, fever, comorbidities (hypertension, diabetes mellitus, gout, inflammatory bowel disease), and family history of psoriasis, while the third part for determining the phenotypes of psoriasis include (psoriasis of fold, seborrheic psoriasis, psoriasis plaque (limbs and trunk) (plaque, guttate, erythroderma), duration and type of treatment include topical, phototherapy, systemic therapy, and drugs history including (beta blocker, anti-malaria drugs, lithium, tetracycline, NSAID).

B: Severity of psoriasis was assessed by using the standardized PASI score depending on the skin area involved that is transformed into a grade from 0 to 6; and the disease severity estimated by three clinical signs: (redness), (thickness) and (scaling) that are measured on a scale of 0 to 4, from none to maximum. The sum of all three severity parameters is then calculated for each section of skin, multiplied by the area score for that area and multiplied by weight of respective section. The final score classifies each patient either with mild disease when PASI<10, moderate when PASI=10-15, and severe when PASI >15 [8-9].

Ethical consideration:

Verbal consent was obtained from each participant prior to data collection. All information kept confidential and data used exclusively for research purposes and individuals were asked to participate on a voluntary basis.

Administrative approvals were granted from the Council of Iraq Board of Community and Family Medicine and Al-Imamein Al-Kadhimaein Medical City.

Statistical analysis:

Statistical Package for the Social Sciences (SPSS) version 20 was used for data entry and analysis. Suitable tables and graphs were used to describe the data. Chi –square test was used to test association of categorical variables and identify the variables of significant association. P-value of less than 0.05 was considered statistically significant.

RESULTS:

During the period of study, a total number of patients with psoriasis had attending to dermatology consultation was 107, their mean age was 36.88±4.3years. Male to female ratio were approximately 1:1. Those who reside in Baghdad 79 (73.8%) was more than those from other governorates. Most of the females were housewives 45 (42.1%) while males were mostly self-employed 26 (24.3%). From the total sample size, 65 (60.7%) were married, and 43 (40.2 %) had primary education or less. More than two thirds 79 (71.0%) of the participants were non-smokers, and the majority were not drinking alcohol 105 (98.1%) (Table 1).

From the total sample size, the commonest sites of lesion was upper limbs 85 (79.4%) followed by lower limbs 81 (75.7%). Almost all of the patients had scaling 101(94.4%) followed by 97 (90.7%) itching. The commonest type of psoriasis was plaque psoriasis 84 (78.5%) followed by scalp psoriasis 28 (26.2%). About one third of the participants 38 (35.5%) had five years or less duration of psoriasis of and the same number 38 (35.5%) had duration of more than 10 years. Almost all the patients were on topical treatment 103 (96.3%) and 97 (90.7%) of them were on systemic treatment. The number of patients with no family history of psoriasis was 73 (68.2%), and with no past medical history of hypertension, diabetes or both were 90 (84.1%) (Table 2).

The mean ±SD of PASI of the participants was found to be 6.44±7.79. More than three quarters 84 (78.5%) of participants classified as mild PASI (PASI less than 10), 11 (10.3%) were of moderate PASI (PASI= 10-15) and 12 (11.2%) were with severe PASI (PASI more than 15) (Figure 1).

No significant association was found between the characteristics of the patients and being having mild or moderate to severe psoriasis according to PASI score (Table 3).

Table 1: Distribution of the socio-demographic characteristics of sample

Variable	No. (107)	Percent
Age (years)		
<25	43	40.2
25-34	8	7.5
35-44	26	24.3
45-54	14	13.1
≥55	16	15.0
Sex		
Female	53	49.5
Male	54	50.5

Table 2: Distribution of the sample according to psoriasis characteristics

Variable	No.	Percent
Type of psoriasis *		
Plaque psoriasis	84	78.5
Inverse psoriasis	6	5.6
Erythrodermic psoriasis	10	9.3
Nail psoriasis	2	1.9
Scalp psoriasis	28	26.2

* More than one response

Table 3: Relation of the PASI categories according to some characteristics of the sample

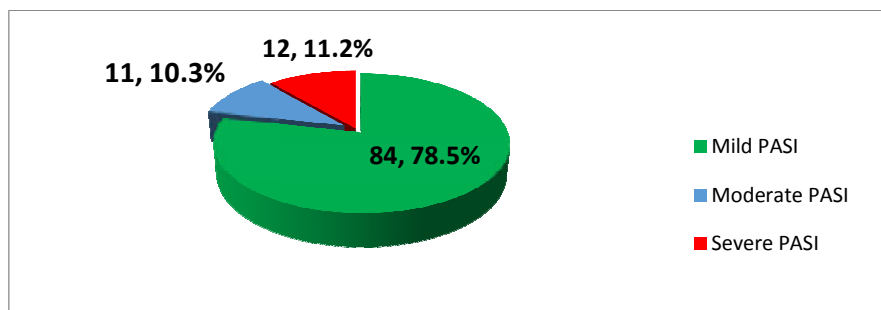| Variable	Mild		Moderate & Severe		Total		Significance
	No. (84)	%	No. (23)	%	No. (107)	%	
Age (years)							
≤35	44	78.6	12	21.4	56	52.3	P=0.98
>35	40	78.4	11	21.6	51	47.7	
Sex							
Female	44	83.0	9	17.0	53	49.5	P=0.26
Male	40	74.1	14	25.9	54	50.5	

Figure 1: Distribution of study participants by psoriasis area and severity index (PASI)

DISCUSSION:

The study had shown that the commonest age had psoriasis was under 35 years which agreed with a study conducted in Erbil 2018, 72% of the studied sample presented before the age of 40 years [10] and agreed with the National Institute for Health and Care Excellence in New Zealand that reported in 2017 the commonest age before 35 years [11]. However, a study in Turkey 2002 found that the commonest age group was 30-39 years [12], as well as in Italy a study in 2003 found the age was equal or more than 45 years' duo to different in sample sizes [13].

In the study, males and females were approximately equally in number. This agreed with New Zealand National Institute for Health and Care Excellence guidelines 2017 that reported males and females were equally affected by psoriasis [11] and close to results of Erbil study as males were 52% and females were 48% [10]. While the study from Turkey 2002 found females were 61% [12] and a study from Iran 2015 found males represented 58.3% of the cases. [14]

In this study, 60.7% were currently married. This agreed with study from Iran 2015 found 65.6% were married [14] and from Turkey 65% were married, 30% were single [12].

The study found that the commonest site of lesion was the upper limbs 79.4% followed by lower limbs 75.7%. This study disagreed with a study conducted in Mosul 2012, that reported arms 52.6% and legs 43.5% [15] and New Zealand National Institute for Health and Care Excellence guidelines 2017 that reported that scalp, extensor elbows, knees are the most frequently involved sites [11] while a study from Iran 2015 found the commonest sites of lesion was trunk 37% of the cases [14].

In this study, scaling was reported by 94.4% of the cases followed by itching 90.7% of cases. This agreed with study in Europe that reported scaling of the skin in 92%, itching in 72% and erythema in 69% [16] were the main complaints, while the study from Mosul 2012 reported itching 44.2% and disfigurement 33.8% [15] were more.

The commonest type of psoriasis reported by our patients was plaque psoriasis 78.5% followed by scalp psoriasis 26.2%. This agreed with New Zealand National Institute for Health and Care Excellence guidelines 2017 that reported that the plaque psoriasis is the most common type of psoriasis accounting for 55–90% [11] but not with findings of the study from Turkey 2002 found 68% had plaque and 3% inverse type [12] and study from Department of Dermatology, Al-Kindy teaching hospital in Baghdad, Iraq had plaque 55% and other type 45% [17] and study from Iran 2015 found plaque 90.1%, other types 9.9% [14].

In the study 35.5% had duration of psoriasis of five years or less and more than 10 years. This agreed with a study from Slemania, Iraq 2019 that reported 36% between 10 to 20 years and 35% more than 20 years [18] while study from Mosul 2012 on patients attended dermatology clinic reported that 41.6% had more than 5 years [15] and study from Iran 2012 that reported 52.1% had duration less than 10 years [14].

Patients with positive family history of psoriasis were found to be 31.8%. This agreed with study from Erbil that reported 32 % had a positive family history of psoriasis in one or more of their relative [10] and close to results of Turkey study that the Family history was positive 30% of the patients [12].

In the current study, more than two thirds 71.0% of the participants were non-smokers, while the study from Turkey 2002 found smoking was observed in 40% of the cases [12] and the study from Slemania 2019 found smoking in 16% of cases [18].

Less than 2% of patients in this study reported drinking alcohol while the study from Slemania 2019 found 6% were alcoholic [18] and the study from Turkey 2002 found alcohol intake was 12% of the cases [12].

Results of the current study revealed that more than three quarters 78.5% of participants classified as mild, 10.3% were moderate and 11.2% were severe according to PASI scoring, while study from Mosul 2012 reported 48.1% was mild, 35.1% was moderate and 16.8% was severe [15] and in a study conducted in UK 2013 found patients with psoriasis 51.8%, 35.8%, and 12.4% respectively had mild, moderate, and severe disease. [19] Also a Korean study in 2016 found the severity of psoriasis was 52% mild and 48% moderate to severe [20] , and a study conducted on a large population of European psoriasis patients showed that psoriasis was a significant problem for 15% of patients with mild psoriasis, 23% with moderate psoriasis and 51% with severe psoriasis [16].

One of the main limitations of this study is that it was conducted in one center even though it was a referral teaching hospital.

In conclusion results of the current study showed that the commonest type of psoriasis was plaque psoriasis mostly affecting the limbs, followed by

scalp psoriasis, less than quarter (21.5%) of the participants had moderate to severe psoriasis according to PASI Score and no relation was found between socio-demographic, disease duration and family history of psoriasis with the severity of the disease in the studied sample.

CONCLUSIONS:

Finding from the current study specified the following conclusions:

1. The commonest type of psoriasis was plaque psoriasis mostly affecting the limbs, followed by Scalp psoriasis.
2. Less than quarter (21.5%) of the participants had moderate to severe psoriasis according to PASI Score.

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