Psoriasis in Al - Anbar Government clinical and epidemiological study

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ABSTRACT

In this study, the percentages of study variables including age, gender, residence, family history between study groups including patients with psoriasis disease and control group, the results showed presence of There were substantial differences in age between study groups (P0.05), but no huge differences in sexual identity (P>0.05), housing (P>0.05), or family background (P>0.05). Meanwhile the terms of BMI, there's no big variation between categories (p> 0.05). They were chosen in this way to obtain the patients with psoriasis disease (27.70±0.80) and control group (27.80±0.50). Per the PASI, 8% of sick people had mild psoriasis (PASI3), while 55% had modest psoriasis (PASI 3-10) whereas, 37% had severe type (PASI >10). In addition, the mean differences of HbA1C, plasma glucose and plasma protein according to study groups including (patients with psoriasis disease and control group) was no significant differences between means of HbA1C, plasma glucose and plasma protein according to study group (P 0>0.05).

Keywords: Psoriasis, Biomarkers, Demographic data, Severity of Psoriasis disease

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1. Introduction

Psoriasis is an allergic disease (a disease with idiopathic inflammation induced by immune system distribution) that creates chronic state [1]. Slightly elevated plaques (plaques may look various depending on skin types) and dimensions on the skin may be marked signs of inflammation [2]. This happens because a hyperactive immune response accelerates skin cell proliferation [3]. In a month cavity, normal skin cells hyperplasia and shed (fall off) accrue [4]. It was happening for three or four days [5]. Rather than shedding, dermal cell accumulate on the outer layer of epithelium of the skin [6]. Some patients claim that their plaques itch, burn, and hurt [7]. Plaques signs and scales can arise everywhere on the skin, but they are most prevalent on the wrists, ankles, and scalp [8]. Psoriasis lead to severe inflammatory response can have an effect on certain body parts and tissues within the body [9]. Patients with psoriasis may also have other health condensation [10]. One third of psoriasis patients will develop inflammation of joints (PsA) [11]. PsA symptoms include swelling, stiffness, and pain in the joints, unfortunately PsA frequently misdiagnosed in mildly cases and should be treat rapidly to avoid permanent joint damage [12]. Symptoms can appear at any age especially the ages from 15 to 25 and all type of skin and gender [13]. Pustular kind is characterized by red, cracked skin with small pustules on the armpits and lower leg [14]. Other Type of psoriasis was Guttate, which little, red patches appear on the chest and legs, and it usually occur in children. Also respiratory problems accrued like strep infection in throat, and tonsillitis, stress, skin injury [15]. The third type was Inverse, It causes brilliant red, gleaming sores in skin creases like the armpits [16]. The last type of psoriasis was Erythrodermic type is characterized by a fiery hyperemic skin and the shedding of scales caused severe Diseases, sunburn blisters, certain medicines, and stopping specific forms of psoriasis therapy are also factors to consider directly to avoid the serious illness [17].

2. Materials and Methods

The present study is an observational case control design. The data of study were collected in the period from

March 2021 to June 2021. The study was conducted in clinical private in AL-Anbar Government, Iraq. A total number of subjects involved in this study was 200 patients (100 patients suffering from psonasis disease and 100 as control healthy), from both sex (male and female), with age range 15-65 years. All patients and control were from the same ethnic group (Arabic).A valid consent was achieved from each patients before their inclusion in the study. Questionnaire taken from the patients and case sheet included age, gender, residence, smoking locally treatment, treatment by systemic drug and family history. The psoriasis patients who diagnoses as patients with eczema. Any patients were given both local and systemic treatment.drug treatment, patients were suffering from diabetic, and obesity patients. Five ml of blood were obtained from each subject by vein puncture, it was put into EDTA tubes with sodium citrate for obtained plasma, stored in (-20˚C) in order to be used in HbA1C, plasma glucose, and plasma protein.

2.1. BMI measurement
Regard to World Health Organization criteria, all patients are classified according BMI (WHO, 2004). Depending on the flowing, BMI (kg/m^2) = weight (kg) / height (m^2).
　　Underweight ≥ 18.5
　　Normal (18.5 - 24.9).
　　Overweight (25-29.9).
　　Obese ≤ 30.

2.2. Distribution of psoriasis as a measurement of how severe it is

According to PASI, mild cases (PASI <3), moderate diseases (PASI 3-10) and severe onset (PASI >10) (Mattei *et al*., 2014).

2.3. Estimation of HbA1C
This biomarker was determination according to study of Hamaguchi *et al*., as reported in [18].

2.4. Determination of plasma glucose
This biomarker was determination according to study of Frank *et al*., (2012).

2.4. Determination of plasma protein
It was prepared by 25 ml serum to chib, and calculated by dry- chemistry (Dri-chem Fujifilm) (Japan).
2.5. Statistical analysis

SPSS version 23 was used for statistical analysis. (Means± SD) was used to depict continuous variables. To compare the means of two groups, a student t-test was utilized.

3. Results and discussion
In this study, the percentages of study variables including age, gender, residence, family history between study groups including patients with psoriasis disease and control group were shown in Table 1. The findings revealed that there were significant variations in age (P0.05) between research groups, but no significant variations in gender (P>0.05), residency (P>0.05), or familiar (P >0.05).

Table 1. Distribution of study groups by socio-demographic characteristics

Study variables	Study groups (%)		P-value
	patients with psoriasis disease	Healthy control	
Age 15-30 years 31-60 years ≥ 61 years	10(10.0%) 34(34.0%) 56(56.0%)	12(12.0%) 76(76.0%) 12(12.0%)	**P ≥ 0.05***

Study variables	Study groups (%)		P-value
	patients with psoriasis disease	Healthy control	
Total	100(100%)	100(100.0%)	
Gender Male Female	52(52.0%) 48(48.0%)	27(27.0%) 73 (44.0%)	P > 0.05
Total	100 (100.0%)	100 (100.0%)	
Residence Urban Rural	36(36.0%) 64(64.0%)	10(10.0%) 90 (90.0%)	P > 0.05
Total	100(100.0%)	100(100.0%)	
Family history Yes No	54(54.0%) 46(46.0%)	76(176.0%) 24(24.0%)	P > 0.05
Total	100(100.0%)	100 (100.0%)	

* p value ≤ 0.05 was significant.

There was no discernible important results appear to compare between the two groups. Subjects groups are in the BMI (p>0.05). They were chosen in this way to obtain the patients with psoriasis disease (27.70±0.80) along with control group (27.80±0.50) as shown Table 2.

Table 2. General characterization of patients with psoriasis disease and control group according to BMI as mean ±SD

Parameter	Patients with psoriasis disease	Control group	p-value
	Mean±SD	Mean±SD	
BMI (Kg/M^2)	27.70±0.80	27.80±0.50	P > 0.05

* p value ≤ 0.05 was significant.

As per the PASI, 8% of patients had mild psoriasis (PASI3), 55% had moderate psoriasis (PASI3-10), and 37% had severe psoriasis (PASI>10), as indicated in Table 3.

Table 3. Distribution of cases according to PASI

PASI	No. of patients	%
mild	8	8%
Moderate	55	55%
Severe	37	37%

The mean differences of HbA1C, plasma glucose and plasma protein according to study groups including (patients with psoriasis disease and control group) was investigated in Table 4. There were no significant

changes in HbA1C means, according to the findings of plasma glucose and plasma protein according to study group (P 0>0.05).

Table 4. Mean differences of HbA1C, plasma glucose and plasma protein according to study groups including (patients with psoriasis disease and control group).

Biomarker	Patients with psoriasis disease	Con. Group	p-value
	Mean ± SD	Mean ± SD	
HbA1C (%)	7.85±0.86	7.22±1.09	P > 0.05
plasma glucose (mg/dl)	9.32±3.36	12.63±6.32	P > 0.05
plasma protein (g\L)	28.80±4.08	34.21±8.78	P > 0.05

* p value ≤ 0.05 was significant.

4. Discussion

Psoriasis is increasingly being viewed as a systemic illness, with experts believing that dermatological symptoms are simply one aspect of the disease. Its link to the metabolic syndrome is particularly significant [19]. Psoriasis is believed to afflict 2–4% of the industrialized global population [20]. Psoriasis rates vary by age, geography, and ethnicity; these variances are considered to be caused by a mix of ecological and hereditary factors [21]. It may strike anyone at any age, although it most frequently strikes people between the ages of 15 and 25.Psoriasis is diagnosed in around a third of adults before they reach the age of 20 [22]. According to several research, the typical age of start for psoriasis was 33 years old, with 75 percent of cases occurring even before age reached 46 [23]. Others believed that psoriasis onset was bimodal, with two peaks of the illness-the first at 16 to 22 and the second at 57 to 60 [24]. However, there are few research on the epidemiology or prevalence of psoriasis in kids, and those that do appear show that psoriasis in children varies greatly across Taiwan, China, and the United States [25] and 1.37% during life hits in 0–17-year-old children in Germany [26]. The major seeking study on prevalence among children was done out in Germany [27]. Psoriasis was found to be 0.40 percent common in children under 18., according to statistics from a health insurance company database of around 1.3 million people, and grew fairly linearly over time [28]. A research record by Sabry *et al*., [29] reported that, the occurrence of disease in people with age 18 years and less was 0.05%. The paper of Vos *et al*. [30], explained the 50–69 year old age group had the highest disease burden, and psoriasis produced a somewhat greater burden in adult males than adult females up to 75 years old so both gender are affected [31]. Psoriasis affects both men and women in equal amounts [32]. Furthermore, other research found that psoriasis is also more prevalent in males, according to all investigations that provided distribution by sex [33-34].The figures given are not statically important [35-36]. This is a topic that needs to be looked into more, particularly the distinction between hereditary and behavioral variables [37]. The severity of the disease has been linked to a higher incidence of certain risk factors in the past [38]. In the lack of reliable data, research have focused on the therapy spectrum as a measure for intensity [39]. Lesion area and severity index are then used as a severity index (PASI) was employed, which is extensively used to evaluate severity in both research and clinical settings [40].Few research have been published to date that investigate the link between the distribution of psoriasis risk factors and PASI, and the relationship has not been convincingly shown in Asian psoriasis patients [41, 42].

5. Conclusion

Patients with psoriasis disease is related to the only patient's age, but it has nothing to do with demographic data as gender, residence, family history and BMI. Furthermore, the allocation of patients as per the eczema area rating scale was examined, moderate psoriasis was a predominant in Al-Anbar government, also, this disease

was not related to some biomarkers determination like HbA1C, plasma glucose and plasma protein.

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