

## Profile of patients receiving medical care at a reference, support, and treatment center for psoriasis patients at a university hospital\*

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DOI: <http://dx.doi.org/10.1590/abd1806-4841.201644945>

**Abstract:** Psoriasis is a chronic, inflammatory, immune-mediated disease affecting 1-3% of the population worldwide. This work seeks to draw a profile of patients with psoriasis, analyzing socioeconomic, anthropometric, and clinical aspects. For this, medical records from 81 individuals who received medical care in a university hospital in 2014 were consulted. It was observed that the patients were mostly dark-skinned black adult men, with a low education level and a low income, who were sedentary, former smokers, obese, with an increase in waist circumference, and who did not consume alcohol. Psoriasis vulgaris predominated, beginning mainly on the scalp, hands, and feet. In addition, many presented some type of associated comorbidity and had relatives with psoriasis.

**Keywords:** Comorbidity; Dermatology; Health profile; Psoriasis

Psoriasis is a chronic, inflammatory, erythematous scaly, immune-mediated disease, which occurs universally, affecting men and women equally in 1-3% of the population worldwide.<sup>1,2</sup>

The physiopathology involves immune system, genetic and environmental components.<sup>1,2</sup> It is characterized by the expansion and activation of Th1, Th17, Th22, and T-cells, with the production of the associated cytokines, such as Interferon, the tumor necrosis factor (TNF), interleukin 17 (IL17), and IL22 on the skin.<sup>3,4</sup> Factors such as traumas, acute and intense exposure to sunlight, infections, certain drugs, psychogenic and emotional factors, smoking, alcohol, and endocrine factors may trigger or worsen psoriatic lesions.

For this prospective and observational study, 81 patients treated at a psoriasis reference center in a university hospital were selected. The project was approved by the Human Research Ethics Committee. The following data were verified: gender, skin color, age group, education level, income level, per capita income, smoking, alcoholism, sedentary lifestyle, abdominal circumference, Body Mass Index (BMI), type of psoriasis, sites and age when the lesions began, presence of comorbidities, existence of relatives with psoriasis, and occurrence of psoriatic arthritis.

The majority of people, 75 (92.6%), were 18 years of age or older. In addition, in 31 cases (38.6%), the first lesions appeared earlier than or at 18 years of age, affecting both genders equally (Table 1).

Data showed that 45 patients (55.6%) were dark-skinned, 27 (33.3%) were white, and 9 (11.1%) were black (Table 1). This result is in disagreement with the majority of the literature, in which occurrences in people with white skin have been more prevalent, as psoriasis tends to be rare in black, indigenous, and Asian people.<sup>3,5</sup>

It was determined that, predominantly, 60 (74.1%) of the people were paid under the minimum wage, and 25 (30.9%) had not completed elementary school, thus reflecting the socioeconomic status of most of the Brazilian Unified Health System (SUS) users (Table 1).

Studies show that smoking and alcohol consumption, in addition to being risk and worsening factors of the disease, also reduce patient response to treatment.<sup>6,7</sup> In this sense, the majority, 44 individuals (54.3%), consisted of ex-smokers, and 41 (50.6%) did not consume alcohol (Table 1).

Received on 18.07.2015

Approved by the Advisory Board and accepted for publication on 11.10.2015

\* Work conducted at the Reference Center for Support and Treatment of Psoriasis Patients at the Hospital Universitário Lauro Wanderley - Universidade Federal da Paraíba (UFPB), João Pessoa, Paraíba, Brazil.

Financial Support: None.

Conflict of Interest: None.

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In this study, 58 patients (71.6%) stated that they do not exercise (Table 1). It is known that regular exercise, at moderate intensity, improves some risk factors (mental health, vitality, body composition, sleeping), in addition to helping insulin and psoriasis control.<sup>8</sup>

It has been reported that psoriasis favors weight increase and obesity.<sup>1,8,9</sup> Studies show a relation between obesity and chronic inflammation, in which the fatty tissue is part of the immune system and the number of adipocytes is proportional to that of macrophages. An association can be observed between high levels of TNF $\alpha$ , IL6, IL17, leptin, and C-reactive protein, and increases in BMI, which contribute to alterations in insulin biochemical pathways, leading to insulin resistance, and contributes to the increase in lipid levels, triglycerides, type II diabetes, and cardiovascular diseases. The inflammatory state, in obese individuals, is also related to the development or worsening of psoriasis.<sup>3,9</sup>

**TABLE 1:** Psoriasis patients' socioeconomic characteristics and habits (n=81). João Pessoa (PB), Brazil, 2014

Variable	Absolute frequency (n)	Relative frequency (%)
<b>Gender</b>		
Male	43	53.1
Female	38	46.9
<b>Skin color</b>		
White	27	33.3
Dark-skinned	45	55.6
Black	9	11.1
<b>Age group</b>		
Children (0-11 years of age)	4	4.9
Adolescents (12-18 years of age)	2	2.5
Adults (19-59 years of age)	61	75.3
Senior citizens (> or = 60 years of age)	14	17.3
<b>Education level</b>		
Illiterate	10	12.3
Elementary school - incomplete	25	30.9
Elementary school - complete	14	17.3
High school - incomplete	2	2.5
High school - complete	21	25.9
College degree - incomplete	1	1.2
College degree - complete	8	9.9
<b>Per capita income</b>		
Up to minimum wage	60	74.1
1 to 3 times minimum wages	18	22.2
Over 3 times minimum wages	3	3.7
<b>Smoking</b>		
Smokers	14	17.3
Non-smokers	44	54.3
Ex-smokers	23	28.4
<b>Alcohol consumption</b>		
Consumes alcohol	22	27.2
Does not consume alcohol	41	50.6
No longer consumes alcohol	18	22.2
<b>Exercising</b>		
Exercises	23	28.4%
Does not exercise	58	71.6%
<b>Total</b>	<b>81</b>	<b>100%</b>

In this aspect, the research revealed that 26 people (32.1%) were overweight, 33 (40.7%) were obese, and 48 (59.3%) presented a high abdominal circumference (Table 2).

Psoriasis type II more commonly occurs among family members, most often associated with an early onset of the dis-

**TABLE 2:** Anthropometric measurements and clinical characteristics of psoriasis patients (n=81). João Pessoa (PB), Brazil, 2014

Variable	Absolute frequency (n)	Relative frequency (%)
<b>BMI (kg/m<sup>2</sup>)*</b>		
Low weight (< 18.5 kg/m <sup>2</sup> )	4	4.9
Normal weight (18.5-24.9 kg/m <sup>2</sup> )	18	22.2
Pre-obese (25.0 - 29.9 kg/m <sup>2</sup> )	26	32.1
Grade I obesity (30.0 - 34.9 kg/m <sup>2</sup> )	11	13.6
Grade II obesity (35.0 - 39.9 kg/m <sup>2</sup> )	18	22.2
Grade III obesity ( $\geq$ 40 kg/m <sup>2</sup> )	4	4.9
<b>Abdominal circumference (cm) **</b>		
<b>Males</b>		
>90 cm	13	30.2
<90 cm	30	69.3
<b>Females</b>		
>80cm	35	92.1
<80cm	3	7.9
<b>Comorbidities</b>		
Diabetes	18	22.2
Dyslipidemias	14	17.3
Hypertension	25	30.9
Atopies (asthma, rhinitis, or atopic dermatitis)	10	12.3
Cardiovascular diseases	1	1.2
Eye diseases	4	4.9
Absence of comorbidities	13	16
<b>Psoriasis type</b>		
Vulgaris	76	83.8
Inverse	0	0
Erythrodermic	1	1.2
Guttate	0	0
Pustular	4	4.8
<b>Time of onset of disease</b>		
Up to 18 years of age	31	38.6
After 18 years of age	50	61.4
<b>Lesion sites</b>		
Hand/foot	23	28.4
Elbow/knee	12	14.8
Back area	4	4.9
Abdominal area	5	6.2
Scalp	26	32.1
Others	11	13.6
<b>Total</b>	<b>81</b>	<b>100%</b>

\* World Health Organization Classification, 2000;

\*\* International Diabetes Federation Classification, 2006.

ease.<sup>1,2</sup> In this sense, among the 6 patients under 18 years of age, half had a family member who was a psoriasis patient; and among the 75 patients of above 18 years of age, only 28 (37.3%) reported having a family member with psoriasis.

As regards the clinical form of psoriasis, 76 patients (93.8%) presented psoriasis vulgaris, followed by 4 patients (4.9%) with pustular psoriasis (Table 2). Data from the literature indicate that psoriasis vulgaris was the most common disease, affecting approximately 80% to 90% of the patients.<sup>1</sup> Low prevalence of erythrodermal form of the disease in this study is justifiable, as it refers to outpatient services, whereas for specific cases of erythrodermic psoriasis, inpatient treatment would be required.

Records showed that 53 people (65.4%) presented psoriatic arthritis. These high numbers are most likely due to the multidisciplinary nature of this Center, where Dermatology and Rheumatology work together, enabling more diagnoses.

Lesions appear more frequently in portions of the body normally covered by clothes or protected by hair, that is, areas less exposed to ultraviolet radiation.<sup>2,8</sup> This study detected that in 26 patients (32.1%) lesions began mainly on the scalp, whereas in 23 patients (28.4%) they appeared first in the hands and feet.

Literature shows that the presence of systemic diseases related to psoriasis is frequent.<sup>1,3,8</sup> The basis for these associations is complex: effects of chronic systemic inflammation, psychosocial problems, and potential adverse effects of treatment may be important.<sup>1,3</sup>

The sample included 10 (12.3%) atopic patients (asthma, rhinitis, or atopic dermatitis carriers); 25 (30.9%) hypertensive patients; 18 (22.2%) diabetic patients, and 14 (17.3%) patients with dyslipidemias. Such results are compatible with studies that show that metabolic syndrome (MS), as a whole, and its isolated components have been associated with psoriasis (Table 2).<sup>1,3,8</sup>

Therefore, the present study identified a psoriasis patient population consisting mostly of dark-skinned adult males with low education and income levels who were sedentary and obese, with increased abdominal circumferences; who were ex-smokers; and who did not consume alcohol. These patients were diagnosed with psoriasis vulgaris, which mainly began on the scalp, hands and feet. In addition, many had some type of associated comorbidity and relatives who had psoriasis.

It is important to understand psoriasis patient profiles, considering the disease's high prevalence rate and the great impact on the patients' quality of life so that health promotion and intervention actions may be better targeted. □

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**How to cite this article:** Cordeiro Júnior TGM, Andrade BDP, Palitot EB, Piuvezam MR, Mascarenhas SR. Profile of patients attending by a reference center, support and treatment for psoriasis patients at a university hospital. An Bras Dermatol. 2016;91(5):691-3.