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Demographic and Clinical Characteristics of Geriatric Patients with Psoriasis: A Single-center, Cross-sectional, Retrospective Study in Turkish Population

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ABSTRACT

Background: Psoriasis is a common, chronic, inflammatory skin disorder affecting almost 2-3% of the population. Studies on the epidemiological data and the course of the disease have generally been published in pediatric and middle-aged patients, where the disease is more common. This study aimed to provide more insight into the disease and treatment characteristics of psoriasis patients over 65.

Materials and Methods: In this retrospective, cross-sectional, single-center, hospital-based study, patients over 65 who visited our department between 01.06.2017 and 01.06.2020 were included.

Results: Ninety six patients with psoriasis were admitted to our outpatient clinic during the study period. The mean age of the patients was 69.92±4.73 years. Women and men were equally affected. Almost 9.4% of the patients had psoriatic arthritis. The patients' mean Psoriasis Area Severity Index score was 8.39±7.11, and the disease duration was 13.76±12.71 years. Nail involvement was detected in 43.8% of the patients. Family history was positive in 19.8% of the patients. Smoking was positive in 28.1% of the patients, and regular alcohol use was positive in 6.3%.

Conclusion: The clinical course of psoriasis is usually milder in elderly onset patients. Further studies are warranted to determine the best management of psoriasis in elderly patients. Drug interactions and metabolism should be carefully managed in these patients.

Keywords: Alcohol consumption, Biologic agents, Conventional treatments, Comorbidity, Dermatology, Geriatric, Inflammation, Nail psoriasis, Psoriasis, Psoriatic arthritis, Smoking

Introduction

Psoriasis is one of the most common inflammatory skin disorders, which affects approximately 2-8% of the population without any race or sex predilection [1,2]. In epidemiologic studies, it is reported to be more common in the middle age, followed by the pediatric age group. In many epidemiologic studies, it has been shown that the disease's onset has a bimodal distribution. In the early 30s, the first peak occurs and the second peak usually occurs in the early 60s [3]. Today, people over 65 are considered the geriatric population, and some differences distinguish this age group from other age groups [4]. Polypharmacy and many comorbidities in this age group challenge clinicians in managing psoriasis [5].

This study evaluated our department's demographic, clinical, and treatment characteristics of older adults with psoriasis.

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Materials and Method

Patient Group

This study was conducted in the dermatology clinic of a public university hospital and the study protocol was approved by the Istanbul University-Cerrahpasa, Cerrahpasa Faculty of Medicine Clinical Research Ethics Committee (number: 43710, date: 02.03.2021). Informed voluntary consent forms were obtained from the patients included in the study to use their information. The outpatient dermatology service database was reviewed retrospectively. Patient characteristics, including sex, body mass index (BMI), family history, psoriasis area and severity index (PASI) scores, disease duration, nail or joint involvement and all medications used for psoriasis including topical and systemic treatments were included in the analysis. Comorbidities associated with psoriasis, such as metabolic syndrome, coronary artery disease (CAD), diabetes mellitus (DM), hypertension (HT) and dyslipidemia, smoking and alcohol intake were also evaluated.

Statistical Analysis

Descriptive statistics in the study are given as mean, percentage, frequency and standard deviation. Kruskal-Wallis and Mann-Whitney U tests were used to examine the difference in PASI scores according to patient groups. The all-pairwise method was used to identify different groups. The Mann-Whitney U test was used to investigate the patients' age differences according to gender. Spearman correlation analysis was performed to investigate the relationship between smoking years and duration of illness with PASI scores. In the study, a chi-square analysis was used to examine the difference in nail involvement rates according to comorbidity and treatment levels. The critical decision value in the research was taken as 0.05. The analyses were concluded with the SPSS 25.00 package program.

Results

Ninety-six patients with psoriasis were applied to our outpatient clinic between 01.06.2017 and 01.06.2020. Among these patients, 50% were women and 50% were men. Psoriatic arthritis was present in 9.4% of the patients. Nail involvement was detected in 43.75% (n=42) of the patients. The mean age of the patients was 69.92±4.73. Of 96 patients, 86 (89.6%) had plaque-type psoriasis, three (3.1%) had palmoplantar psoriasis, and 7 had (7.3%) pustular psoriasis. The overall mean age of the patients was 69.92±4.73. The mean ages of the female patients were 69.69±4.68, and the male patients were 70.15±4.81. BMI levels were found to be 30.27±4.99. The mean PASI score of the patients was 9.04±6.9, and the mean duration of the disease was 13.76±12.71 (1-50) years. The mean period of smoking was 10.04±18.84 years. Almost 67.7% of the patients were using an additional medication, and 72.9% of the patients had comorbidities. The most common comorbidities were HT (n=48, 50%), CAD (n=20, 20.8%), and DM (n=17, 17.7%) (Table 1).

It was found that the PASI scores were not statistically different according to the patient's comorbidities, and the PASI score measurements of the patients with or without comorbidity were similar (p=0.76). Family history was positive in 19.8% of the patients. PASI scores were not at different levels according to the patient's

Table 1. Clinical, demographic data and comorbidities of the patients

Characteristics	**n=96**
Sex - no. (%)	
Female	48 (50%)
Male	48 (50%)
Age - (years) 69.9±4.7	
Female	69.7±4.5
Male	70.2±4.8
Clinical subtype - no. (%)	
Plaque type psoriasis	86 (89.6%)
Palmoplantar	3 (3.1%)
Pustular psoriasis	7 (7.3%)
Weight, height, and BMI	
Weight (kg)	81.1±14.2
Height	163.7±9.7
BMI	30.3±5
PASI score	9.04±6.9 (minimum 0 - maximum 32)
Comorbidities (n%)	
Epilepsy	1 (1.1%)
Vasculitis	1 (1.1%)
Osteoporosis	1 (1.1%)
Inflammatory bowel disease	1 (1.1%)
Chronic renal failure	1 (1.1%)
Rheumatoid arthritis	1 (1.1%)
Hypothyroidism	1 (1.1%)
Hepatitis	2 (2.1%)
Migraine	1 (1.1%)
Psychiatric disorders	2 (2.1%)
Diabetes mellitus	17 (17.1%)
Osteoarthritis	4 (4.2%)
Benign prostatic hyperplasia	2 (2.1%)
Coronary artery disease	20 (20.8%)
Hypercholesterolemia	11 (11.5%)
Asthma	3 (3.1%)
Hypertension	48 (50%)

no: Number, BMI: Body mass index, kg: Kilogram, min: Minimum, max: Maximum

family history. The PASI score measurements of the patients with or without a family history were similar (p=0.341). Smoking history was positive in 28.1% of the patients, and regular alcohol consumption was positive in 6.3%. No significant correlation was found between the smoking durations of the patients and the PASI scores. There was no significant correlation between the duration of smoking and the PASI scores (p=0.462, p>0.05). Also, no significant difference was found between PASI scores and the alcohol consumption of the patients, and the PASI score measurements of the patients who used or did not use alcohol were similar (p=0.383).

Almost 63.5% (n=61) of the patients were using topical treatments. 29.2% (n=28) of the patients were using conventional treatments; 6.3% (n=6) were using acitretin, 4.2% (n=4) were using methotrexate, and 18.7% (n=18) were receiving phototherapy. Seven geriatric patients (7.3%) were using biological therapies; in this group, 2 (2.1%) patients were using adalimumab, 1 (1%) patient was using secukinumab, 2 (2.1%) patients were using ustekinumab, 1 (1%) patient was using infliximab and similar 1 (1%) patient was using ixekizumab therapy (Table 2).

There were no statistically significant correlation between the disease duration and PASI scores (r=0.13, p=0.19, p>0.05). The prevalence of nail involvement was higher in patients who have comorbid diseases (p=0.01)

Discussion

Almost 30% of all cases of psoriasis have a late-onset disease that occurs after the age of 40 years. The clinical studies focusing on the late-onset group set a cut-off of these groups as 60. These patients usually had a milder clinical course when compared with early and middle-aged-onset groups [1,6]. Similarly, in our study, lower PASI scores, less psoriatic arthritis, and lower systemic treatment usage were detected. The differences in the pathogenesis and clinical characteristics between early-onset and late-onset psoriasis are still unknown. Still, the association between the human leukocyte antigens genes and the onset age of psoriasis may affect these differences [6].

Table 2. Treatments of the patients

Treatments	n=96
Topical treatments	61 (63.5%)
Conventional treatments	28 (29.2%)
Acitretin	6 (6.3%)
Methotrexate	4 (4.2%)
Phototherapy	18 (18.7%)
Biological treatments	7 (7.3%)
Adalimumab	2 (2.1%)
Infliximab	1 (1%)
Ustekinumab	2 (2.1%)
Secukinumab	1 (1%)
Ixekizumab	1 (1%)

The management of psoriasis may be challenging for physicians in the senior age group due to having several comorbidities and polypharmacy that may lead to adverse events, drug interactions, increased hepatotoxicity, and treatment outcomes may be more unpredictable and complicated [7]. In our study, 72.9% of the patients had comorbidities, and 67.7% used additional medication. However, no severe adverse reactions or side effects have been detected during patient follow-ups.

Some authorities have suggested that geriatric psoriasis should be evaluated as a distinct subtype due to the differences in parameters such as the course and involvement of nails and joints [8]. In this study, a milder clinical course of psoriasis was detected with lower PASI scores and less nail and joint involvement. Therefore, our study may also support the hypothesis which offers elderly-onset psoriasis as a distinct clinical subtype.

Moreover, it is also well known that psoriasis is associated with several comorbidities, such as inflammatory bowel diseases, metabolic syndrome, cardiovascular diseases and stroke. The prevalence of comorbidities such as metabolic syndrome and cardiovascular diseases is considered to be higher in patients with chronic plaque psoriasis when compared with the average population [9]. In our study, DM, HT and CAD were the most common comorbidities, consistent with previous studies.

The role of smoking in psoriasis pathogenesis is a well-known entity and has been shown in several case-control and cohort studies. The immunomodulatory effect of nicotine and its role in releasing pro-inflammatory cytokines may lead to the development of psoriasis [10]. Clinicians should be aware of the patients' smoking habits.

It can also be challenging to decide on systemic and biological treatments in elderly patients and topical treatments are usually indicated as first-line therapy due to the lower risk of adverse effects [11]. In elderly patients, skin atrophy, purpuric eruption, bruising, rebound phenomenon, and tachyphylaxis are the most common long-term adverse effects of topical steroids. Therefore, they should be used carefully [12]. Phototherapy and systemic therapy may be suggested in patients with mild-moderate psoriasis. Although phototherapy is a safe treatment protocol, it may be challenging to perform in those with psoriatic arthritis, debilitation, or stroke in these patient groups [13,14]. Systemic therapies are indicated in patients with severe psoriasis with 10% body surface area involvement of a high PASI score. Acitretin may be the first treatment choice in the management of psoriasis in geriatric age group when the hepatic/renal toxicity risk of methotrexate, HT, and hepatic/renal toxicity risk of cyclosporin have been considered [15-

18]. The dose can be started at a low dose and raised over 4-6 weeks to increase patient tolerance.

Biologic agents seem to be safe in elderly patients who have severe psoriasis, but in the literature, there are still reports of hepatitis flare and tuberculosis reactivation, especially with tumor necrosis factor alpha inhibitors [7]. Ustekinumab is a biological agent with a safe long-term safety profile confirmed by real-world data in the over-65 age group. It has also been reported that secukinumab and ixekizumab show similar efficacy and safety profiles in the elderly and younger age groups. However, real-world data regarding interleukin (IL)-17 and IL-23 inhibitors, which came into use later, are not as numerous as those for ustekinumab [5]. We did not observe any serious side effects in our patients over 65 years of age and using biological agents in this study, compared to other age groups.

Lastly, drug-induced or -provoked psoriasis should be always considered in geriatric psoriasis cases. In this group, drugs such as beta-blockers, lithium, non-steroid anti-inflammatory agents, synthetic antimalarial drugs, imiquimod, and targeted treatments using monoclonal antibodies are the best-known drugs to trigger psoriasis, and these drugs can be used quite frequently in this age group [19]. In our study, almost 67.7% of the patients were using different systemic treatments such as antihypertensive drugs, salicylic acid, statins, and antidepressants. Patients should be referred to relevant clinics for replacement of potentially culprit medications.

Study Limitation

The main limitation of our study is being a retrospective study with a small sample size conducted from a single center.

Conclusion

In conclusion, as supported in this study, clinically, the course of psoriasis is usually milder in geriatric age group. More studies are needed to determine the best management of psoriasis in this patient group. Drug interactions and metabolism should be carefully managed in these patients.

Ethics

Ethics Committee Approval: This study was conducted in the dermatology clinic of a public university hospital and the study protocol was approved by the Istanbul University-Cerrahpasa, Cerrahpasa Faculty of Medicine Clinical Research Ethics Committee (number: 43710, date: 02.03.2021).

Informed Consent: Informed voluntary consent forms were obtained from the patients included in the study to use their information.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Concept: T.K.U., S.G., B.E., Design: T.K.U., S.G., B.E., Data Collection or Processing: T.K.U., S.G., B.E., Analysis or Interpretation: T.K.U., S.G., A.Ö.E., B.E., Literature Search: T.K.U., S.G., Writing: T.K.U., S.G.

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References

1. Tseng IL, Yang CC, Lai EC, Lee CN. Psoriasis in the geriatric population: A retrospective study in Asians. J Dermatol 2021;48:818-824.
2. van Winden MEC, ter Haar ELM, Groenewoud HMM, van de Kerkhof PCM, de Jong EMGJ, Lubeek SFK. Disease and Treatment Characteristics in Geriatric Psoriasis: A Patient Survey Comparing Age Groups. Acta Derm Venereol 2020;100:adv00215.
3. Raharja A, Mahil SK, Barker JN. Psoriasis: a brief overview. Clin Med (Lond) 2021;21:170-173.
4. Orimo H, Ito H, Suzuki T, Araki A, Hosoi T, Sawabe M. Reviewing the definition of "elderly". Geriatrics & Gerontology International 2006;6:149-158.
5. Di Caprio R, Caiazzo G, Cacciapuoti S, Fabbrocini G, Scala E, Balato A. Safety concerns with current treatments for psoriasis in the elderly. Expert Opin Drug Saf 2020;19:523-531.
6. Chularojanamontri L, Kulthanan K, Suthipinittharm P, Jiamton S, Wongpraparut C, Silpa-Archa N, Tuchinda P, Sirikuddta W. Clinical differences between early- and late-onset psoriasis in Thai patients. Int J Dermatol 2015;54:290-294.
7. Balato N, Patruno C, Napolitano M, Patrì A, Ayala F, Scarpa R. Managing moderate-to-severe psoriasis in the elderly. Drugs Aging 2014;31:233-238.
8. Kwon HH, Kwon IH, Youn JI. Clinical study of psoriasis occurring over the age of 60 years: is elderly-onset psoriasis a distinct subtype? Int J Dermatol 2012;51:53-58.
9. Takeshita J, Grewal S, Langan SM, Mehta NN, Ogdie A, Van Voorhees AS, Gelfand JM. Psoriasis and comorbid diseases: Epidemiology. J Am Acad Dermatol 2017;76:377-390.
10. Armstrong AW, Armstrong EJ, Fuller EN, Sockolov ME, Voyles SV. Smoking and pathogenesis of psoriasis: a review of oxidative, inflammatory and genetic mechanisms. Br J Dermatol 2011;165:1162-1168.
11. Bakirtzi K, Sotiriou E, Papadimitriou I, Sideris N, Vakirlis E, Lallas A, Vrani F, Ioannides D. Elderly patients with psoriasis: long-term efficacy and safety of modern treatments. J Dermatolog Treat 2022;33:1339-1342.
12. Yosipovitch G, Tang MB. Practical management of psoriasis in the elderly: epidemiology, clinical aspects, quality of life, patient education and treatment options. Drugs Aging 2002;19:847-863.
13. Legiawati L, Astriningrum R, Yusharyahya SN, Chandrakesuma V. Sociodemographic and Clinical Characteristics of Geriatric Patients with Psoriasis Receiving Narrowband Ultraviolet B Phototherapy. Ann Geriatr Med Res 2020;24:290-296.
14. Bulur I, Erdogan HK, Aksu AE, Karapınar T, Saracoglu ZN. The efficacy and safety of phototherapy in geriatric patients: a retrospective study. An Bras Dermatol 2018;93:33-38.
15. Sandhu VK, Ighani A, Fleming P, Lynde CW. Biologic Treatment in Elderly Patients With Psoriasis: A Systematic Review. J Cutan Med Surg 2020;24:174-186.

16. Di Lernia V, Goldust M. An overview of the efficacy and safety of systemic treatments for psoriasis in the elderly. Expert Opin Biol Ther 2018;18:897-903.

17. Kostović K, Žužul K, Čeović R, Bukvić Mokos Z. Psoriasis in the mature patient: Therapeutic approach in the era of biologics. Clin Dermatol 2018;36:222-230.

18. Garber C, Plotnikova N, Au SC, Sorensen EP, Gottlieb A. Biologic and Conventional Systemic Therapies Show Similar Safety and Efficacy in Elderly and Adult Patients With Moderate to Severe Psoriasis. J Drugs Dermatol 2015;14:846-852.

19. Tsankov N, Angelova I, Kazandjieva J. Drug-induced psoriasis. Recognition and management. Am J Clin Dermatol 2000;1:159-165.