Original Article

Gaps in moderate plaque psoriasis management: A survey of Saudi dermatologists

Mohammad Almohideb[1], Nora Abdulrahman Almohideb[2]

[1]Department of Dermatology, King Saud bin Abdulaziz University for Health Sciences, College of Medicine,
[2]King Saud University Medical Intern, Riyadh, Saudi Arabia

Abstract

Background: There are many barriers that usually lead to under-treatment of moderate psoriasis patients, with subsequent unsatisfactory results and clinical outcomes. **Objective:** Given this lack of consistent guidelines on treating moderate plaque psoriasis patients, the aim of the current study is to define how Saudi dermatologists define and treat such cases in the real-world clinical setting. **Methods:** We conducted an online cross-sectional survey from May 2020 to October 2020, involving all eligible dermatologists working at different academic, governmental, and private sectors in Saudi Arabia. **Results:** Finally, a total of 260 dermatologists were included in the final analysis; out of them, 140 (53.8%) were males and 120 (46.2%) were females. Regarding the tools used by participating dermatologists for diagnosis of moderate psoriasis, most of the participants (86.5%) used Body Surface Area (BSA), 7.3% used Physician Global Assessment (PGA), and 6.2% used Dermatology Life Quality Index (DLQI). Cutoff scores for defining moderate psoriasis varied widely among surveyed dermatologists. The surveyed dermatologists reported that 46% of their patients with moderate plaque psoriasis were receiving biologics as their primary therapy, while 24.1% were receiving prescription topical treatment, 20.3% were receiving an oral systemic therapy, 4.9% were using over-the-counter topical treatment, and 4.7% were receiving phototherapy. **Conclusion:** There is a pervasive lack of consensus regarding the definition of moderate psoriasis, with reported wide ranges among the commonly used severity tools in psoriasis patients.

Keywords: Dermatologists, disease severity, online survey, psoriasis, treatment

Introduction

There are many barriers that usually lead to under-treatment of moderate psoriasis patients, with subsequent unsatisfactory results and clinical outcomes.[1-5] Moreover, there is a lack of a consensus on the identification and appropriate treatment of moderate psoriasis patients. According to the American Academy of Dermatology (AAD), moderate psoriasis is identified when ≥5% to <10% of the body surface area (BSA) is affected by the disease.[6] According to a European consensus, payer reimbursement criteria, and clinical trials; "the rule of ten" should be applied to define disease severity.[7-10] They define the mild disease when any/all of the following ≤10: affected percentage of BSA, Psoriasis Area and Severity Index [PASI], and/or Dermatology Life Quality Index [DLQI].[7-10] When any of the three aforementioned parameters were higher than 10, the disease is classified as moderate to severe, with no separation of moderate and severe categories.[7-10] Similarly, the US Food and Drug Administration (FDA) does not allow drug application for moderate psoriasis as a separate indication.[11] This comes in line with the absence of tailored treatment strategies for moderate psoriasis, which, in turn, the reason that many patients with moderate/moderate to severe diseases may end up receiving no treatments or topical ones, with no significant relief of symptoms.[1,2,4]

Based on the previously mentioned facts, there is a lack of necessary tools for doctors that would make it hard to make

Address for correspondence: Dr. Mohammad Almohideb, Assistant Professor of Dermatology, College of Medicine, King Saud Bin Abdulaziz University for Health Sciences, Riyadh - 14611, Saudi Arabia.
E-mail: moalm20@gmail.com

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informed decisions in terms of treatment and improving clinical outcomes. Based on the risk-benefit ratio, doctors may consider the conventional systemic or biological treatment inappropriate for the moderate form of psoriasis, with main concerns about the long-term side effects of such drugs.[3,5] Another drawback of the systemic treatments is the follow-up burden, where regular laboratory investigations and lifestyle adjustments are always needed.[12,13] Moreover, such treatment options may be unavailable to some patients due to cost concerns or insurance coverage issues, especially when coming to biologic treatment agents.[5]

A previous study, of 150 participants, examined how dermatologists define and manage moderate plaque psoriasis in actual clinical setting. The study confirmed the absence of a clear definition of moderate psoriasis among US dermatologists.[11] Given this lack of consistent guidelines on treating moderate plaque psoriasis patients, the aim of the current study is to define how Saudi dermatologists define and treat such cases in the real-world clinical setting.

Materials and Methods

Study design

This is an online cross-sectional survey that was conducted from May 2020 to October 2020, involving all eligible dermatologists working at different academic, governmental, and private sectors in Saudi Arabia.

Data collection

The survey questionnaire was prepared after a thorough review of the literature. The questions were customized to fit into the criteria of this study. The questionnaire's content was then validated by a panel of subject experts. A pilot study was conducted among 30 participants, who were not included in the final survey. The survey was analyzed using Cronbach's reliability coefficient. If there is any need, the needed changes were incorporated before using for the larger sample.

The questionnaire was composed of three parts: "Part A" that was the sociodemographic details and background clinical experience, "Part B" that assessed diagnosis and experience of moderate plaque psoriasis and "Part C" that assessed the treatment of moderate plaque psoriasis. The questionnaire was distributed online using Google forms. Only completely filled questionnaires were considered for the study.

Informed consent and ethical considerations

No identifying information of any participant was published and all collected data were exclusively used for statistical analysis. The data of the patients were kept confidentially. Every participant was asked to fill an online informed consent in the first page of the survey before being able to move further.

Statistical analysis

Data will be analyzed by SPSS 26 (SPSS Inc, Chicago, IL, USA). Descriptive statistics were calculated for all variables. For categorical variables, comparative analyses were carried out by Chi-square test or Fisher's exact test, as appropriate. Based on normality status, independent-samples *t*-test or Mann–Whitney U test is to compare females to males. A P value < 0.05 will be selected as a statistically significant level in all the tests.

Results

Respondent dermatologists

Finally, a total of 260 dermatologists were included in the final analysis; out of them, 140 (53.8%) were males and 120 (46.2%) were females. Dermatologists had a mean age of 36.9 ± 8.6 years and spent a mean of 9.4 ± 7.7 years in practice. One-third (36.2%) of the participants are currently working in a multi-specialty practice, 19.6% are currently working in a single-specialty practice, and 17.7% are currently working in a primary hospital. Respondent dermatologists spent an average of 41.5%, 37.1%, 34.1%, 31.3%, and 27.6% of their time working in direct patient care medical dermatology, surgical (non-cosmetic) dermatology, cosmetic dermatology, and dermato-pathology, respectively. There was a statistical significant difference between males and females in terms of dermatology certification (P value < 0.001), dermatology board eligibility (P value < 0.001), practice setting type (P value < 0.001), staff within practice (P value < 0.001), and time spent in different aspects of dermatology care (P value < 0.05). Sociodemographic data and background clinical experience are summarized in Table 1.

Diagnosis and experience of moderate plaque psoriasis

The participating dermatologists showed a reported variable number of examined psoriasis patients monthly; 31.5% examined <5 patients, 38.1% examined 10–20 patients, and 30.4% examined 20–40 patients. Nearly half of the participants (44.6%) reported the exacerbation of the disease as the main cause of dermatologic consultation among psoriasis patients, 28.1% of the patients coming for the first time, and 21.5% are coming as a regular visit. Regarding the encountered locations affected by psoriasis, dermatologists reported that 31.5% of the cases have affected feet, 14.6% have affected genital areas, 13.5% have affected faces, and 12.7% have affected scalps [Table 2].

The reported average percentage of mild psoriasis cases was 56.5%, while the moderate cases were 26.2%, and the severe cases were 17.3% [Figure 1]. Regarding the tools used by participating dermatologists for diagnosis of moderate psoriasis, most of the participants (86.5%) used Body Surface Area (BSA), 7.3% used Physician Global Assessment (PGA), and 6.2% used Dermatology Life Quality Index (DLQI). Cutoff scores for defining moderate psoriasis varied widely among surveyed dermatologists. Median low and high cutoffs for moderate psoriasis were 6% and 10% BSA, respectively; however, the minimum and maximum (min/max) range of BSA cutoffs used to define moderate psoriasis was very broad (overall min/max:

Table 1: Sociodemographic data and background clinical experience

Variables	Sex						*P*
	Male (*n*=140; 53.8%)		Female (*n*=120; 46.2%)		Total (*n*=260; 100%)		
	n	%	*n*	%	*n*	%	
Are you board-certified in dermatology?							
Yes	92	65.7	49	40.8	141	54.2	<0.001*
No	48	34.3	71	59.2	119	45.8	
Are you board eligible in dermatology?							
Yes	109	77.9	54	45.0	163	62.7	<0.001*
No	31	22.1	66	55.0	97	37.3	
In what type of practice setting do you work?							
Solo office	12	8.6	0	0.0	12	4.6	<0.001*
Single-specialty office group	39	27.9	12	10.0	51	19.6	
Multi-specialty office group	40	28.6	54	45.0	94	36.2	
Primary hospital	2	1.4	44	36.7	46	17.7	
Community non-teaching hospital	17	12.1	0	0.0	17	6.5	
Community teaching hospital	15	10.7	0	0.0	15	5.8	
University hospital	15	10.7	10	8.3	25	9.6	
Describe the staff within your practice (for each, please report number and percent of staff)							
Nurse practitioners	16	11.4	17	14.2	33	12.7	<0.001*
Other registered nurses (Not NPs)	39	27.9	59	49.2	98	37.7	
Physician assistants	85	60.7	22	18.3	107	41.2	
Medical assistants	0	0.0	22	18.3	22	8.5	

Variables	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	*P*
Age	37.1	8.4	36.7	8.9	36.9	8.6	0.728
How many years have you been practicing dermatology?	9.8	7.7	9.0	7.6	9.4	7.7	0.416
What percent of time do you spend in direct patient care?	43.7	14.9	38.8	18.6	41.5	16.8	0.022*
What percent of time do you spend practicing within the Medical dermatology	40.2	23.1	33.6	15.3	37.1	20.1	0.006*
What percent of time do you spend practicing within the Surgical (non-cosmetic) dermatology	35.8	6.9	32.2	7.9	34.1	7.5	<0.001*
What percent of time do you spend practicing within the Cosmetic dermatology	34.3	17.3	27.7	14.4	31.3	16.4	0.001*
What percent of time do you spend practicing within the Dermato-pathology	27.5	16.1	27.8	9.6	27.6	13.4	0.867

*Statistically significant

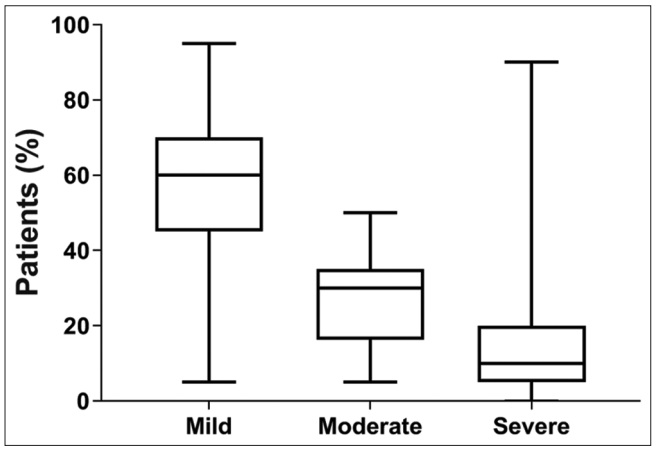

Figure 1: Severity of plaque psoriasis patients seen in a typical month (%). The box represents median and interquartile range, while the whiskers represent minimum and maximum values

1%–50%). Ranges for median low and high cutoffs used to identify moderate psoriasis were also broad for the PGA (2 and 5) and the DLQI (6 and 11) [Figure 2].

Treatment experience of moderate plaque psoriasis

The surveyed dermatologists reported that 46% of their patients with moderate plaque psoriasis were receiving biologics as their primary therapy, while 24.1% were receiving prescription topical treatment, 20.3% were receiving an oral systemic therapy, 4.9% were using over-the-counter topical treatment, and 4.7% were receiving phototherapy [Figure 3]. Regarding the duration of treatment, 36.9% of the participants reported giving treatment for 6 months, 30.0% reported giving it for 1 year, 18.5% were giving it for life, and 14.6% were giving it for only 3 months. About half of the respondents (50.4%) reported failure of treatment among 20%–40% of patients and reported impaired quality of life (52.7%) for psoriasis patients. Participants' treatment experience with moderate plaque psoriasis is summarized in Table 3.

Discussion

Patients with moderate plaque psoriasis represent an ill-defined segment of the psoriasis population. We conducted an online

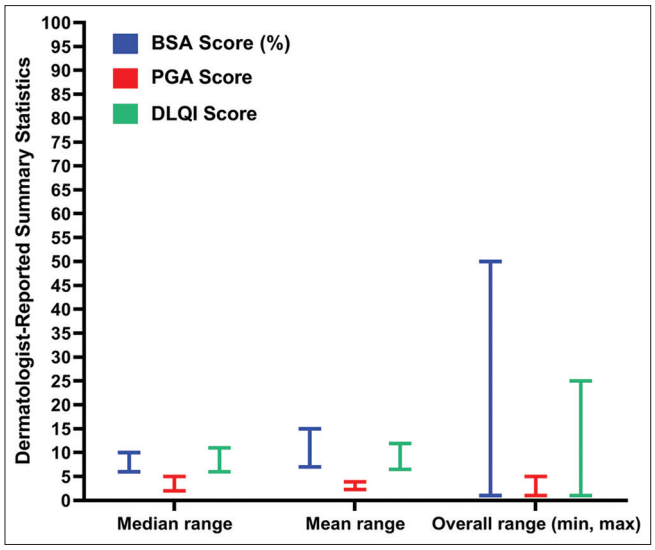

Figure 2: Different cut-offs for the diagnosis of moderate psoriasis patients. The box represents median and interquartile range, while the whiskers represent minimum and maximum values

Table 2: Diagnosis and experience of moderate plaque psoriasis

Variables	*n*	%
How many psoriasis patients did you face monthly?		
<5 patients	82	31.5
10-20 patients	99	38.1
20-40 patients	79	30.4
Cause of the dermatologic consultation		
Regular visit	56	21.5
Exacerbation of the disease	116	44.6
First time for diagnosis	73	28.1
Other	15	5.8
What is the location of psoriasis in the disease patients?		
Palms	12	4.6
Genital area	38	14.6
Feet	82	31.5
Face	35	13.5
Scalp	33	12.7
Legs	26	10.0
Arms	0	0.0
Multiple areas	34	13.1
What is the tool you used for diagnosis of moderate psoriasis?		
Body Surface Area (BSA)	225	86.5
Physician Global Assessment (PGA)	19	7.3
Dermatology Life Quality Index (DLQI)	16	6.2

cross-sectional survey involving 260 dermatologists working at different academic, governmental, and private sectors in Saudi Arabia. In the current study, most of the included dermatologists used BSA, where the median BSA for identifying moderate disease severity ranged from 6 to 10%, which was similar to the range of values suggested by a previous similar study and the AAD for moderate disease severity.[6,11] Nevertheless, the range of BSA cutoff values were highly variable among dermatologists (1%–50%); similarly, wide ranges for moderate disease severity were reported by dermatologists

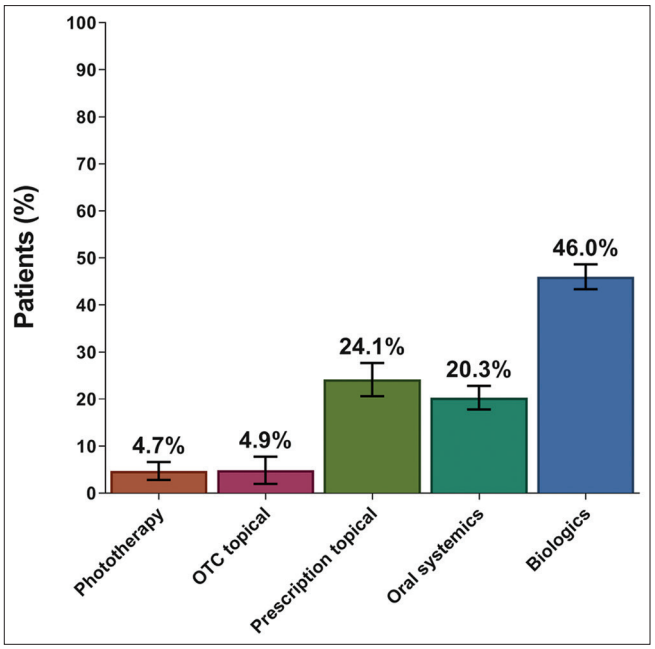

Figure 3: Different treatments for moderate psoriasis patients (%)

on defining moderate psoriasis using other assessments (PGA and DLQI).

Although the majority of dermatologists used different scores to assess disease severity, they were also aware of different locations of the psoriasis lesions. The participants who considered the location of psoriasis lesions mentioned the feet, genital area, face, scalp, and legs as areas they use to determine psoriasis severity. These findings would recommend that dermatologists know that lesions in some areas may affect the patients' quality of life and should be considered when determining disease severity or choosing the best treatment option. In the same context, the AAD urge dermatologists to consider lesions' location when assessing the severity of psoriasis or determining the appropriate treatment strategy.[6] Additionally, these findings would highlight the significance of considering new guidelines for defining moderate plaque psoriasis, with incorporating both the BSA score and the lesions' location, which would have a potential impact on clinical practice.

The literature shows that patients may classify their disease as a higher severity than the one based on the BSA alone. In this regard, a multinational survey of 3426 patients showed that about half of the participants rated their disease as "moderate" or "severe," while, based on BSA, their condition was mild ≤3%.[4] Likewise, the clinical trials-derived evidence suggests that the patients' quality of life, assessed by DLQI, is not conditionally related to the disease severity, as measured by BSA.[14,15] In the ESTEEM 1 trial, of 844 patients, reported a DLQI score similar to the one reported by the UNVEIL trial; however, the former trial has three times higher BSA involvement (24%) compared to the latter trial (7%).[14,15] In the current study, 6.2% of the surveyed dermatologists reported using the DLQI score in assessing

Table 3: Treatment experience of moderate plaque psoriasis

Variables	*n*	%
Duration used for treatment		
For 3 months	38	14.6
For 6 months	96	36.9
For one year	78	30.0
For life	48	18.5
What is your typical approach in monitoring your moderate plaque psoriasis patients?		
Order lab testing when dictated by treatment	42	16.2
Order lab testing when my patients start a new treatment regimen	123	47.3
Routinely order lab testing for my patients	36	13.8
Do not order lab testing at all for my moderate patients	29	11.2
Order lab testing for all my moderate plaque psoriasis patients, every appointment	30	11.5
The patient had impaired quality of life?		
Yes	129	52.7
No	116	47.3
Failure of treatment occurs within		
10%-20% of patients	52	20.0
20%-40% of patients	131	50.4
More than 50% of patients	77	29.6
Non-compliance of treatment occurs due to		
Long duration	30	11.5
Impaired quality of life	85	32.7
Drug-related side effects	107	41.2
Other	38	14.6
Improvement of treatment estimated by		
Photographic evaluation	65	25.0
Clinical evaluation	147	56.5
Instrumental evaluation	13	5.0
Patient satisfaction	35	13.5

psoriasis severity. That said, it is currently recommended by the National Psoriasis Foundation to assess the patient-reported outcomes (like quality of life and daily activities impairment) for a better determination of disease severity and selecting the best treatment option with further evaluation of its effectiveness.[16]

An interesting finding of the current survey is that 46.0% of dermatologists reported the use of biologics as a treatment for moderate psoriasis patients. This is consistent with a previous study of US dermatologists where about half of the participants reported biologic agents as their primary line of treatment.[11] However, these numbers are higher from previous surveys where only 5%–22.5% of moderate to severe psoriasis patients were reported to be using biologic therapy as their current treatment.[1,4] The difference may be originating from the larger sample sizes of other studies, different methodology, or the country-based differences in insurance coverage and treatment policies. Another possible explanation of such discrepancy may be drawn by the variability in defining moderate psoriasis; thus, some of the surveyed dermatologists may have included severe psoriasis patients when asked about their primary treatment for moderate psoriasis. The reported use of prescribing topical agents, systemic treatments, and biologics is consistent with the current guidelines for the treatment of psoriasis.[6,16] Although the concept of moderate psoriasis is defined by the AAD as a disease affecting ≥5% to <10% of BSA,[6] the use of this concept is still limited in guidelines context and among clinical trials. Similarly, many of the available clinical trials do not have predefined inclusion criteria limited to moderate psoriasis patients, rather than a range of severity, from mild to moderate or moderate to severe, in alignment with the FDA established regulations.[7,9,14,17-19]

This study has certain limitations that must be mentioned. As with any survey, there is a risk of response bias. Rating of knowledge and/or experience by oneself amid dermatologists may result in overestimation of genuine knowledge and even elevated self-reported utilization of resources of evidence. Another limitation is that prejudice in volunteerism may subsist as those who agreed to participate may acquire basically dissimilar knowledge and experience than those who did not participate.

Conclusion

There is a pervasive lack of consensus regarding the definition of moderate psoriasis, with reported wide ranges among the commonly used severity tools in psoriasis patients. There is a need for developing, validating, and implementing a clinically-oriented definition of moderate plaque psoriasis for improving clinical outcomes and treatments choice in this patients' group.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patients have given their consent for their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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