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ORIGINAL ARTICLE

Taiwanese Dermatological Association consensus statement on management of psoriasis

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ABSTRACT

Background: Effective management of psoriasis is a cause for much concern. In Taiwan, there is a lack of consensus on management strategies for psoriasis, especially the principles of drug prescribing in psoriatic patients.
Objectives: The Taiwanese Dermatological Association convened Expert Panel meetings three times between 2012 and 2015 to discuss the management strategies for treatment of psoriasis in order to fill the knowledge gap and provide a reference tool for Taiwanese dermatologists.
Results: This paper reports the final output from the three meetings, with the aim of aiding clinical decision making in terms of principles of prescribing, including dosing strategies, efficacy profiles, and safety concerns in connection with eight categories of antipsoriatic treatment: topical agents, phototherapy, nonbiologic conventional systemic agents, licensed biologic systemic agents, newly emerging therapies, combination therapy, transitional therapy, and traditional Chinese medicine.
Conclusion: The Expert Panel, comprising distinguished Taiwanese dermatologists, succeeded in developing a consensus about the management of psoriasis in Taiwanese patients. Unavailability of data in certain areas may suggest a possibility of new directions in research.

Introduction

Psoriasis is a chronic immune-mediated inflammatory disease characterized by abnormal differentiation and hyperproliferation of keratinocytes, which may vary in severity from mild localized plaques to generalized involvement covering nearly the whole body.[1] In 2003, a genetic profiling study revealed that psoriasis was strongly associated with HLA-Cw6 in Chinese patients.[2] According to two studies conducted based on the Taiwanese National Health Insurance database, the 1-year prevalence rates of psoriasis in Taiwan were estimated to be 0.19% and 0.235%, respectively.[3]

The Taiwanese National Health Insurance database has enabled research on a wide range of issues regarding the epidemiology of psoriasis. In Taiwan, male patients with psoriasis are put at a higher

Conflicts of interest: Dr. Tsen-Fang Tsai has conducted clinical trials or received consultation honorarium for Abbevie, Pfizer, Eli-Lilly, Boehringer Ingelheim GmbH, Leo Pharma, Merck Sharp & Dohme, Galderma, Celgene, Novartis, and Janssen-Cilag, and has received speaking fees from AbbVie, Janssen-Cilag, Leo Pharma, Novartis, and Pfizer. Dr. Yu-Huei Huang has been an advisor and invited speaker for AbbVie and Inc., Celgene, Janssen-Cilag, Eli Lilly, and Novartis. Prof Ching-Chi Chi has served as a consultant and received speaking fees for AbbVie, Janssen-Cilag, and Pfizer Inc. Dr. Chih-Hung Lee has conducted clinical trials for Janssen-Cilag and Roche; served as a consultant or received speaker fee for AbbVie Inc., Janssen-Cliag, Pfizer, and Novartis. Dr. Tak-Wah Wong has conducted clinical trials or received honorarium as a consultant or speaker for Janssen-Cilag, Novartis and Pfizer. All of the other authors declare no conflicts of interest.

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risk of developing sexual dysfunction, with a hazard ratio of 1.27 (95% confidence interval, 1.11–1.46; $p = 0.001$),[4] whereas in pregnant women with severe psoriasis, an increased risk of low birth weight infants has been found.[5] Patients with psoriasis are more likely to suffer from concomitant conditions including chronic diseases such as diabetes, hyperlipidemia, and hypertension,[6] and malignant tumors such as nonmelanoma skin cancer and lymphoma.[7] In addition, vitiligo bears significant relation to psoriasis.[8] Arthritis is found to be a potential determinant for incident vascular comorbidities in psoriatic patients.[9] Among diabetic patients, regular insulin use is associated with development of psoriasis, whereas frequent use of thiazolidinedione may be related to a modest reduction in psoriasis risk.[10]

The most frequently prescribed category of antipsoriatic medications was topical corticosteroids, and up to 98.4% of patients received such treatment.[6] Although no cure is available for psoriasis, many treatment options exist. These include topical agents, phototherapy, and systemic biologic and nonbiologic agents.

Treatment gaps exist in Taiwan in terms of patient expectations of antipsoriatic care in clinical practice. There are also discrepancies between dermatologists when approaching patients in the management of psoriasis. This may have resulted in dermatologists being hesitant about providing the optimal treatment options. In the absence of any local literature that clearly explains the criteria for drug selection, it therefore becomes necessary for experts to come together to discuss the development of clear and definitive local management strategies for psoriasis.

In view of the abovementioned situation, The Taiwanese Dermatological Association set up an Expert Panel, and held consensus meetings three times on, respectively, June 30, 2012, December 22, 2013, and April 12, 2015, to review literature and clinical practice guidelines, in order to reach agreement among Taiwanese dermatologists regarding psoriasis management toward a standardized treatment protocol in Taiwan, with a focus on principles of prescribing, including dosing strategies and safety concerns.

Methods

To maximize the number of delegates, invitations were extended to all board-certified dermatologists in Taiwan who showed interest in the treatment of psoriasis. They convened to discuss the local management strategies for psoriasis. It was advised that a balance should be achieved between literature evidence and real-life clinical practice.

Six senior dermatologists were invited to present relevant data during each consensus meeting. The topics and discussion points were developed based on premeeting brainstorming among the presenters. To determine the degree of consensus, panel members were requested to vote by using a 1–9 numeric rating scale, with a higher score indicating greater level of approval for each given item. An item was deemed to be agreed, if the votes scoring 7–9 points accounted for $\geq$ 75% of the total votes cast, and highly agreed if this figure reached $\geq$90%. In the event that the original version of an item was not approved—i.e., the ratings between 7 and 9 accounted for < 75% of all the votes—amendments to that item were made following which the item was put to the vote once again. Voting on the amended items proceeded on a yes/no basis, with an approval rating of > 50% required for the next round of voting. An amended item, if approved, was then voted upon again using the 1–9 scale, with the same rule that the ratings of 7–9 should account for $\geq$ 75% of the votes. However, in case of a < 75% result, or when the votes against the amendment accounted for $\geq$ 50% in the first place, changes to the given item would be made for the second time. In this way, each item was passed either in its original form or in a certain amended form. A maximum of two amendments were allowed to reach the consensus.

The finalized consensus statements were categorized and tabulated according to general management of psoriasis, and eight categories of antipsoriatic medications: topical agents, phototherapy, nonbiologic systemic agents, licensed biologic systemic agents, newly emerging therapies, combination therapy, transitional therapy, and traditional Chinese medicine.

Results

The consensus statements on general management of psoriasis and treatment options, including topical agents, phototherapy, nonbiologic systemic agents, licensed biologic systemic agents, newly emerging therapies, combination therapy, transitional therapy, and traditional Chinese medicine are summarized in Tables 1–10, respectively. The voting results are given in brackets after each statement. For example, "16 out of 19, 84.2%" means that out of 19 panel members who voted, 16 (84.2%) have graded the statement from 7 to 9. We may also add a symbol of R1 or R2 to the brackets, denoting the number of amendments made to the item discussed before consensus has been achieved. R1 represents one round of amendment, and R2 two rounds.

The consensus statements on general management of psoriasis are shown in Tables 1 and 2, on topical agents in Table 3, on phototherapy in Table 4, on nonbiologic systemic agents in Table 5, on licensed biologic systemic agents in Table 6, on emerging therapy for psoriasis in Table 7, on combination therapy in Table 8, on transitional therapy in Table 9 and on traditional Chinese medicine in Table 10.

Discussion

General management

Most panel members concurred with the classification of psoriasis as set out in Table 1. More members (11 vs. 10) favored including nail lesions as one of the seven types. Most panel members did not

Table 1 Consensus statements on general management of psoriasis.

Main types of psoriasis[1]	Plaque, guttate, inverse, pustular (generalized & localized), erythrodermic, psoriatic arthritis (PsA), & psoriatic nail lesions (19/21, 90.5%; R1)
Measurement tools to assess level of severity[11]	PASI (psoriasis area severity index), percentage of body surface area (BSA), physician's global assessment (PGA), & quality of life (DLQI) (17/19, 89.5%; R1)
Classification of severity	Psoriasis can be classed as mild & moderate to severe (20/24, 83.3%)
How to define mild & moderate to severe psoriasis	Mild psoriasis can be defined as a percentage of BSA <10, or a PASI score <10, & a DLQI score <10, whereas moderate to severe psoriasis defined as BSA $\geq$ 10, or a PASI $\geq$10, or a DLQI$\geq$10. DLQI (dermatology life quality index) can be used to assess DLQI (21/22, 95.5%; R1)
How to determine treatment failure or success in moderate to severe psoriasis[11]	• ΔPASI <50: modify treatment regimen • ΔPASI $\geq$50 & <75, DLQI>5: modify treatment regimen • ΔPASI $\geq$50 & <75, DLQI$\leq$5: continue treatment regimen • ΔPASI $\geq$75: continue treatment regimen (23/25, 92%)
Assessment of nail lesions[45]	Currently, mNAPSI (modified nail psoriasis severity index) is a better assessment tool than NAPSI (18/24, 75%); mNAPSI is shown in Table 2.