HOPE

Humectant **O**cclusive **P**rotective **E**mollient

NEWSLETTER

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Think Moisturizer
Think Ajanta Dermatology

Glycerin, Ceramide, Butter based moisturiser

AQUASOFT

Cream/Lotion/Max Cream/Max Lotion/S Bar/CV

Facial moisturiser

Aquasoft FC

60 / 100 g Cream

Aquaxyl Uvinul A Plus, Uvinul T 150,
Tinosorb S, Vitamin E

Urea based moisturiser

Aqurea HF | 20 | 10

Urea 40% Urea 20% Urea 10%

Ceramide & Colloidal Oat meal based moisturiser

Biosilk

Ceramide 1,3,6-II, Oat Com, Pentavitin, Stimulex-AS complex, Sodium Hyaluronate

Lotion/Cream

Oil based moisturiser

Prusoft

Sunflower Seed Oil 10.0%, Jojoba Oil 4.0%, Sodium Pyrrolidone Carboxylic Acid 2.5%, Sodium Chloride 0.5%

Cream

Ultra moisturising complex

1st Time in India

SORILAST®

Cream

Urea 12%, Salicylic acid 0.5%, Lactic acid 6.81%, Avena Sativa 0.10%, HACE 200 0.10%, Witch Hazel extract 1%, Biophilic H-MB 1%

HOPE
Humectant Occlusive Protective Emollient
NEWSLETTER
ISSUE 4

Think Moisturizer
Think Ajanta Dermatology

DOCTOR'S CORNER

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Ceramides and psoriasis

The epidermal barrier, which mainly refers to the stratum corneum (SC), creates a first-line defense against myriad potentially harmful invaders, diminishes transepidermal water loss (TEWL), and plays an essential role in maintaining skin homeostasis. Epidermal ceramides account for approximately 50% of total epidermal lipids by weight. Along with free fatty acid and cholesterol, ceramides constitute a hydrophilic extracellular lipid matrix, which is indispensable for permeability barrier function. In addition, ceramides also act as an active second messenger, regulate keratinocyte proliferation and differentiation, enhance proinflammatory cytokines production, and modulate immune responses. An abnormal ceramide expression defects extracellular lipid organization, disturbs epidermal self-renewal, exacerbates skin immune response, and actively participates in the progression of several inflammatory dermatoses, exemplifying psoriasis, and atopic dermatitis.[1]

Ceramide alteration in the SC and psoriasis

Although it was once considered that total ceramide level was not altered in psoriasis epidermis, recent studies with improved measurement methods and larger and more strictly controlled sample size have shown that significantly decreased total ceramides are inversely correlated with the Psoriasis Area Severity Index (PASI) score. Very long-chain (VLC) ceramides are increased in psoriatic lesions, while ultra-long-chain (ULC) ceramides are significantly decreased. This bias towards shorter ceramides contributes to hexagonal lipid organization and phase separation in extracellular lipid membranes. Non-hydroxy-fatty acid [N] sphingosine [S] ceramide (Cer[NS]) is elevated in psoriatic lesions, whereas phytosphingosine-carrying ceramides (phytoCer) and acylated ceramides (acylCer), are both reduced in psoriatic lesions and correlate with increased TEWL and inferior water retention capacity. PhytoCer enhances SC barrier structure by forming strong hydrogen bonds and highly thermostable domains in the extracellular lipid matrix. Thus, decreased phytoCer and acylCer, which are critical for epidermal lipid lamellae structure and keratinocyte differentiation, act as a causal role in permeability barrier dysfunction and hyperproliferation in psoriasis.[1]

Ceramides in the treatment of psoriasis

Conventional treatments for psoriasis include topical treatment, phototherapy, and systemic treatment, which have different degrees of therapeutic efficacy and adverse reactions. Despite the good response to biological agents, relapse is inevitable after the withdrawal of therapy. Improvement of epidermal function with topical emollients can mitigate and/or prevent the relapse of psoriasis. Therefore, long-term skin care could be an effective and economical way to prolong the therapeutic effects of topical or systemic treatments and delay relapse.[2]

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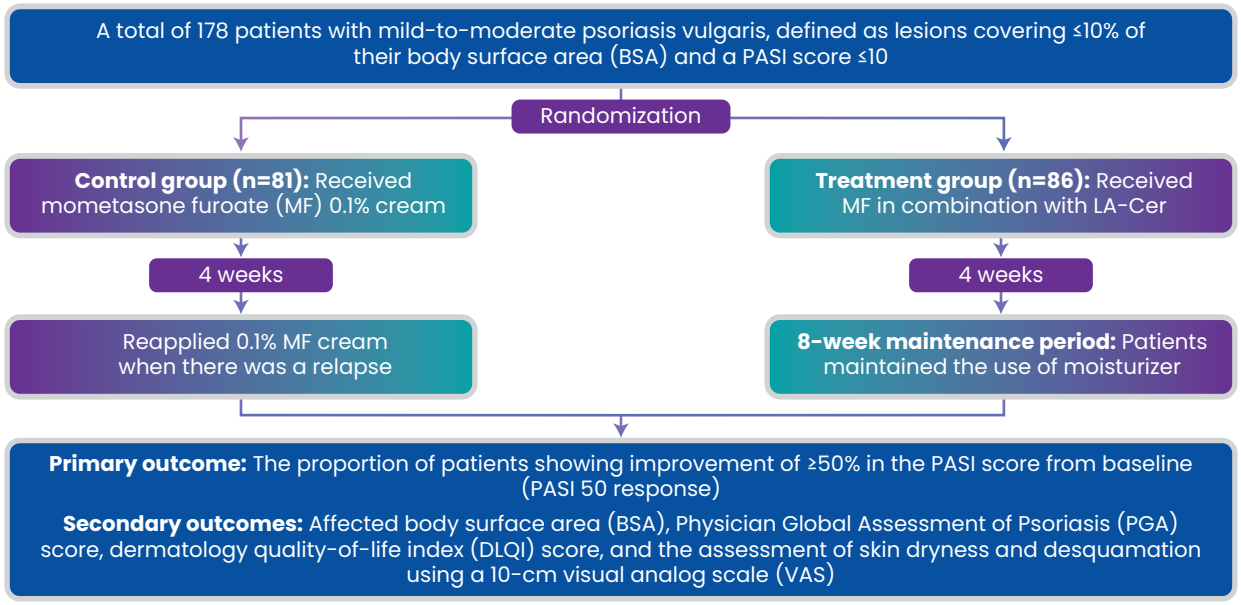
Applying ceramides holds therapeutic promise in psoriasis.[1] Ceramides play an essential role in structuring and maintaining the permeability barrier function of the skin. Besides their structural role in the SC, they also serve as intracellular signaling molecules mediating several biological processes such as proliferation, differentiation, apoptosis, and immune responses.[2] Maintaining epidermal homeostasis may possess therapeutic promises for dermatoses with systemic inflammation, such as psoriasis. A recent study among 106 psoriasis vulgaris patients implicated that topical application of linoleic acid-ceramide moisturizer is effective for both treatment and prevention of psoriasis.[1]

Linoleic acid-ceramide-containing moisturizer: A promising agent to prevent and treat psoriasis[2]

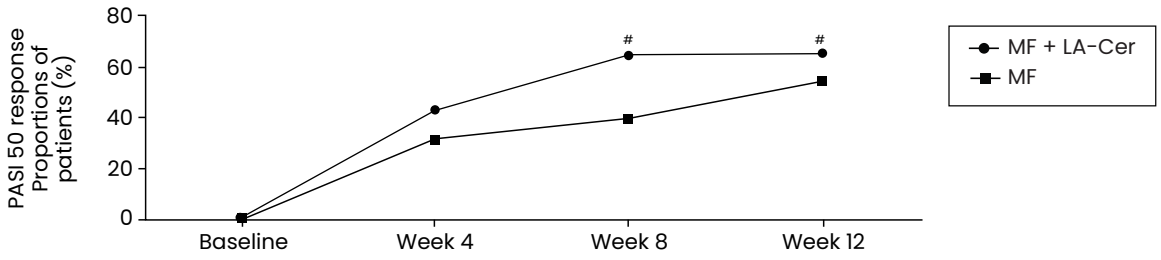
Li, *et al.,* conducted a multicenter, randomized, controlled trial to evaluate the efficacy and safety of a linoleic acid-ceramide-containing moisturizer (LA-Cer) for mild-to-moderate psoriasis vulgaris.



Clinical highlights

- PASI 50 response revealed the superiority of LA-Cer-MF with lower relapse rates at week 8. The proportion of patients achieving PASI 50 response signifying treatment efficacy at week 8 was 65.06% in the LA-Cer-MF group and 40% in the control group (Figure 1; both $p<0.05$).

Figure 1. The observed clinical response rate was shown as the percentage of patients achieving PASI 50



PASI: Psoriasis Area and Severity Index MF: Mometasone furoate; LA-Cer: Linoleic acid-ceramide-containing moisturizer.
#Represent the significance differences ($p<0.05$) between two groups.

- The use of the LA-Cer-containing moisturizer as maintenance therapy resulted in a continuous improvement in the clinical state in terms of body surface area, PASI, investigators' assessment of skin dryness and desquamation, and Physician Global Assessment of Psoriasis (PGA) score, and in the patients' quality-of-life (Figure 2).
- Trial medications were well-tolerated, and no serious adverse events were observed during the trial.

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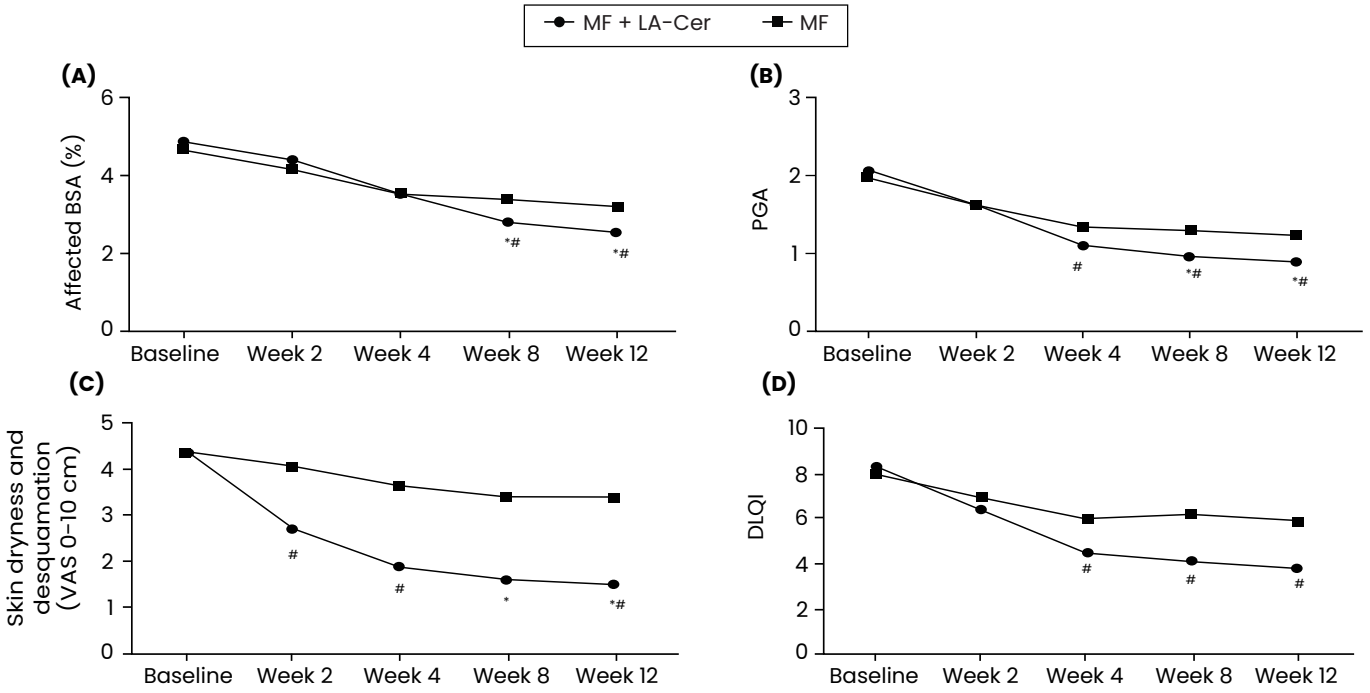
Figure 2. Comparison of clinical assessment between patients treated with or without LA-Cer moisturizer. Graphs A-D represent BSA, PGA, VAS dryness and desquamation and DLQI, respectively



LA-Cer: Linoleic acid-ceramide-containing moisturizer; BSA: Body surface area; PGA: Physician Global Assessment of Psoriasis; DLQI: Dermatology quality-of-life index; VAS: Visual analog scale. *Represent the significance differences ($p<0.05$) compared with Week 4; #Represent the significance differences ($p<0.05$) between two groups.

LA-Cer-containing moisturizer is a promising agent to prevent and treat psoriasis as it enhances the therapeutic effect induced by topical glucocorticoids and delays relapse.

References: 1. Li Q, Fang H, Dang E, *et al.* The role of ceramides in skin homeostasis and inflammatory skin diseases. J Dermatol Sci. 2020;97(1):2–8. **2.** Li X, Yang Q, Zheng J, *et al.* Efficacy and safety of a topical moisturizer containing linoleic acid and ceramide for mild-to-moderate psoriasis vulgaris: A multicenter randomized controlled trial. Dermatol Ther. 2020;33(6):e14263.

GUIDELINE UPDATE

Moderate-to-severe Psoriasis in Older Adults: Recommendations on Management from the Psoriasis Working Group of the Spanish Academy of Dermatology and Venereology (AEDV)

Introduction

A Delphi exercise was carried out with members of the AEDV Psoriasis Group. They developed a consensus statement that discusses 17 recommendations for managing treatment for moderate-to-severe psoriasis in patients older than 65 years (Table 1). The recommendations were proposed by a committee of 6 dermatologists who reviewed the literature. Fifty-one members of the AEDV Psoriasis Group. Then applied the Delphi process in 2 rounds to reach consensus on which principles to adopt. The recommendations can help to improve management, outcomes, and prognosis for older adults with moderate-to-severe psoriasis.

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Table 1. Recommendations agreed by consensus

Quality-of-life assessment	**Recommendation 1:** Develop HRQoL questionnaires specifically tailored to elderly patients with moderate-to-severe plaque psoriasis.
	Recommendation 2: Assess the HRQoL of people living with elderly patients who have moderate-to-severe plaque psoriasis.
Supplementary education	**Recommendation 3:** Provide patients with supplementary education concerning aspects of the disease-specific to older patients on a regular basis during follow-up (for example, patient support programs, visual educational materials, nurse visits, etc.).
Vaccination	**Recommendation 4:** Consider routine vaccination against herpes zoster in elderly patients with moderate-to-severe plaque psoriasis.
Evidence generation	**Recommendation 5:** Promote research and studies of real-world clinical practice that include older patients with moderate-to-severe psoriasis.
Treatment	**Recommendation 6:** Prioritize the simplification of treatment regimens when choosing a therapy.
	Recommendation 7: Long-term single-drug topical therapies should not be considered a first-line treatment option, especially in elderly patients with physical limitations who have no one to assist them in the application of the treatment.
	Recommendation 8: Older patients should generally be prescribed lower doses of conventional systemic treatment than those used in the younger population, and clinical and laboratory monitoring should be more frequent.
	Recommendation 9: Treatment with methotrexate should be started at low doses (5–7.5 mg) and increased gradually while closely monitoring tolerance, efficacy, and toxicity. Methotrexate is not recommended in patients taking non-steroidal anti-inflammatory drugs, diuretics, isoniazid, or a number of other medications, including penicillins, sulfonamides, antiepileptics, colchicine, dipyridamole, ethanol, sulfonylureas, and trimethoprim–sulfamethoxazole.
	Recommendation 10: In older patients, acitretin should generally be administered at lower doses than those indicated for younger patients, particularly at the start of treatment.
	Recommendation 11: Treatment with ciclosporin is not recommended for the treatment of moderate-to-severe psoriasis in elderly patients.
	Recommendation 12: As an isolated factor, age should not be considered a limitation when considering biologic therapy for the management of psoriasis.
	Recommendation 13: Biologic agents are, on the whole, more effective and better-tolerated than conventional systemic treatments.
	Recommendation 14: Due to the convenience of their dosing regimens, drugs targeting IL-12/23p40 and IL-23p19) are a good option in both the first and subsequent lines of treatment.
	Recommendation 15: When a case of psoriasis has proved refractory to several therapies (conventional systemic drugs or biologics), IL-17 and IL-23p19 inhibitors should be considered as a safe and effective treatment option.
	Recommendation 16: Use other biologic agents rather than TNF-α inhibitors in patients who have demyelinating disease, heart failure, latent tuberculosis infection in the absence of chemoprophylaxis, hepatitis B virus infection, lupus erythematosus or other autoimmune diseases. When considering the use of TNF-α inhibitors in this subpopulation, the patient's cardiac function must first be assessed clinically.
	Recommendation 17: When patients achieve remission, physicians should try to optimize the biologic drug regimen (decreasing doses or increasing intervals) with respect to the regimen specified in the Summary of Product Characteristics.

HRQoL: Health-related quality-of-life; IL: Interleukin; PUVA: Psoralen and ultraviolet A; TNF: Tumor necrosis factor.

Reference: Mataix J, García L, Belinchón I, *et al.* [Translated article] Moderate to severe psoriasis in older adults: Recommendations on management from the Psoriasis Working Group of the Spanish Academy of Dermatology and Venereology (AEDV). Actas Dermosifiliogr. 2023;114(9):T802-T811.

CONFERENCE UPDATE

Altered peripheral blood mRNA expression of tight junction proteins in psoriasis

Tight junctions are the cell-cell adhesion proteins that regulate paracellular permeability. Psoriasis is associated with chronic tight junction proteins (TJPs) in the epidermis that have been described in psoriasis. Tight junctions seal the intercellular space between keratinocytes and consist of transmembrane proteins such as claudins, occludin, and junctional adhesion molecules (JAMs). Psoriasis has increasingly been known as a systemic inflammatory condition.

Objective: To determine the alterations of messenger ribonucleic acid (mRNA) expression of some of the TJPs in the peripheral blood cells.

Study type: Case-control study

Patients: 15 patients with psoriasis vulgaris; 10 healthy subjects

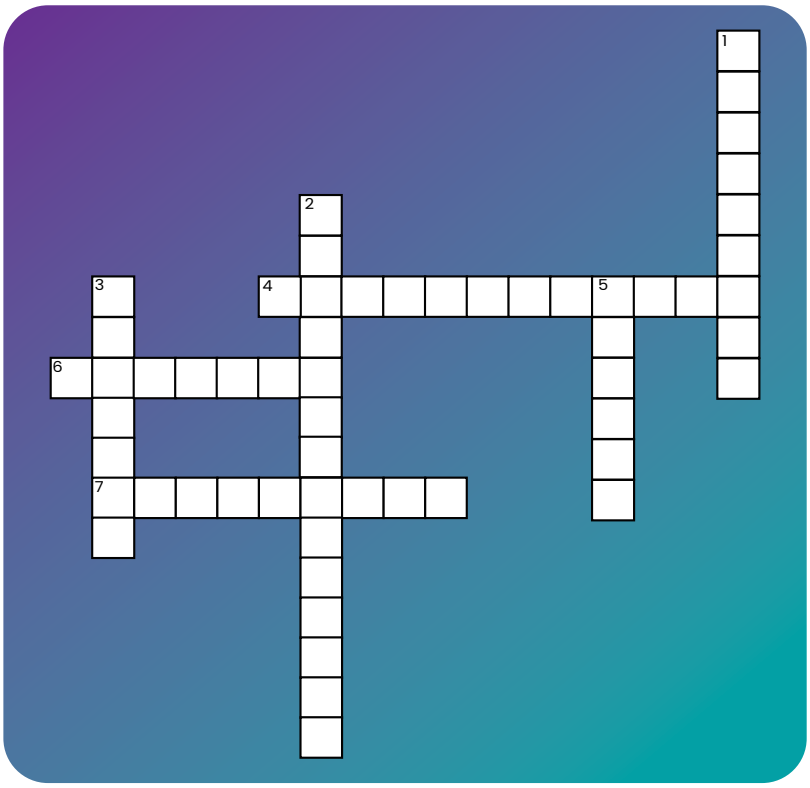
Clinical parameters evaluated: Peripheral blood mRNA expression of TJP 1, TJP 2 and Claudin 5 using real-time polymerase chain reaction. Fold change ratio was compared between the patients and healthy subjects.

Results: The mRNA expression of TJP 1, TJP 2 and Claudin 5 in psoriasis patients were reduced as compared to that in normal subjects with 1.5 to 2 fold changes.

Tight junction strands serve as a physical barrier to prevent solutes and water from passing freely through the paracellular space between epithelial sheets. Alterations in the expression of TJPs may contribute to the barrier dysfunction. TJPs are also expressed in endothelia and myelinated cells, and hence may contribute in the pathogenesis of systemic manifestations.

Reference: Shah SR. Altered peripheral blood mRNA expression of tight junction proteins in the psoriasis. Available at: https://www.wcd2023singapore-abs.org/documents/abstract-driven/psoriasis/altered-peripheral-blood-mrna-expression-20752.pdf. Accessed on October 11, 2023.

CROSSWORD & QUIZ



ACROSS

4. Ceramides are a type of _____found in the skin.
6. Ceramides help to maintain the skin's _____ function, preventing moisture loss.
7. Psoriasis is an autoimmune disorder that affects the _____ (layer of the skin).

DOWN

1. _____ are essential lipid molecules that play a crucial role in maintaining the skin's barrier function and are often reduced in psoriatic skin.
2. _____ is the term for the thickening of the skin's outer layer seen in psoriasis.
3. Psoriasis causes a buildup of skin cells on the skin's surface, leading to the formation of _____.
5. Psoriasis is often associated with an overactive _____response.

Answers: Across: 4. Sphingolipid; 6. Barrier; 7. Epidermis
Down: 1. Ceramides; 2. Hyperkeratosis; 3. Plaques; 5. Immune

1. What happens to skin cells in a person with psoriasis?

A. Skin cells pile up on the surface of the skin before they are mature
B. Mature skin cells cannot make their way to the surface of the skin
C. Skin cells die before becoming mature
D. B and C

2. Which among the following may occur with psoriasis?

A. Hives
B. Gingivitis
C. Conjunctivitis
D. Arthritis

3. Itching is a common symptom of psoriasis (and other skin disorders). Which of these can help relieve the itching?

A. Apply hot packs
B. Spend brief periods of time in the sun
C. Use a skin moisturizer
D. B and C

4. What can make psoriasis worse?

A. Beta-blocker medicines
B. Stress
C. Dry climate
D. All of the above

Answers: 1. A; 2. D; 3. D; 4. D