



Case Study

AYURVEDIC MANAGEMENT OF POLYMORPHOUS LIGHT ERUPTION (PMLE) IN A PEDIATRIC PATIENT

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ABSTRACT

Polymorphous Light Eruption (PMLE) is the most common immunologically mediated photodermatosis resulting from abnormal cutaneous hypersensitivity to ultraviolet radiation. The disease commonly manifests with recurrent pruritic papules, erythematous plaques, a burning sensation, and photosensitivity following sun exposure. Ayurveda offers a holistic approach by correcting underlying digestive disturbances, *Dosha* imbalance, and systemic susceptibility responsible for recurrent photosensitivity reactions. **Objective:** To evaluate the clinical effectiveness of a gut-oriented Ayurvedic treatment protocol in a pediatric patient suffering from chronic Polymorphous Light Eruption associated with digestive dysfunction. **Materials and Methods:** A 7-year-old female child presented with recurrent sun allergy since the age of five years, associated with chronic digestive disturbances and constipation since childhood. The patient was managed using a personalized Ayurvedic protocol comprising *Aahar Amrutham Ras*, *Anthram Mitram Gulika*, Skin Detox Drops, *Shishu Laxoherb*, *Changeri Swaras*, external applications, dietary modifications, and lifestyle regulation. Clinical progress was assessed through serial follow-ups over approximately ten months. **Results:** Progressive reduction in photosensitivity symptoms was observed during follow-up. Significant improvement in sun allergy was reported within the initial months of treatment. By the final follow-up, PMLE symptoms had substantially subsided with sustained relief, improved digestive function, reduced constipation, and marked improvement in overall skin health. **Conclusion:** This case demonstrates that Ayurvedic management based on *Agnideepana*, *Ama Pachana*, *Pitta-Shamana*, *Rakta-Prasadana*, and gut-skin axis correction may provide significant clinical benefit in pediatric PMLE. Larger clinical studies are warranted to validate these observations.

INTRODUCTION

Polymorphous Light Eruption (PMLE) is a recurrent inflammatory photodermatosis caused by abnormal delayed hypersensitivity reactions to ultraviolet radiation. It is characterized by recurrent episodes of pruritic papules, vesicles, plaques, erythematous eruptions, and burning sensations occurring after sun exposure. PMLE affects both adults

and children and significantly impacts quality of life due to avoidance of outdoor activities and persistent fear of sunlight exposure. [1-3]

The exact pathogenesis of PMLE remains incompletely understood. However, current evidence suggests that ultraviolet radiation induces photo-altered skin antigens that trigger an exaggerated immune response in genetically susceptible individuals. This immune dysregulation results in activation of inflammatory pathways involving T lymphocytes, cytokines, and cutaneous immune cells, leading to characteristic photosensitive eruptions. [4-7] Conventional management primarily focuses on avoidance of sunlight, broad-spectrum sunscreens,

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antihistamines, and topical corticosteroids. Although symptomatic relief may be achieved, recurrence is common, especially during periods of increased sun exposure.^[8-10]

Ayurvedic Perspective^[11-13]

Although Polymorphous Light Eruption (PMLE) is not described as a separate disease in classical Ayurvedic texts, its clinical presentation can be understood through the concepts of *Pitta Dushti*, *Rakta Dushti*, *Agnimandya*, *Ama* formation, and *Twak Vikara*. The disease manifests predominantly after exposure to sunlight, resulting in erythema, itching, a burning sensation, inflammatory skin eruptions, and recurrent hypersensitivity reactions. These features indicate the involvement of aggravated *Pitta Dosha* and vitiated *Rakta Dhatu*, which together constitute the principal pathogenic factors responsible for photosensitive skin disorders.

According to Ayurveda, the skin (*Twak*) is an *Upadhatu* of *Mamsa Dhatu* and maintains an intimate relationship with *Rakta Dhatu*. Any disturbance in *Rakta* directly affects the integrity, colour, texture, and immune responsiveness of the skin. Excessive exposure to sunlight (*Atapa Sevana*), intake of *Pitta*-provoking foods, irregular dietary habits, and impaired digestion contribute to the aggravation of *Pitta Dosha*. Simultaneously, weakened digestive fire (*Agnimandya*) leads to the formation of *Ama*, an incompletely metabolized toxic intermediate that circulates through the body and obstructs various channels (*Strotorodha*). The accumulated *Ama* combines with aggravated *Pitta* and vitiated *Rakta*, producing chronic inflammatory responses within the skin. As a consequence, the skin becomes excessively reactive to environmental triggers such as sunlight, heat, and seasonal variations. This pathological state can be understood as a form of *Doshika* hypersensitivity where the threshold for inflammatory response becomes significantly lowered. Repeated exposure to sunlight further aggravates *Pitta* and *Rakta*, perpetuating the cycle of inflammation and recurrence.

From a systemic perspective, PMLE is not merely a localized skin disorder but reflects dysfunction of the digestive-immune axis. Ayurveda recognizes that impaired *Agni* is the root cause of many chronic diseases. When digestion remains compromised for prolonged periods, persistent *Ama* formation results in altered tissue metabolism, immune dysregulation, and increased susceptibility to inflammatory conditions. This concept closely resembles modern understanding of the gut-skin axis, wherein gastrointestinal dysfunction contributes to systemic immune activation and chronic skin disease.

Thus, PMLE may be interpreted as a *Pitta-Rakta* predominant *Twak Vikara* with underlying *Agnimandya* and *Ama* involvement. Management based on *Deepana*, *Pachana*, *Pitta-Shamana*, *Rakta-Prasadana*, and *Rasayana* principles provides an Ayurvedic approach aimed at treating the root pathology rather than merely suppressing cutaneous manifestations.

Role of the Gut-Skin Axis in PMLE

Recent advances in immunology have highlighted the importance of the gut-skin axis in the pathogenesis of chronic inflammatory and allergic skin disorders. The gastrointestinal tract is not only responsible for digestion and nutrient absorption but also serves as the largest immunological organ of the body. Approximately 70% of the body's immune cells are associated with gut-associated lymphoid tissue (GALT), where continuous interaction occurs between dietary antigens, intestinal microbiota, and immune cells.^[14-16]

In healthy individuals, the intestinal barrier functions as a selective interface that permits absorption of nutrients while preventing translocation of harmful antigens and inflammatory molecules. However, impaired digestion, intestinal dysbiosis, chronic constipation, and altered gut permeability may disturb immune homeostasis. This results in excessive activation of inflammatory pathways, increased production of pro-inflammatory cytokines, and heightened immune responsiveness to environmental triggers.^[14,17-18]

Emerging evidence suggests that disruption of gut immune regulation contributes to several inflammatory skin disorders, including atopic dermatitis, psoriasis, urticaria, and photosensitivity-related conditions. In susceptible individuals, ultraviolet radiation may induce photo-modified antigens within the skin, triggering abnormal immune responses. When systemic inflammation and immune dysregulation are already present due to gastrointestinal dysfunction, the cutaneous response to sunlight may become exaggerated, resulting in recurrent photosensitive eruptions characteristic of Polymorphous Light Eruption (PMLE).^[14-18]

The present case demonstrated a long-standing history of indigestion and severe constipation preceding the onset of PMLE. This observation supports the concept that correction of digestive dysfunction may play an important role in reducing systemic inflammatory burden and improving cutaneous tolerance to sunlight. Therefore, the therapeutic approach adopted in this case was directed not only toward symptomatic management of photosensitivity but also toward restoration of

digestive health, elimination of *Ama*, regulation of bowel function, and normalization of the gut-skin immune axis.

Case Study

The present case describes a pediatric patient suffering from chronic sun allergy since early childhood, associated with longstanding digestive disturbances. The recurrent nature of symptoms and their relationship with sunlight exposure were suggestive of Polymorphous Light Eruption. The patient was managed using a personalized Ayurvedic protocol aimed at correcting digestive dysfunction, reducing systemic inflammation, and improving tolerance to sunlight exposure.

Patient Information

Age/Gender: 7 years / Female

Registration Date: 12 August 2025

Duration of Illness: Since the age of 5

Associated History: Digestive disturbances and constipation since childhood require repeated supportive measures for bowel evacuation.

Chief Complaints

- Recurrent sun allergy after exposure to sunlight
- Photosensitive skin eruptions
- Burning and irritation of exposed skin
- Chronic indigestion
- Persistent constipation since childhood
- Associated hypopigmented facial lesions

History of Present Illness

According to parental history, white patches initially appeared over the body at approximately four years of age. Subsequently, the child developed recurrent photosensitivity reactions following sun exposure at approximately five years of age. Symptoms repeatedly worsened after outdoor exposure and interfered with routine activities.

Alongside dermatological manifestations, the child suffered from chronic indigestion and severe constipation since childhood. Bowel movements were frequently difficult and occasionally required supportive interventions.

Diagnosis

Modern Diagnosis

Polymorphous Light Eruption (PMLE)

Ayurvedic Diagnosis

- *Pitta Pradhana Twak Vikara*
- *Rakta Dushti*
- *Agnimandya*
- *Ama Avastha*
- *Koshtagata Vata* is associated with *Vibandha*

Aggravating Factors

Environmental Factors

- Direct sunlight exposure
- Heat exposure
- Outdoor activities during the daytime

Dietary Factors

- Spicy food
- Sour food
- Processed food
- Packaged food
- Food additives
- Fermented foods

Associated Systemic Factors

- Chronic indigestion
- Constipation
- Poor digestive function

MATERIALS AND METHODS

The patient was managed at IAFA using a personalized gut-oriented Ayurvedic treatment protocol designed to treat the underlying digestive dysfunction, photosensitivity, recurrent inflammatory skin manifestations, and chronic constipation. The treatment strategy was based on the principles of *Agnideepana*, *Ama Pachana*, *Pitta-Shamana*, *Rakta-Prasadana*, *Koshta Shodhana*, and *Twak-Prasadana*. Management aimed not only at symptomatic control of photosensitivity but also at correction of the gut-skin axis dysfunction believed to contribute to chronic inflammatory skin responses.

Treatment was initiated on 12 August 2025 and continued through serial follow-ups until June 2026.

Clinical Assessment and Therapeutic Objectives

A comprehensive clinical assessment was performed at baseline, including:

- Detailed history of photosensitivity and sun exposure.
- Evaluation of skin manifestations and their recurrence pattern.
- Assessment of digestive function and bowel habits.
- Identification of dietary aggravating factors.
- Evaluation of associated constitutional factors.

Based on the clinical findings, the therapeutic objectives were:

- Correction of *Agnimandya* (impaired digestive fire)
- Elimination of *Ama* (metabolic toxins).
- *Pitta-Shamana* and *Rakta-Prasadana*.
- Regulation of bowel movements.
- Reduction of photosensitivity reactions.
- Improvement of skin tolerance to sunlight.
- Prevention of recurrence
- Restoration of digestive and immune homeostasis.

Parents were advised to maintain strict lifestyle recommendations throughout the treatment photoprotection measures and adhere to dietary and period.

Ayurvedic Treatment Protocol

Table 1: Ayurvedic treatment protocol with dosage, route, and therapeutic action

Formulation	Dose	Route	Therapeutic Action
Aahar Amrutham Ras	7.5ml twice daily (later increased to 15ml twice daily)	Oral	<i>Agnideepana</i> , gut repair, immune modulation
Anthram Mitram Gulika	1 tablet once daily after meals	Oral	<i>Rasayana</i> , mucosal healing, immune regulation
Skin Detox Drops	6.5 ml twice daily before meals	Oral	<i>Rakta Shodhana</i> , detoxification
Shishu Laxoherb	6.5 ml at bedtime	Oral	Relieves constipation and improves bowel function.
Changeri Swaras	5 ml twice daily	Oral	Digestive correction and <i>Pitta</i> balancing.
IAFA 333 Oil	Twice daily application	External	Skin nourishment and anti-inflammatory action.
AF-7 Bar	During bathing	External	Skin cleansing and maintenance

Phase-wise Ayurvedic Management

Phase I: Acute Photosensitivity Control Phase (12 August 2025 – 22 September 2025)

Formulations

- Aahar Amrutham Ras
- Anthram Mitram Gulika
- Skin Detox Drops
- Shishu Laxoherb
- IAFA 333 Oil

Therapeutic Goal

To reduce photosensitivity reactions, correct digestive dysfunction, eliminate Ama, improve bowel regularity, and control inflammatory skin manifestations.

Phase II: Consolidation Phase (September 2025 – November 2025)

Formulations

- Continued Phase I medicines
- Addition of Changeri Swaras

Therapeutic Goal:

To stabilize Agni, reduce residual skin lesions, improve tissue metabolism, and prevent recurrence of photosensitivity episodes.

Phase III: Maintenance and Immune Stabilization Phase (November 2025-June 2026)

Formulations:

- Aahar Amrutham Ras
- Anthram Mitram Gulika
- Skin Detox Drops
- Changeri Swaras
- Shishu Laxoherb

AF-7 Bar

Therapeutic Goal

To maintain remission, improve skin resilience against sunlight exposure, support long-term digestive health, and prevent relapse.

Dietary and Lifestyle Recommendations

The patient was advised to follow a *Pitta*-pacifying, easily digestible diet throughout the treatment period. Dietary interventions were aimed at reducing systemic inflammation, supporting digestive function, and minimizing photosensitivity triggers.

Recommendation

- Old rice, millets, buckwheat, ragi, and gluten-free oats
- Green leafy vegetables
- Pomegranate and seasonal fruits
- Lauki juice with Tulsi and Pudina
- Fennel water
- Wheat grass juice
- Light vegetarian meals
- Adequate hydration
- Regular intake of lukewarm water
- Early dinner and regular meal timings

Advised Avoidance

- Excessive sunlight exposure
- Fermented foods
- Packaged and processed foods
- Artificial additives and preservatives
- Excessively spicy, sour, and oily foods
- Excess dairy products
- High-fat food
- Refined sugar-rich food

- Daytime sleeping and irregular eating habits

Protective Measures

- Avoidance of peak sunlight hours
- Use of protective clothing and umbrellas
- Application of topical protective preparations before sun exposure

RESULTS

The patient was followed regularly from August 2025 to June 2026. Clinical improvement was assessed based on the frequency and severity of photosensitivity reactions, intensity of skin manifestations following sun exposure,

gastrointestinal symptoms, bowel regularity, and overall functional well-being.

Clinical Severity Assessment

For descriptive clinical evaluation, a Composite Clinical Severity Score (CCSS) was utilized retrospectively based on documented symptoms. The score ranged from 0–12, incorporating:

- Photosensitivity reactions (0–4)
- Cutaneous manifestations (0–4)
- Gastrointestinal dysfunction (0–4)

Higher scores indicated greater disease severity.

Table 2: Longitudinal Clinical Outcome Assessment

Follow-up Date	Photosensitivity Severity	Skin Manifestations	Gastrointestinal Status	Composite Clinical Severity Score (0–12)
12 Aug 2025	Severe recurrent PMLE episodes after sun exposure	Facial hypopigmented lesions and recurrent inflammatory eruptions	Severe indigestion and chronic constipation	11
22 Sep 2025	Marked reduction in photosensitivity reactions	Approximately 50–60% improvement in lesions	Digestion improved, constipation reduced	7
17 Nov 2025	Continued reduction in sun-induced reactions	Only a single facial lesion remained	Stable digestive function	5
02 Feb 2026	PMLE symptoms are largely controlled	Residual lesions improving	Regular bowel movements	4
20 Mar 2026	Significant improvement maintained	Approximately 90% recovery	Normal digestion and bowel function	2
10 Jun 2026	Sustained relief from PMLE symptoms	Recovery maintained without significant progression	Digestive health stable	1

Improvement in PMLE Symptoms

The most notable therapeutic response was observed in photosensitivity-related manifestations. During the initial consultation, the child experienced recurrent skin reactions following sunlight exposure, significantly affecting daily outdoor activities. Progressive improvement was observed throughout the treatment period.

Within the first six weeks of treatment, a substantial reduction in photosensitivity reactions was reported. By the second follow-up, episodes of sun-induced skin inflammation had markedly decreased. Subsequent follow-ups demonstrated sustained improvement with increased tolerance to sunlight exposure and absence of significant disease exacerbations.

By June 2026, PMLE symptoms remained well controlled, with no major photosensitivity flare reported during routine follow-up.

Gastrointestinal Outcomes

The patient had a long history of indigestion and severe constipation since early childhood. Progressive improvement in digestive function was observed during treatment. Bowel movements became regular, abdominal discomfort reduced, and overall digestive health improved substantially.

The improvement in gastrointestinal symptoms paralleled the reduction in photosensitivity manifestations, supporting the therapeutic basis of correcting digestive dysfunction as part of PMLE management.

Overall Clinical Outcome

After follow-up, the patient demonstrated:

- Significant reduction in recurrent photosensitivity reactions.
- Marked improvement in sunlight tolerance.
- Sustained control of PMLE symptoms.

- Approximately 90% improvement in associated skin manifestations.
- Restoration of normal digestive function.
- Resolution of chronic constipation.
- Improved quality of life and daily activity performance.
- No adverse drug reactions or treatment-related complications.

Summary of Therapeutic Response

The overall clinical course demonstrated a progressive and sustained reduction in PMLE severity over approximately ten months of Ayurvedic management. The greatest improvement was observed in photosensitivity reactions and digestive health, suggesting a potential role of gut-oriented Ayurvedic intervention in the long-term management of PMLE.

DISCUSSION

Polymorphous Light Eruption (PMLE) is the most common immunologically mediated photodermatosis characterized by recurrent photosensitive skin eruptions following exposure to ultraviolet radiation. Although its exact etiology remains incompletely understood, current evidence suggests that PMLE develops due to an abnormal immune response against photo-induced cutaneous antigens.^[17,18] Ultraviolet radiation alters endogenous skin molecules, resulting in the formation of neo-antigens that activate cellular immune pathways. Activated T lymphocytes, inflammatory cytokines, and antigen-presenting cells subsequently initiate an inflammatory cascade, producing erythema, pruritus, papular eruptions, and recurrent photosensitivity reactions. The chronic and relapsing nature of PMLE indicates that the disorder involves systemic immune dysregulation rather than a purely localized skin abnormality.^[19-21]

Recent advances in dermatological immunology have highlighted the importance of the gut-skin axis in chronic inflammatory skin diseases.^[22] The gastrointestinal tract serves as a major immunological organ where continuous interaction occurs between dietary antigens, intestinal microbiota, and immune cells. Disturbances in digestive function, intestinal microbial balance, and mucosal immunity can alter systemic immune responses and promote chronic inflammation. Such alterations may increase susceptibility to exaggerated cutaneous reactions following environmental triggers, including ultraviolet radiation. Consequently, PMLE may be viewed not only as a disorder of abnormal photosensitivity but also as a manifestation of broader immune and inflammatory dysregulation.^[23-26]

The present case is particularly significant because the child has a long-standing history of

indigestion and severe constipation from early childhood, in addition to recurrent sun allergies. The coexistence of chronic gastrointestinal dysfunction with PMLE suggests the possibility of an underlying gut-mediated inflammatory process contributing to disease persistence. The improvement in digestive symptoms occurred in parallel to improvement in photosensitivity manifestations throughout the treatment period, indicating a potential relationship between gastrointestinal health and cutaneous immune responsiveness.

From an Ayurvedic perspective, the clinical presentation of PMLE can be understood as a *Pitta-Rakta* predominant *Twak Vikara* associated with *Agnimandya* and *Ama* formation. Excessive exposure to sunlight (*Atapa Sevana*) is a well-recognized factor responsible for the aggravation of *Pitta Dosha*. When aggravated *Pitta* interacts with *Rakta Dhātu*, inflammatory changes develop within the skin, producing manifestations such as a burning sensation, erythema, itching, and photosensitivity. Simultaneously, impaired digestive fire leads to the generation of *Ama*, which circulates through *Rasavaha* and *Raktavaha Strotas* and contributes to systemic inflammatory responses. Chronic constipation further impairs the normal elimination of metabolic waste products, facilitating continued accumulation of *Ama* and perpetuation of *Dosha* imbalance.^[11-13]

Based on this understanding, the therapeutic strategy in the present case was directed toward correction of the underlying pathological process rather than symptomatic suppression alone. The treatment protocol focused on improving digestive function, eliminating *Ama*, pacifying aggravated *Pitta*, purifying vitiated *Rakta*, restoring bowel regularity, and supporting normal skin physiology. *Aahar Amrutham Ras* and *Changeri Swaras* were administered to enhance digestive and metabolic function, while *Anthram Mitram Gulika* was incorporated for its *Rasayana* and tissue-supportive properties. Skin Detox Drops assisted in *Pitta-Shamana* and *Rakta-Prasadana*, whereas *Shishu Laxoherb* helped correct chronic constipation and promote regular elimination. External applications provided local protection and supported restoration of skin integrity.

A noteworthy observation in this case was the progressive reduction in photosensitivity reactions over the course of treatment. Significant relief in sun allergy symptoms was reported during early follow-up, and sustained improvement was maintained throughout the observation period. The patient also demonstrated marked improvement in digestive health and bowel regularity, accompanied by substantial recovery of associated skin manifestations.

No adverse events were reported during treatment or follow-up.

The clinical outcome observed in this case supports the Ayurvedic concept that chronic skin disorders may arise secondary to disturbances in digestion, metabolism, and systemic tissue homeostasis. The parallel improvement in gastrointestinal dysfunction and photosensitivity manifestations suggests that correction of *Agnimandya* and *Ama* may have contributed to the observed therapeutic response. Furthermore, the sustained improvement achieved during long-term follow-up indicates that a gut-oriented Ayurvedic approach may

provide benefits beyond temporary symptomatic relief and may help reduce recurrence in chronic photosensitivity disorders.^[27-30]

However, the findings of this report should be interpreted within the limitations of a single-case observation. Objective assessment tools specific to PMLE and laboratory markers of immune activity were not evaluated. Therefore, larger observational studies and controlled clinical trials are required to further investigate the role of Ayurvedic interventions in PMLE and to validate the proposed gut-skin axis mechanism in photosensitivity disorders.

Pharmacological Correlation of Ayurvedic Formulations Used in PMLE Management

Formulation	Major Ingredients	Ayurvedic Properties (Karma)	Probable Role in PMLE Management
Aahar Amrutham Ras	<i>Euphorbia thymifolia</i> , <i>Vitex negundo</i> , <i>Aegle marmelos</i> , <i>Phyllanthus niruri</i> , <i>Boerhavia diffusa</i>	<i>Deepana</i> , <i>Pachana</i> , <i>Rasayana</i> , <i>Amapachana</i>	Improves digestive function, reduces systemic inflammation, supports immune regulation and gut-skin axis balance. ^[31-37]
Anthram Mitram Gulika	<i>Praval Panchamrit</i> , <i>Mukta Pishti</i> , <i>Giloy Satva</i> , <i>Godanti Bhasma</i> , <i>Suvarna Parpati</i>	<i>Rasayana</i> , <i>Balya</i> , <i>Strotoshodhana</i>	Supports tissue healing, promotes immune homeostasis, and helps reduce chronic inflammatory responses. ^[38-41]
Skin Detox Drops	Polyherbal formulation	<i>Rakta Shodhana</i> , <i>Pitta Shamana</i> , <i>Twak Prasadana</i>	Assists in the purification of <i>Rakta</i> , reduces inflammatory skin manifestations, and supports healthy skin physiology.
Shishu Laxoherb	<i>Rheum emodi</i> , <i>Cassia fistula</i> , <i>Foeniculum vulgare</i> , <i>Glycyrrhiza glabra</i>	<i>Mridu Rechana</i> , <i>Anulomana</i> , <i>Agnivardhana</i>	Relieves constipation, improves bowel regularity, and facilitates elimination of accumulated metabolic waste. ^[42-45]
Changeri Swaras	<i>Oxalis corniculata</i> ^[46]	<i>Deepana</i> , <i>Pachana</i> , <i>Grahi</i> , <i>Pitta Shamaka</i>	Supports digestion, improves nutrient assimilation, and helps maintain <i>Pitta</i> balance.
IAFA 333 Oil	Herbal oil formulation	<i>Kandughna</i> , <i>Twak Prasadana</i> , <i>Varnya</i>	Provides local skin protection, reduces irritation, and supports restoration of skin barrier function.
AF-7 Bar	Herbal cleansing formulation	<i>Twak Shodhana</i>	Maintains skin hygiene and supports a healthy skin environment.

The therapeutic approach adopted in this case was personalized to treat the disease at multiple levels, including digestive dysfunction, *Ama* accumulation, *Pitta-Rakta* vitiation, impaired elimination, and recurrent photosensitivity. Rather than focusing solely on symptomatic suppression of skin manifestations, the intervention targeted the underlying systemic factors believed to contribute to disease persistence. The sustained reduction in photosensitivity reactions, improvement in digestive function, normalization of bowel habits, and absence of disease aggravation

during follow-up suggest a favourable clinical response to this comprehensive Ayurvedic strategy. These findings support the potential role of gut-oriented Ayurvedic management in chronic photosensitivity disorders such as PMLE and need further clinical investigation through larger studies.

CONCLUSION

The present case demonstrates that Polymorphous Light Eruption (PMLE) may be viewed not only as a localized photosensitivity disorder but also as a condition associated with underlying

disturbances in digestion, metabolism, and systemic immune regulation. In this pediatric patient, recurrent sun allergy was accompanied by chronic indigestion and constipation, suggesting the possible involvement of the gut-skin axis in disease pathogenesis.

The Ayurvedic treatment approach focused on correction of *Agnimandya*, elimination of *Ama*, pacification of *Pitta Dosha*, purification of *Rakta Dhātu*, and restoration of normal bowel function rather than symptomatic suppression alone. Progressive reduction in photosensitivity reactions, improvement in digestive health, normalization of bowel habits, and sustained clinical improvement during long-term follow-up were observed without any reported adverse effects.

The outcome of this case suggests that a gut-oriented Ayurvedic approach may provide a safe and potentially effective strategy for the management of PMLE and other recurrent photosensitivity disorders. While the findings are limited to a single case report, they highlight the need for larger clinical studies to further explore the role of Ayurvedic interventions and the gut-skin axis in the management of chronic photodermatoses.

REFERENCES

1. Sathe NC, Ramsey ML. Polymorphic Light Eruption. 2026 Feb 15. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2026 Jan-. PMID: 28613636.
2. Karthikeyan K, Aishwarya M. Polymorphous Light Eruption- An Indian Scenario. Indian Dermatol Online J. 2021 Mar 2; 12(2): 211-219. doi: 10.4103/idoj.IDOJ_434_20. PMID: 33959517; PMCID: PMC8088173.
3. Lew R, Jacob J. Polymorphous light eruption: a common skin disease uncommonly recognized in the Hispanic population. Oxf Med Case Reports. 2014 Nov 18; 2014(8): 145-7. doi: 10.1093/omcr/omu055. PMID: 25988060; PMCID: PMC4369994.
4. Sardana K, Sharath S, Kathirvelu AP. Immunopathogenesis of polymorphic light eruption, role of cytokines, effector and regulatory T-cells, and its therapeutic implications. Indian J Dermatol Venereol Leprol. 2025 Dec 16:1-7. doi: 10.25259/IJDVL_1191_2025. Epub ahead of print. PMID: 41655098.
5. Kadurina M, Kazandjieva J, Bocheva G. Immunopathogenesis and management of polymorphic light eruption. Dermatol Ther. 2021 Nov; 34(6): e15167. doi: 10.1111/dth.15167. Epub 2021 Oct 27. PMID: 34676645.
6. Moncada B, González-Amaro R, Baranda ML, Loredó C, Urbina R. Immunopathology of polymorphous light eruption. T lymphocytes in blood and skin. J Am Acad Dermatol. 1984 Jun; 10(6): 970-3. doi: 10.1016/s0190-9622(84)80316-3. PMID: 6234329.
7. Gruber-Wackernagel A, Byrne SN, Wolf P. Polymorphous light eruption: clinical aspects and pathogenesis. Dermatol Clin. 2014 Jul; 32(3): 315-34, viii. doi: 10.1016/j.det.2014.03.012. PMID: 24891054.
8. Schwarz, Thomas. (2011). Photodermatoses: Diagnosis and Treatment. Deutsches Ärzteblatt international. 108. 135-41. 10.3238/arztebl.2011.0135.
9. Ling TC, Dawe RS, Gardener E, Rhodes LE. Interventions for polymorphic light eruption. Cochrane Database Syst Rev. 2017 Oct 9; 2017(10): CD005069. doi: 10.1002/14651858.CD005069.pub3.
10. Gschnait F, Schwarz T, Ladich I. Treatment of polymorphous light eruption. Arch Dermatol Res. 1983; 275(6): 379-82. doi: 10.1007/BF00417337. PMID: 6660910.
11. Agnivesha, Charaka, Dridhabala. In: Charaka Samhita, ed. Vaidya Jadavaji Trikamji Acharya, editor. Varanasi: Chaukhamba Sanskrit Sansthan; 2009.
12. Sushruta. In: Sushruta Samhita, Sutra Sthana, ed. Vaidya Jadavaji Trikamji Acharya, editor. Varanasi: Choukhambha Orientalia; 2005.
13. Vagbhata. In: Ashtanga Hrudaya, 9th ed. Anna Moreshwar Kunte, Krishnashastri Navarre, Harishastri, editors. Varanasi: Choukhambha Orientalia; 2005.
14. Jimenez-Sanchez M, Celiberto LS, Yang H, Sham HP, Vallance BA. The gut-skin axis: a bi-directional, microbiota-driven relationship with therapeutic potential. Gut Microbes. 2025 Dec; 17(1): 2473524. doi: 10.1080/19490976.2025.2473524. Epub 2025 Mar 6. PMID: 40050613; PMCID: PMC11901370.
15. De Pessemier B, Grine L, Debaere M, Maes A, Paetzold B, Callewaert C. Gut-Skin Axis: Current Knowledge of the Interrelationship between Microbial Dysbiosis and Skin Conditions. Microorganisms. 2021 Feb 11; 9(2): 353. doi: 10.3390/microorganisms9020353. PMID: 33670115; PMCID: PMC7916842.
16. Singla N, Singla K, Attauabi M, Aggarwal D. Gut-skin axis: Emerging insights for gastroenterologists-a narrative review. World J Gastrointest Pathophysiol. 2025 Sep 22; 16(3): 108952. doi: 10.4291/wjgp.v16.i3.108952. PMID: 41024986; PMCID: PMC12476645.
17. Ferrara F, Valacchi G. Role of microbiota in the GUT-SKIN AXIS responses to outdoor stressors.

- Free Radic Biol Med. 2024 Nov 20; 225: 894-909. doi: 10.1016/j.freeradbiomed.2024.11.003. Epub 2024 Nov 4. PMID: 39505118.
18. Contevelle LC, Vicente ACP. Skin exposure to sunlight: a factor modulating the human gut microbiome composition. *Gut Microbes*. 2020 Sep 2; 11(5): 1135-1138. doi: 10.1080/19490976.2020.1745044. Epub 2020 Apr 27. PMID: 32339065; PMCID: PMC7524261.
19. Bosman ES, Albert AY, Lui H, Dutz JP, Vallance BA. Skin Exposure to Narrow Band Ultraviolet (UVB) Light Modulates the Human Intestinal Microbiome. *Front Microbiol*. 2019 Oct 24; 10: 2410. doi: 10.3389/fmicb.2019.02410. PMID: 31708890; PMCID: PMC6821880.
20. Ansary TM, Hossain MR, Kamiya K, Komine M, Ohtsuki M. Inflammatory Molecules Associated with Ultraviolet Radiation-Mediated Skin Aging. *Int J Mol Sci*. 2021 Apr 12; 22(8): 3974. doi: 10.3390/ijms22083974. PMID: 33921444; PMCID: PMC8069861.
21. Paz, Mariela & Cela, Eliana & Friedrich, Adrian & Weill, Federico & Leoni, J. & Gonzalez Maglio, Daniel. (2014). Ultraviolet radiation effects on skin cells and the immune system.
22. Guo Z, Yang J, Zang R, Yang Y, Wang Q, Xu C. The brain-gut-skin axis in inflammatory and disfiguring skin diseases: mechanistic insights, clinical correlations, and therapeutic strategies. *Front Immunol*. 2026 Feb 27; 17: 1737303. doi: 10.3389/fimmu.2026.1737303. PMID: 41836406; PMCID: PMC12982022.
23. Malgesini A, Marsiglia MD, Borghi E, Marzano AV, Nazzaro G. The Emerging Role of Gut Microbiota in Inflammatory Skin Diseases: A Systematic Review. *Exp Dermatol*. 2026 Mar; 35(3): e70234. doi: 10.1111/exd.70234. PMID: 41795861; PMCID: PMC12967704.
24. Widhiati S, Purnomosari D, Wibawa T, Soebono H. The role of gut microbiome in inflammatory skin disorders: A systematic review. *Dermatol Reports*. 2021 Dec 28; 14(1): 9188. doi: 10.4081/dr.2022.9188. PMID: 35371420; PMCID: PMC8969879.
25. Amar Y, Niedermeier S, Silva R, Kublik S, Schlöter M, Biedermann T, Köberle M, Eberlein B. Skin microbiome dynamics in patients with polymorphic light eruption in response to ultraviolet radiation. *Br J Dermatol*. 2025 Mar 18; 192(4): 684-696. doi: 10.1093/bjd/ljae464. PMID: 39576029.
26. Jimenez-Sanchez M, Celiberto LS, Yang H, Sham HP, Vallance BA. The gut-skin axis: a bi-directional, microbiota-driven relationship with therapeutic potential. *Gut Microbes*. 2025 Dec; 17(1): 2473524. doi: 10.1080/19490976.2025.2473524. Epub 2025 Mar 6. PMID: 40050613; PMCID: PMC11901370.
27. K, Agna & Balkrishna, Nandedkar. (2025). Clinical Evaluation of Ama in the Pathogenesis of Skin Disorders. *International Journal of Advanced Research*. 13. 1566-1569. 10.21474/IJAR01/21832.
28. Zhang XE, Zheng P, Ye SZ, Ma X, Liu E, Pang YB, He QY, Zhang YX, Li WQ, Zeng JH, Guo J. Microbiome: Role in Inflammatory Skin Diseases. *J Inflamm Res*. 2024 Feb 15; 17: 1057-1082. doi: 10.2147/JIR.S441100. PMID: 38375021; PMCID: PMC10876011.
29. Sadowsky RL, Sulejmani P, Lio PA. Atopic Dermatitis: Beyond the Skin and Into the Gut. *J Clin Med*. 2023 Aug 25; 12(17): 5534. doi: 10.3390/jcm12175534. PMID: 37685600; PMCID: PMC10487925.
30. Ellis SR, Nguyen M, Vaughn AR, Notay M, Burney WA, Sandhu S, Sivamani RK. The Skin and Gut Microbiome and Its Role in Common Dermatologic Conditions. *Microorganisms*. 2019 Nov 11; 7(11): 550. doi: 10.3390/microorganisms7110550. PMID: 31717915; PMCID: PMC6920876.
31. Mali PY, Panchal SS. A review on phytopharmacological potentials of *Euphorbia thymifolia* L. *Anc Sci Life*. 2013 Jan; 32(3): 165-72. doi: 10.4103/0257-7941.123001. PMID: 24501446; PMCID: PMC3902538.
32. Kemboi D, Peter X, Langat M, Tembu J. A Review of the Ethnomedicinal Uses, Biological Activities, and Triterpenoids of *Euphorbia* Species. *Molecules*. 2020 Sep 3; 25(17): 4019. doi: 10.3390/molecules25174019. PMID: 32899130; PMCID: PMC7504773.
33. Kulkarni RR, Virkar AD, D'Mello P. Antioxidant and Anti-inflammatory Activity of *Vitex negundo*. *Indian J Pharm Sci*. 2008 Nov; 70(6): 838-40. doi: 10.4103/0250-474X.49140. PMID: 21369459; PMCID: PMC3040892.
34. Kamal N, Mio Asni NS, Rozlan INA, Mohd Azmi MAH, Mazlan NW, Mediani A, Baharum SN, Latip J, Assaw S, Edrada-Ebel RA. Traditional Medicinal Uses, Phytochemistry, Biological Properties, and Health Applications of *Vitex* sp. *Plants (Basel)*. 2022 Jul 26; 11(15): 1944. doi: 10.3390/plants11151944. PMID: 35893648; PMCID: PMC9370779.
35. Monika S, Thirumal M, Kumar PR. Phytochemical and biological review of *Aegle marmelos* Linn. *Future Sci OA*. 2023 Mar 23; 9(3): FSO849. doi: 10.2144/fsoa-2022-0068. PMID: 37026028; PMCID: PMC10072075.

36. Lee NY, Khoo WK, Adnan MA, Mahalingam TP, Fernandez AR, Jeevaratnam K. The pharmacological potential of *Phyllanthus niruri*. J Pharm Pharmacol. 2016 Aug; 68(8): 953-69. doi: 10.1111/jphp.12565. Epub 2016 Jun 10. PMID: 27283048.
37. Patel N, Mishra R, Rajput D, Gupta A. A comprehensive review of the phytochemistry, pharmacology, pharmacokinetics, and green nanotechnological significance of *Boerhavia diffusa* Linn. Fitoterapia. 2025 Jul; 184: 106599. doi: 10.1016/j.fitote.2025.106599. Epub 2025 May 5. PMID: 40334820.
38. Patel SS, Shah PV. Evaluation of the anti-inflammatory potential of the multidrug herbomineral formulation in male Wistar rats against rheumatoid arthritis. J Ayurveda Integr Med. 2013 Apr; 4(2): 86-93. doi: 10.4103/0975-9476.113869. Erratum in: J Ayurveda Integr Med. 2023 May-Jun;14(3):100716. doi: 10.1016/j.jaim.2023.100716. PMID: 23930040; PMCID: PMC3737452.
39. Mishra, Amrita & Mishra, Ak & Tiwari, Om & Jha, Sh. (2014). In-house preparation and characterization of an Ayurvedic bhasma: Praval bhasma. Journal of integrative medicine. 12. 52-8. doi: 10.1016/S2095-4964(14)60005-4.
40. Verma DK, G K, Kumar P, El-Shazly M. Unmasking the Many Faces of Giloy (*Tinospora cordifolia* L.): A Fresh Look on its Phytochemical and Medicinal Properties. Curr Pharm Des. 2021; 27(22): 2571-2581. doi: 10.2174/1381612826666200625111530. PMID: 32586250.
41. Sharma, K & Arun, Sharma, & Yadav, Yadevendra. (2020). Updated Overview on Godanti Bhasma (An Ayurvedic Formulation of Gypsum). 07. 16-26.
42. Zargar BA, Masoodi MH, Ahmed B, Ganie SA. Phytoconstituents and therapeutic uses of *Rheum emodi* wall. ex Meissn. Food Chem. 2011 Oct 1; 128(3): 585-9. doi: 10.1016/j.foodchem.2011.03.083. Epub 2011 Mar 24. PMCID: PMC7116966.
43. Badgujar SB, Patel VV, Bandivdekar AH. *Foeniculum vulgare* Mill: a review of its botany, phytochemistry, pharmacology, contemporary application, and toxicology. Biomed Res Int. 2014; 2014: 842674. doi: 10.1155/2014/842674. Epub 2014 Aug 3. PMID: 25162032; PMCID: PMC4137549.
44. Murugan SK, Bethapudi B, Raghunandhakumar S, Purusothaman D, Nithyanantham M, Mundkinajeddu D, Talkad MS. A flavonoid-rich standardized extract of *Glycyrrhiza glabra* protects intestinal epithelial barrier function and regulates the tight-junction protein expression. BMC Complement Med Ther. 2022 Feb 7; 22(1): 38. doi: 10.1186/s12906-021-03500-1. PMID: 35130890; PMCID: PMC8822647.
45. Mozaffarpur SA, Naseri M, Esmaeilidooki MR, Kamalinejad M, Bijani A. The effect of cassia fistula emulsion on pediatric functional constipation in comparison with mineral oil: a randomized, clinical trial. Daru. 2012 Dec 3; 20(1): 83. doi: 10.1186/2008-2231-20-83. PMID: 23351337; PMCID: PMC3556012.
46. Sakat SS, Tupe P, Juvekar A. Gastroprotective Effect of *Oxalis corniculata* (Whole Plant) on Experimentally Induced Gastric Ulceration in Wistar Rats. Indian J Pharm Sci. 2012 Jan; 74(1): 48-53. doi: 10.4103/0250-474X.102543. PMID: 23204622; PMCID: PMC3507345.

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