

Do Polyherbal Formulations Offer a Superior Alternative to Single-Herb Therapies in Skin Disorders?

Kapil Kumar Sharma,

Department of Quality Assurance,
Lloyd School of Pharmacy,
Greater Noida, Uttar Pradesh, India.

Correspondence:

Kapil Kumar Sharma,
Department of Quality Assurance,
Lloyd School of Pharmacy,
Greater Noida, Uttar Pradesh, India.
E-id:kapil_shaz@gmail.com

How to cite this article: Sharma K.
Do Polyherbal Formulations Offer a
Superior Alternative to Single-Herb
Therapies in Skin Disorders ? Innov
Pharm Planet (IP-Planet)
2022;10(2):31-33.

Source of Support: Nil.

Conflicts of Interest: None declared.

Date of Submission: 06-04-2022

Date of Revision: 01-05-2022

Date of Acceptance: 15-05-2022

ABSTRACT:

Skin disorders, including eczema, psoriasis, and acne, impact a large global population, necessitating effective treatment options. Traditional medicine has long utilized herbal remedies, with single herbs like Aloe vera and Turmeric offering specific therapeutic benefits. However, growing interest in natural therapies has led to the exploration of polyherbal formulations—combinations of multiple herbs that work synergistically to provide comprehensive treatment. This review examines whether polyherbal formulations offer superior therapeutic benefits compared to single-herb therapies by analyzing their mechanisms of action, efficacy, and clinical applicability.

Polyherbal formulations leverage the combined effects of various herbs to target multiple biological pathways simultaneously, making them particularly useful for managing chronic skin disorders. They offer advantages such as synergistic effects, a multi-target approach, reduced risk of microbial resistance, and fewer side effects. However, challenges like standardization issues, regulatory barriers, and a lack of large-scale clinical trials hinder their widespread adoption.

Comparative studies suggest that polyherbal formulations outperform single-herb therapies in treating chronic and complex skin conditions. For instance, a combination of Neem, Turmeric, and Licorice has been shown to alleviate psoriasis symptoms more effectively than Turmeric alone. Similarly, polyherbal creams with Calendula, Chamomile, and St. John's Wort have demonstrated superior anti-inflammatory effects in eczema treatment.

While polyherbal formulations present a promising alternative for dermatological care, addressing regulatory and standardization challenges is crucial for their integration into mainstream medicine. Further research and clinical validation are necessary to establish their efficacy and long-term safety.

KEYWORDS: Polyherbal formulations, skin disorders, herbal medicine, eczema, psoriasis.

INTRODUCTION

Skin disorders, ranging from mild irritations to chronic conditions such as eczema, psoriasis, and acne, affect a significant portion of the population globally. Herbal remedies have long been used in traditional medicine to treat such conditions, with individual herbs like *Aloe vera* and *Turmeric* offering specific therapeutic properties.⁽¹⁾ However, the growing interest in natural therapies has led to the exploration of polyherbal formulations - a combination of several herbs that can act synergistically to provide a more holistic approach to treating skin disorders.⁽²⁾

The central question explored in this review is whether polyherbal formulations provide a superior therapeutic option compared to single-herb therapies.

While single herbs are known to target specific symptoms or aspects of skin disorders, polyherbal formulations offer a multitargeted approach by combining the therapeutic properties of different plants.⁽³⁾ This review evaluates the evidence supporting the use of polyherbal formulations and compares them with single-herb therapies, focusing on their mechanisms of action, efficacy, and clinical applicability.

Mechanisms of Action in Skin Disorders

Both single-herb and polyherbal therapies act through various mechanisms to improve skin health. Single herbs like *Aloe vera* are commonly known for their anti-inflammatory and moisturizing properties, making them suitable for treating burns and irritations.⁽⁴⁾ On the other hand, herbs like *Turmeric* possess antioxidant and antimicrobial effects, which are

Access this article online

Website: <https://innovationaljournals.com/index.php/ip>

e-ISSN: 2348-7275

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beneficial for treating acne and psoriasis. ⁽⁵⁾ However, these mechanisms may not suffice for chronic or multifactorial skin conditions.

Polyherbal formulations capitalize on the synergistic effects of combining multiple herbs with complementary actions. For instance, combining *Neem* with *Turmeric* not only targets inflammation but also addresses microbial infections common in acne and other inflammatory skin disorders. These combinations work on multiple biological pathways, making polyherbal formulations a potentially more effective option for managing chronic skin conditions. ⁽⁶⁾

Advantages of Polyherbal Formulations

1. Synergistic Effects: Polyherbal formulations benefit from the synergy between different herbs. For example, a combination of *Aloe vera* and *Gotu Kola* enhances collagen production and promotes wound healing better than either herb alone. This synergy allows polyherbal remedies to target a broader range of symptoms, offering more comprehensive care for conditions like psoriasis and eczema. ⁽⁷⁾

2. Multi-target Approach: Chronic skin conditions such as eczema and psoriasis are often caused by a combination of inflammation, oxidative stress, and immune dysregulation. Polyherbal formulations can address these multiple pathways simultaneously, making them more effective for the long-term management of skin conditions. ⁽⁸⁾

3. Reduced Risk of Resistance: In conditions where microbial infections play a role, such as acne or fungal infections, the use of multiple antimicrobial herbs in a polyherbal formulation reduces the risk of pathogens developing resistance, a common problem with single-ingredient treatments. ⁽⁹⁾

4. Fewer Side Effects: Combining multiple herbs in lower concentrations may reduce the likelihood of side effects compared to using a single herb in high doses. The balancing effect of multiple herbs can make polyherbal formulations a safer option for long-term use. ⁽⁷⁾

Challenges and Limitations of Polyherbal Formulations

Despite the promising benefits, several challenges limit the widespread use of polyherbal formulations in clinical practice:

1. Standardization Issues: One of the primary challenges of polyherbal formulations

is ensuring consistent quality and potency. The active ingredients of herbs can vary based on factors such as growing conditions and extraction methods, making it difficult to standardize polyherbal products. ⁽¹⁰⁾

2. Regulatory Barriers: Polyherbal formulations often fall under dietary supplements rather than pharmaceuticals, making regulatory approval a complex process. This results in inconsistent quality control across products. ⁽³⁾

3. Lack of Clinical Trials: Although traditional use supports the efficacy of many polyherbal formulations, rigorous clinical trials are needed to validate these treatments. Most studies focus on single herbs, and there is a paucity of large-scale trials for polyherbal therapies. ⁽³⁾

Comparative Effectiveness: Polyherbal vs. Single-Herb Therapies

In various studies, polyherbal formulations have demonstrated superior outcomes in treating chronic and complex skin conditions compared to single-herb therapies. For example, a formulation combining *Neem*, *Turmeric*, and *Licorice* has been shown to reduce psoriasis symptoms more effectively than *Turmeric* alone. ⁽⁶⁾ Similarly, polyherbal creams for eczema, combining *Calendula*, *Chamomile*, and *St. John's Wort*, have outperformed single-herb treatments in reducing inflammation and itching. ⁽¹¹⁾

While single-herb therapies can be effective for specific symptoms, polyherbal formulations provide multifaceted relief by targeting the underlying causes of the disorder. This broader therapeutic action makes polyherbal formulations particularly useful in chronic conditions like psoriasis and eczema, which require long-term management.

CONCLUSION

The evidence suggests that polyherbal formulations offer a promising alternative to single-herb therapies in the treatment of skin disorders. Their ability to target multiple pathways simultaneously, reduce side effects, and offer a synergistic therapeutic effect makes them a superior option for treating chronic and multifactorial conditions like eczema, psoriasis, and acne. However, challenges related to standardization and regulatory approval must be addressed to fully integrate polyherbal formulations into mainstream healthcare.

Future research, including clinical trials, will be essential in validating the efficacy and safety of these treatments and unlocking their full potential in dermatological care.

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