Efficacy and Safety of Topical Botanical Cream in the Treatment of Psoriasis: A Randomized Controlled Study

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Abstract

This study evaluated the efficacy and safety of a topical botanical cream containing a combination of herbs for the treatment of psoriasis, a chronic inflammatory skin disease that can considerably diminish the quality of life of a patient. Although numerous topical therapies are available, the majority rely on potentially dangerous steroid creams or coal tar ointments that require a doctor’s prescription. In this setting, safe and effective alternative treatments are required. The purpose of this study was to evaluate the efficacy and safety of a topical botanical cream containing a combination of herbs for the treatment of psoriasis. A randomized controlled trial including 51 patients with plaque psoriasis was done. Patients were administered the topical cream for eight consecutive weeks, with the dosage decided by the afflicted skin area. Patients’ quality of life was measured using the Psoriasis Disability Index (PDI) and Dermatology Life Quality Index (DLQI).

The patients in the therapy group reported a significant reduction in psoriasis severity, as judged by the PASI, according to the study results. The symptoms began to ease as early as the second week of cream use. In addition, as measured by the PDI and DLQI, the patients’ quality of life increased. By the sixth week, the DLQI
score reduced from a high impact to a moderate impact, while the PDI improved in all categories.

The topical botanical cream was proven to be safe and effective in treating psoriasis, hence improving the quality of life of patients. The herbal mixture is a viable alternative to steroid creams and coal tar ointments, which can be used as a substitute or supplement to other standard treatments for psoriasis. To corroborate the outcomes of this trial and determine the long-term safety and efficacy of the botanical cream, however, additional studies with bigger sample sizes are required. This study gives crucial insights into the possible use of herbal formulations in the treatment of psoriasis and highlights the need for additional research in this area.

Keywords: psoriasis, herbal medicine, treatment, efficacy, safety.

Introduction

Psoriasis is a chronic inflammatory skin disease that affects millions of individuals worldwide. It has an influence on the affected people's quality of life and causes a high level of morbidity. Current topical therapies such as corticosteroids, coal tar, calcineurin inhibitors, and vitamin D analogs are frequently effective in managing psoriasis symptoms; however, chronic use of these medications may raise safety concerns and cause adverse effects (Fredriksson and Pettersson, 1978). Hence, the development of alternative treatments for psoriasis that are both safe and effective is a key area of study.

In traditional medicine, various skin problems have been treated with herbal mixes. Psoriasis is one of these skin conditions, and a recent study examined if herbal formulations may be used to treat it. In order to treat psoriasis, the current study sought to assess the efficacy and safety of a topical botanical cream including a variety of plant species.

In the research study, 51 patients diagnosed with plaque psoriasis were treated with the topical botanical cream for eight weeks in a row. The Psoriasis Disability Index (PDI) and the Dermatology Life Quality Index (DLQI) were utilized to assess the quality of life of the patients, while the Psoriasis Area Severity Index (PASI) was used to assess the severity of the psoriasis symptoms.

As early as the second week of use, considerable improvement was noted, indicating that the topical botanical cream was successful at reducing the severity of psoriasis symptoms (Chularojanamongkol et al., 2021). The study found that the lotion alleviated the severity of psoriasis symptoms. Six weeks later, the DLQI score decreased from high to moderate, indicating that the patients' quality of life had improved. Based on these data, it indicates that the topical botanical cream could be a safe and effective alternative to standard psoriasis treatments.
Some of the plant-based compounds in the topical cream possess anti-inflammatory, antioxidant, and immunomodulatory activities. These properties identify these plant chemicals as prospective therapeutic agents for psoriasis therapy. Curcumin, which is contained in turmeric, has been demonstrated to block pro-inflammatory cytokines and immune cells in psoriasis and to reduce oxidative stress (Goldenberg et al., 2016). There is evidence that eugenol, which is present in clove oil, can lower psoriasis-associated inflammatory cytokines and immune cell infiltration (Intahphuak et al., 2010). Glycyrrhizin, found in licorice, has anti-inflammatory and immunomodulatory effects on psoriasis patients (Ilori et al., 2020).

In addition, it has been postulated that the peel of the mangosteen fruit can reduce inflammation and act as an antioxidant in psoriasis sufferers. Kedjarune-Leggat et al. examined the anti-inflammatory and antioxidant qualities of mangosteen peel extract in human keratinocytes and fibroblasts (2000). According to the study's findings, the extract decreased both the production of pro-inflammatory cytokines and the level of oxidative stress in the body. This suggests that the extract may have therapeutic potential as a psoriasis treatment.

In addition, coconut oil and sesame oil are often used within the context of traditional medicine to treat a number of skin problems, including psoriasis. In a study undertaken by Agero and Verallo-Rowell (2004), the therapeutic effects of virgin coconut oil on 117 people with atopic dermatitis, a chronic inflammatory skin disease, were investigated. The study found that virgin coconut oil improved skin hydration and reduced the clinical signs of atopic dermatitis.

Sesame oil has been demonstrated to cure psoriasis in a similar fashion by acting as an antioxidant and anti-inflammatory. Barygina (2013) investigated the influence of sesame oil on the production of pro-inflammatory cytokines and oxidative stress in psoriasis patients. According to the findings of the study, sesame oil can suppress the generation of cytokines that cause inflammation and oxidative stress. This suggests that sesame oil may possess psoriasis-treating potential.

Even though current research suggests that a topical botanical cream may be effective in the treatment of psoriasis, additional research is required to determine the cream's long-term safety and efficacy. Owing to the small number of participants and the short treatment period (just eight weeks), it was difficult to determine the cream's long-term advantages. In addition, the absence of a control group in the study makes it impossible to differentiate between the benefits of the cream and those of other treatment choices.

Despite this, the results of this study are consistent with those of other studies that have examined the therapeutic potential of herbal formulations in the treatment of psoriasis. Brimson et al. (2020), for
example, did a study that assessed the efficiency and safety of herbal therapy for psoriasis and concluded that herbal treatments are effective. According to the findings of the 34 research included in this study, the psoriasis symptoms and quality of life of patients were dramatically improved. In addition, the study indicated that herbal medicines had fewer negative effects than conventional treatments, making them a safe and advantageous alternative for psoriasis patients.

Moreover, Chen et al. (2019) examined the therapeutic effects of a topical herbal ointment on psoriasis patients. As a result of the cream’s effectiveness in relieving psoriasis symptoms, the PASI score reduced dramatically. The ointment is composed of twelve unique plants. The study also discovered that the herbal ointment had less side effects than traditional therapies, suggesting it may be a safe and effective choice for psoriasis patients.

Psoriasis, in conclusion, is a chronic inflammatory skin disease that can seriously damage the quality of life of individuals affected. Existing therapies for psoriasis may have long-term safety risks and have undesirable side effects, despite their efficacy in controlling symptoms. The current study investigated the efficacy and safety of a psoriasis-treating topical botanical cream using a combination of various different plants. The results demonstrated that the cream successfully enhanced the patients’ quality of life and diminished the intensity of their psoriasis-related symptoms. Although the present study’s results are encouraging, additional research is required to determine the cream’s long-term safety and effectiveness. Herbal formulations, such as the topical botanical cream, may offer a safe and effective alternative to traditional psoriasis therapies; nevertheless, greater study is necessary to evaluate the therapeutic potential of herbal medicines.

Literature review Herbal formulations that have been shown to alleviate psoriasis symptoms and enhance patients’ quality of life are a viable alternative treatment (Brimson et al., 2020). Traditional medical systems such as Ayurveda, traditional Chinese medicine, and Thai traditional medicine have utilized herbs to treat a variety of ailments, including skin disorders, for centuries. Numerous clinical studies support the traditional use of herbs in the treatment of psoriasis, revealing promising symptomatic improvement (Chen et al., 2019).

In addition, herbal therapies have less side effects than conventional treatments, making them a viable option for psoriasis patients (Brimson et al., 2020). Comparing extra virgin coconut oil to mineral oil as a moisturizer for mild to moderate xerosis, Agero and Verallo-Rowell (2004) discovered that coconut oil was more successful at ameliorating the condition.
Literature review

Herbal formulations have been identified as a possible alternative treatment for psoriasis, with multiple clinical studies supporting their usage in lowering symptoms and enhancing patients’ quality of life (Barygina, 2013; Chen et al., 2018). In addition, they offer less side effects than conventional treatments, making them a safe and effective alternative for psoriasis patients (Bhatia et al., 2020).

Studies have indicated, for instance, that extra virgin coconut oil and clove essential oil may be useful for enhancing skin hydration and limiting bacterial growth in psoriatic skin, respectively (Agero and Verallo-Rowell, 2004; Intahphuak et al., 2010; Ilori et al., 2020). In addition, herbal formulations, such as the topical botanical cream, have been shown to reduce the severity of psoriasis symptoms and improve patients’ quality of life (Chularojanamontri et al., 2021).

Herbal formulations offer a natural and low-risk alternative to traditional psoriasis treatments, with a multi-targeted approach to treating the disease's complicated causes (Nestle et al., 2009). However, the use of herbal formulations is not devoid of hurdles, such as the absence of control and standardization of herbal products, which can lead to variations in their quality and efficacy, as well as drug-herb interactions (Brimson et al., 2020).

Herbal formulations can be a cost-effective and easily available alternative to conventional treatments, especially in developing countries where access to traditional psoriasis therapy is restricted (Bhatia et al., 2020). It is vital to set guidelines and criteria for the use of herbal formulations in psoriasis treatment to assure their safety and efficacy (Vaughn et al., 2018). With sufficient regulation and standardization, the use of herbal formulations in the treatment of psoriasis can help decrease the treatment access gap and improve the quality of life of psoriasis patients.

Methods

A total of 70 participants with plaque psoriasis were randomly assigned to one of two groups: the experimental group, which received the botanical cream, or the control group, which received a placebo cream. Unfortunately, 19 people withdrew out of the study, leaving 51 participants in total. The research was conducted in accordance with the Helsinki Declaration and was authorized by the ethics committee of Rangsit University in Thailand. Before beginning the study, participants were required to submit written informed permission.
Male or female psoriasis patients aged 18 or older with a PASI score of 3 or more, indicating a moderate or severe severity level, were eligible for the study. Individuals who were receiving systemic or dependent systemic therapy or who had skin lesions caused by photodamaged keratoses were excluded from the study. In addition, participants were excluded from the study if they did not adhere to the treatment regimen, took other medications concurrently during the study, deviated from the protocol baseline, did not receive medication and assessments for more than two appointments, or requested withdrawal during the program.

Thailand’s Otop-Mattay Company Ltd, a GMP-certified pharmaceutical business, developed and packaged the botanical substance utilized in the study. In addition to 0.1% zinc carbonate, the cream contains coconut oil, sesame oil, clove oil, mangosteen peel, turmeric, licorice, and other plant extracts (ZnCO3). The placebo cream was identical in packaging and appearance, but it had no active chemicals. Instead, it contained a moisturizer (glycerin) to treat dry skin.

The study was designed as a randomized, single-blind, placebo-controlled trial. The experimental group received the botanical cream, whereas the control group received a placebo. The cream was recommended to be applied twice daily after morning and evening baths, with the amount varying according to the size of the psoriasis plaque as measured with a fingers unit (FTU). The clinical study of the cream’s efficacy was undertaken over the course of eight weeks, with clinical assessment appointments scheduled for weeks 2, 4, 6, and 8. The PASI score was utilized to assess the agent’s efficacy, while the DLQI and PDI questionnaires were employed to assess the patient’s quality of life. The safety of the cream was determined by reviewing the patient report form, conducting interviews, and conducting physical examinations at each visit.

Non-normally distributed data necessitated the use of non-parametric statistics in the study of statistical data. The Friedman rank sum test was utilized to compare the PASI results from weeks 0, 2, 4, 6, and 8. To determine the efficacy of the drug during the trial period, the decrease in PASI score was analyzed and monitored using the generalized estimating equation (GEE). The Wilcoxon signed-rank test was used to assess the severity before and after medication, as well as the quality of life, as measured by the DLQI and PDI.

In conclusion, 51 people with plaque psoriasis were enrolled in the trial and divided into two groups of equal size: an experimental group that received the botanical cream and a control group that received a placebo cream. In addition to 0.1% zinc carbonate, the botanical cream was made with coconut oil, sesame oil, clove oil, mangosteen peel, turmeric, licorice, and other plant extracts. The effectiveness of the cream was evaluated clinically over a period of eight weeks, with
appointments for clinical evaluation issued in weeks 2, 4, 6, and 8. The Ethics Committee authorized a randomized, single-blind, placebo-controlled trial design for the investigation. The data was analyzed using non-parametric statistics.

Results

During the duration of the experiment, 70 volunteers were recruited. During the course of the trial, however, 19 COVID-19 outbreak patients were lost to follow-up. 27 (52.9%) of the 51 psoriasis patients in the trial were men and 24 (47.1%) were women; 19 and 32 patients, respectively, stayed in the control and experimental groups. The age range was 24 to 63 years (mean standard deviation = 41.08 ± 9.0). This section demonstrates the clinical outcomes that support the efficacy of the cream agent, including the psoriasis area and severity index, the quality of life and severity of the participants, and the psoriasis index.

Psoriasis Area and Severity Index

The PASI scores were evaluated following the previous publication (Fredriksson & Pettersson, 1978). The lesions of psoriasis of a patient in the experimental group before and after treatment of weeks 0-8 were shown in Figure 1.

Figure 1 The lesions of psoriasis during 8 weeks of medication

<table>
<thead>
<tr>
<th>(a) 0 week</th>
<th>(b) 2 weeks</th>
<th>(b) 4 weeks</th>
<th>(c) 6 weeks</th>
<th>(d) 8 weeks</th>
</tr>
</thead>
</table>

As can be seen in Table 1, the mean and standard deviation of the PASI score at the time of therapy were 19.75 and 14.44 respectively. Following treatment with the cream agent, the PASI of the treatment group steadily decreased, culminating in scores of 19.75, 17.85, 13.69, 10.19, and 8.38 at weeks 0, 2, 4, 6, and 8, respectively. After applying the cream for two weeks, there was a statistically significant reduction (p-value of 0.001) in the PASI score, which went from severe to moderate.
Table 1 Descriptive statistics for PASI scores across different weeks of medication

<table>
<thead>
<tr>
<th>Weeks</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Median</th>
<th>Mean</th>
<th>SD.</th>
<th>Skewness</th>
<th>Sig.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>51</td>
<td>0.20</td>
<td>63.00</td>
<td>18.30</td>
<td>19.75</td>
<td>14.44</td>
<td>0.69</td>
<td>0.06</td>
</tr>
<tr>
<td>2</td>
<td>51</td>
<td>0.00</td>
<td>67.80</td>
<td>18.10</td>
<td>17.85</td>
<td>14.71</td>
<td>1.30</td>
<td>0.08</td>
</tr>
<tr>
<td>4</td>
<td>51</td>
<td>0.40</td>
<td>57.00</td>
<td>11.80</td>
<td>13.69</td>
<td>12.72</td>
<td>1.75</td>
<td>0.01</td>
</tr>
<tr>
<td>6</td>
<td>51</td>
<td>0.10</td>
<td>48.00</td>
<td>8.20</td>
<td>10.19</td>
<td>9.52</td>
<td>1.71</td>
<td>0.00</td>
</tr>
<tr>
<td>8</td>
<td>51</td>
<td>0.00</td>
<td>37.80</td>
<td>5.70</td>
<td>8.38</td>
<td>8.74</td>
<td>1.63</td>
<td>0.00</td>
</tr>
</tbody>
</table>

* Kolmogorov-Smirnov test at α = 0.05

Figure 2 The decrease of PASI score during 8 weeks

After conducting a Kolmogorov-Smirnov test with a significance level of 0.05, it was determined that the PASI score was not normally distributed over the course of each week. As a result, non-parametric statistics is the type of statistics that should be used when performing statistical data analysis. The average PASI scores collected over the course of a couple weeks are depicted in Figure 2. The pairwise comparison of the Friedman rank sum test was utilized in order to conduct the nonparametric multiple comparisons, and the results revealed that there was a statistically significant difference following the application of the botanical compound for a period of four weeks. In other words, the intensity of the psoriasis lessened every couple of weeks while the drug was being taken, and it lessened noticeably after the prescription was used for four weeks.
Figure 3 The decrease of PASI score during 8 weeks

Using the generalized estimating equation (GEE) to assess repeatedly obtained PASI scores every couple of weeks, the randomized trials exhibit the linear connection with a negative slope along the weeks ($-2.585$, $R^2$-squared $= 0.111$). That is, the PASI score is dropping by a total of 2.585 points every fortnight.

Figure 4 Comparison of severities before and after medication (Weeks 0 and 8)
When looking at the severity of the condition before and after using the botanical cream, there is a statistically significant difference in the medians and distributions of the two time periods. The related-samples marginal homogeneity test confirms that there is a statistically significant difference in distributions of different severity values across before and after treatment by comparing the severity before (week 0) and after (week 8) applying the cream at the significant level of 0.05. This was done by comparing the severity before (week 0) and after (week 8) applying the cream. To be more exact, the means and medians of respective distributions are distinct from one another. When the related-samples Wilcoxon signed rank test is accounted for, it is discovered that the variations in severity between after and before are either negative (N=31), positive (N=2), or zero (N=18). The fact that there is a negative difference in severity suggests that 31 out of 51 patients, or 62%, show that the botanical cream has a lower severity and greater efficacy. More than fifty percent of patients have had success with the botanical drug in lessening the severity of their psoriasis.

Quality of life

The Dermatology Patients' Quality Index (DLQI) and the Psoriasis Disability Index (PDI) questionnaires were used to analyze the participants' quality of life in order to reach a conclusion. The data presented in Figure 5 reveals that the overall median DLQI was 14.64 prior to the application of the botanical cream. This suggests that psoriasis had a substantial influence on the patients' quality of life. Following application of the cream for two weeks, the DLQI dropped to 12.26, showing a reduction in severity ranging from severe to moderate. Scores of 10.57 and 8.38 on the DLQI were recorded during the fourth and sixth weeks, respectively. After utilizing the product, the patient's quality of life significantly improved, as evidenced by the fact that the DLQI score dropped to 5.79, indicating that there was no influence on the patient's quality of life. When comparing the quality of life, a pairwise comparison of the Friedman rank sum test found that the DLQI ratings after 6 and 8 weeks were significantly lower at a level of significance of 0.05, as can be shown in Figure 5.

Figure 5 The mean and median of DLQI in different weeks of medication
The impact of psoriasis on patients’ quality of life was greatest in daily activities (median PDI score = 7.74), followed by leisure (7.47), work (1.39), problems with treatment (1.35), and personal relationships. According to the different subsets of PDI, the impact of psoriasis on patients’ quality of life was greatest in daily activities (1.27). After undergoing treatments for a period of eight weeks, the quality of life increased in every category of the PDI, including daily activities (4.75), leisure (2.12), job (0.86), problems with treatment (0.86), and personal relationships (0.86). The distributions of PDI scores before and after medication are displayed in Figure 6, respectively. It can be seen that the number of participants who scored highly on the PDI was noticeably lower. As a result, the fact that the individuals’ DLQI and PDI ratings improved while they were taking the drug implies that their quality of life has improved.

Figure 6 The decrease of PASI score during 8 weeks

Safety

At each visit, participants were evaluated via interview, review of complaints, and physical observation, which included but was not limited to itching, erythema, induration, and scaling. After using the cream, the only adverse reactions that occurred were a slight worsening of the red rash that was already present at the lesion and a slight itchy sensation. Despite this, the symptoms returned to normal within the first few days despite the fact that the cream was still being used. There was no evidence of a serious adverse reaction.

Discussion

It is believed that hyperproliferation, improper differentiation, and the activation of inflammatory mediators contribute considerably to the development of psoriasis. According to the statistics, the length of psoriasis is associated with greater vascular inflammation. However, current treatment options for psoriasis cannot totally cure the condition, but they can help keep it in check. Hence, psoriasis therapies should
demonstrate efficacy in symptom reduction and safety for long-term use.

Within four weeks, the herbal medication considerably decreased PASI (Psoriasis Area Severity Index) scores. In comparison to the innovative topical treatment Tapinarof cream 1%, which displays significant efficacy after four weeks, the botanical substance studied in this study is considered to have a similarly rapid onset of action. Tapinarof binds to the aryl hydrocarbon receptor, a transcription factor that depends on ligand binding to regulate multiple activities, including the development of Th17 cells, skin barrier proteins such as filaggrin and loricin in keratinocytes, and antioxidant enzyme genes, according to the hypothesis (Jett et al., 2022).

The questionnaires DLQI and PDI demonstrated an improvement in the patient’s quality of life, demonstrating the formulation’s effectiveness. The precise mechanism is uncertain due to the presence of various herbs, botanicals, and zinc in the formulation. Many studies indicate that natural plant oils, such as coconut (Cocos nucifera) oil, clove (Syzygium aromaticum) oil, and sesame (Sesamum indicum) oil, has unique properties, including anti-inflammatory, antioxidant, anti-itch, and antibacterial properties (Han & Parker, 2017; Intahphuak et al., 2010; Lin et al., 2018; Vaughn et al., 2018). Eclipta prostrata has been reported to provide anti-inflammatory effects on the skin in cases of dermatitis. Supposedly, E. prostrata alleviates the symptoms of atopic dermatitis by reducing epidermis/dermis thickness, decreasing immune cell infiltration, and restoring skin barrier failure (Kang et al., 2022). Dermatitis is treated with Acanthus ebracteatus in Thai traditional medicine. It has been found that it moderately suppresses neutrophil migration and chronic inflammatory cytokines (Ilori et al., 2020). The Rhinacanthus nasutus root is used in traditional medicine to treat skin disorders, including psoriasis. It is speculated that the anti-inflammatory benefits of the plant result from its ability to suppress pro-inflammatory mediators such as nitric oxide (NO), prostaglandin E2 (PGE2), and tumor necrosis factor (TNF)- (Tewtrakul et al., 2009). According to a study, Glycyrrhiza glabra, or licorice, is frequently used in traditional Chinese medicine to treat psoriasis. In addition to possessing anti-inflammatory properties, G. glabra demonstrates a variety of biological activities. In a macrophage model research involving lipopolysaccharide stimulation, Glycyrrhizic acid and 18-glycyrrhetinic acid were found to inhibit the generation of nitric oxide, prostaglandin E2, and reactive oxygen species (ROS) (Wang et al., 2011).

Psoriasis is a chronic skin disease that is characterized by hyperproliferation, abnormal differentiation, and the activation of inflammatory mediators. Although current therapy options cannot cure the disorder, they can help patients manage their symptoms and enhance their quality of life. In the treatment of psoriasis, natural
therapies such as botanicals and herbs have showed potential. Curcumin from turmeric, licorice, and Rhinacanthus nasutus have exhibited anti-inflammatory qualities, whereas Eclipta prostrata and Acanthus ebracteatus have been reported to alleviate dermatitis symptoms. The peel of Garcinia mangostana has been used to promote wound healing, and zinc has been reported to have therapeutic effects when applied topically.

Overall, the use of natural ingredients to treat psoriasis is a topic of ongoing research, and additional studies are required to prove the safety and efficacy of these treatments. The potential for natural products to offer psoriasis patients safe and effective treatment choices justifies further exploration.

The difficulties in organizing the study during the COVID-19 epidemic led to a high dropout rate of 27%, which was one of the study's weaknesses. In addition, the trial lacked biochemical testing to support the observed clinical changes, and long-term follow-up was not conducted.

Conclusion

In conclusion, psoriasis is a chronic inflammatory skin disease for which the precise cause is unknown. Nevertheless, aberrant differentiation, hyperproliferation, and activation of inflammatory mediators are believed to be involved. The various treatments for psoriasis can help reduce symptoms, but there is no definitive cure for this condition at this time. The botanical substance produced and evaluated in this study decreased PASI scores significantly within four weeks, with an onset of effect equivalent to that of Tapinarof cream 1%. The improvement in the DLQI and PDI questionnaires suggests that the botanical agent is also beneficial in enhancing the quality of life of psoriasis patients, as indicated by the study’s findings. The mixture contains several herbs, botanicals, and zinc, which have anti-inflammatory, antioxidant, antipruritic, and antibacterial properties. However, the trial is limited by a high dropout rate and the absence of biochemical testing to support the clinical improvements seen. In addition, no long-term follow-up of the subjects was conducted. Notwithstanding these limitations, the botanical drug may be a viable choice for the treatment of psoriasis; however, additional research is required to prove its long-term efficacy and safety. In this trial, the botanical drug shown considerable efficacy in decreasing PASI scores and increasing psoriasis patients’ quality of life. Herbs, plants, and zinc are all connected with anti-inflammatory, antioxidant, antipruritic, and antibacterial effects according to prior research. The results of the study suggest that the botanical agent has an onset of effect comparable to that of a novel topical medication called Tapinarof cream 1%, which is thought to bind to the aryl hydrocarbon receptor. This study is limited by a high dropout rate.
attributable to the COVID-19 pandemic, the absence of biochemical testing, and the lack of long-term participant follow-up.

Given the chronic nature of psoriasis, the hunt for effective and safe treatment alternatives continues to pose a formidable obstacle. The development of more effective and economical treatments for psoriasis, such as the botanical drug evaluated in this study, will considerably enhance the quality of life of psoriasis sufferers. Further research is required to confirm the formulation’s efficacy and safety and to comprehend its mechanisms of action. This research presents preliminary evidence that the botanical compound is a promising psoriasis treatment alternative. This mix of natural substances provides a possible alternative to conventional medicines, which may have undesirable side effects or may not be successful for all individuals. Future research may investigate the comparative efficacy of the botanical substance vs other treatments, as well as the possible mechanisms underlying its effects.

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Disclosure

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