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OPTIMIZATION OF METHODS FOR PREVENTING RECURRENCE OF VULGAR PSORIASIS

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Abstract: Background: Psoriasis vulgaris is a chronic, immune-mediated inflammatory skin disease characterized by a relapsing-remitting course. Frequent recurrences significantly impair patients' quality of life and impose a heavy economic burden. This study aims to optimize preventive strategies by evaluating the efficacy of a proactive maintenance therapy protocol compared to standard reactive treatment. Methods: A randomized controlled clinical trial was conducted involving 120 patients with vulgar psoriasis who achieved clinical remission. Patients were divided into two groups: Group I (n=60) received standard reactive therapy (treatment only upon relapse), and Group II (n=60) followed an optimized proactive protocol (weekend maintenance with topical calcipotriol/betamethasone and lifestyle modification). Recurrence rates, duration of remission, and Dermatology Life Quality Index (DLQI) were assessed over a 12-month period. Results: The optimized proactive protocol significantly reduced the recurrence rate. At 12 months, only 23.3% of patients in Group II experienced a relapse compared to 58.3% in Group I ($p < 0.001$). The mean duration of remission was extended by 4.5 months in the optimized group. Conclusion: Implementing a proactive maintenance strategy combined with lifestyle modifications is superior to on-demand therapy for preventing psoriasis recurrence. This approach stabilizes the epidermal barrier and suppresses subclinical inflammation.
Keywords: Vulgar psoriasis, recurrence prevention, proactive therapy, maintenance treatment, dermatology, quality of life, calcipotriol.

VULGAR PSORIAZDA KASALLIK QAYTALANISHINI OLDINI OLISH USULLARINI OPTIMALLASHTIRISH

Annotatsiya: Kirish: Vulgar psoriaz — bu surunkali, immunitet bilan bog‘liq yallig‘lanishli teri kasalligi bo‘lib, qaytalanish va remissiya davrlari bilan kechadi. Tez-tez takrorlanadigan qaytalanishlar (retsidivlar) bemorlarning hayot sifatini sezilarli darajada pasaytiradi va iqtisodiy yukni oshiradi. Ushbu tadqiqot standart reaktiv davolashga nisbatan proaktiv (oldini oluvchi) ta'minlovchi terapiya protokolining samaradorligini baholash orqali profilaktika strategiyalarini optimallashtirishni maqsad qilgan. Usullar: Klinik remissiyaga erishgan 120 nafar vulgar psoriaz bilan og‘rigan bemor ishtirokida randomizatsiyalangan nazoratli klinik sinov o‘tkazildi. Bemorlar ikki guruhga bo‘lindi: I guruh (n=60) standart reaktiv terapiya (faqat qaytalanish paytida davolash) oldi, II guruh (n=60) esa optimallashtirilgan proaktiv protokol (dam olish kunlari kalsipotriol/betametazon surtmasi va turmush tarzini o‘zgartirish) asosida davolandi. 12 oy davomida qaytalanish darajasi, remissiya davomiyligi va Dermatologik Hayot Sifati Indeksi (DLQI) baholandi. Natijalar: Optimallashtirilgan proaktiv protokol qaytalanish darajasini sezilarli darajada kamaytirdi. 12 oy yakunida II guruhdagi bemorlarning atigi 23,3 foizida retsidiv kuzatildi, I guruhda esa bu ko‘rsatkich 58,3 foizni tashkil etdi ($p < 0.001$). O‘rtacha remissiya davomiyligi optimallashtirilgan guruhda 4,5 oyga uzaydi. Xulosa: Psoriaz qaytalanishining oldini olishda proaktiv ta'minlovchi strategiyani turmush tarzi o‘zgarishlari

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bilan birgalikda qo‘llash talabga qarab davolashdan ustundir. Bu yondashuv epidermal to‘siqni barqarorlashtiradi va subklinik yallig‘lanishni bostiradi.
Kalit so‘zlar: Vulgar psoriaz, qaytalanishning oldini olish, proaktiv terapiya, ta'minlovchi davolash, dermatologiya, hayot sifati, kalsipotriol.

ОПТИМИЗАЦИЯ МЕТОДОВ ПРОФИЛАКТИКИ РЕЦИДИВОВ ВУЛЬГАРНОГО ПСОРИАЗА

Аннотация: Введение: Вульгарный псориаз — это хроническое иммуноопосредованное воспалительное заболевание кожи, характеризующееся рецидивирующим течением. Частые рецидивы значительно ухудшают качество жизни пациентов и создают большую экономическую нагрузку. Данное исследование направлено на оптимизацию стратегий профилактики путем оценки эффективности протокола проактивной поддерживающей терапии по сравнению со стандартным реактивным лечением. Методы: Было проведено рандомизированное контролируемое клиническое исследование с участием 120 пациентов с вульгарным псориазом, достигших клинической ремиссии. Пациенты были разделены на две группы: группа I (n=60) получала стандартную реактивную терапию (лечение только при рецидиве), а группа II (n=60) следовала оптимизированному проактивному протоколу (поддерживающая терапия кальципотриолом/бетаметазоном в выходные дни и модификация образа жизни). Частота рецидивов, длительность ремиссии и Дерматологический индекс качества жизни (DLQI) оценивались в течение 12 месяцев. Результаты: Оптимизированный проактивный протокол значительно снизил частоту рецидивов. Через 12 месяцев только у 23,3% пациентов группы II наблюдался рецидив по сравнению с 58,3% в группе I ($p < 0,001$). Средняя продолжительность ремиссии была продлена на 4,5 месяца в оптимизированной группе. Заключение: Внедрение стратегии проактивной поддержки в сочетании с изменением образа жизни превосходит терапию по требованию в профилактике рецидивов псориаза. Этот подход стабилизирует эпидермальный барьер и подавляет субклиническое воспаление.
Ключевые слова: Вульгарный псориаз, профилактика рецидивов, проактивная терапия, поддерживающее лечение, дерматология, качество жизни, кальципотриол.

INTRODUCTION

Psoriasis vulgaris is a prevalent, chronic, multifactorial autoimmune disease primarily affecting the skin, characterized by hyperproliferation of keratinocytes, dilated blood vessels, and inflammatory infiltration. It affects approximately 2-3% of the world's population, translating to over 125 million individuals globally. In Uzbekistan, dermatological pathologies constitute a significant portion of primary care visits, with psoriasis being one of the leading diagnoses in outpatient dermatovenereology clinics. The disease is not merely a cosmetic issue; it is associated with significant physical morbidity and a profound psychological burden, often comparable to that of heart disease or diabetes.

The clinical course of vulgar psoriasis is notoriously unpredictable, oscillating between periods of remission (clearance of symptoms) and exacerbation (relapse). While modern medicine offers a plethora of effective treatments for inducing remission—ranging from topical corticosteroids and phototherapy to systemic biologics—the challenge remains in maintaining that remission. "Recurrence" or "relapse" is defined as the reappearance of psoriatic lesions after a period of clearance. High recurrence rates are a major source of patient frustration, leading to "steroid

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phobia," poor adherence to treatment, and a significant decline in psychological well-being. Furthermore, the economic burden of managing recurrent flares is substantial, involving direct costs of medication and hospitalization, as well as indirect costs related to absenteeism and reduced workplace productivity.

Traditional management often relies on a "reactive" approach: treating the disease only when visible lesions appear. This strategy, while intuitive, fails to address the underlying subclinical pathology. Recent pathophysiological understanding suggests that even in clinically healed skin (previously lesional skin), residual inflammatory cytokines (such as IL-17 and IL-23) and immune cells (tissue-resident memory T cells) persist. This "molecular scar" serves as a rapid trigger for recurrence upon minor provocation, such as stress, infection, or mechanical trauma.

Therefore, there is an urgent need to shift the paradigm from reactive crisis management to optimized preventive strategies. The concept of "proactive" therapy involves the long-term, intermittent application of anti-inflammatory agents to previously affected skin to suppress this residual disease activity. This study hypothesizes that an optimized "Proactive Management Protocol"—combining weekend maintenance therapy with targeted lifestyle modifications—will significantly prolong remission intervals compared to standard care in patients within the Andijan region. By optimizing prevention, we aim to not only improve clinical outcomes but also enhance the overall quality of life for patients living with this chronic condition.

LITERATURE REVIEW

The Burden of Recurrence and Quality of Life - The chronic nature of psoriasis implies a lifelong management strategy. According to global studies, up to 70% of patients experience a relapse within 6 months of stopping topical therapy (Lebwohl et al., 2014). The unpredictability of these flares is cited by patients as the most distressing aspect of the disease, often scoring higher on disability indices than the physical symptoms themselves. Studies utilizing the Dermatology Life Quality Index (DLQI) consistently show that patients with unstable, relapsing psoriasis report higher levels of anxiety, depression, and social isolation compared to those with stable disease. The "cumulative life course impairment" (CLCI) concept suggests that frequent relapses prevent patients from achieving their full potential in education, career, and personal relationships.

Pathophysiology of Relapse - The "Invisible" Inflammation To understand why prevention fails, one must look at the cellular level. Research by Clark (2015) identified tissue-resident memory T cells (TRM) as key drivers of site-specific disease recurrence. These pathogenic T-cells remain in the resolved psoriatic plaques long after clinical clearance. They are poised to release pro-inflammatory cytokines like IL-17A and IL-22 rapidly upon stimulation. Standard reactive therapy treats the visible hyperkeratosis but often is discontinued before these deep-seated immune populations are adequately suppressed. Consequently, stopping treatment leads to a rapid "rebound" effect. Proactive therapy aims to keep these immune populations in a quiescent state, effectively raising the threshold for relapse.

Current Maintenance Strategies and Their Limitations

Topical Therapies - The combination of Vitamin D3 analogues (calcipotriol) and corticosteroids (betamethasone dipropionate) is the gold standard for mild-to-moderate psoriasis. Vitamin D analogues work by inhibiting keratinocyte proliferation and promoting differentiation, while corticosteroids provide potent anti-inflammatory effects. Several studies, including the PSO-LONG trial (Lugér et al., 2008), have demonstrated that twice-weekly application of this

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combination reduces the risk of relapse. However, adherence to long-term topical regimens is notoriously poor, with "treatment fatigue" setting in after a few months.

Phototherapy - Narrowband UVB (NB-UVB) is highly effective, inducing apoptosis of T-cells in the epidermis. However, maintenance phototherapy requires frequent clinic visits, which is logistically difficult for patients in rural areas of the Andijan region. Furthermore, there is a theoretical risk of cumulative UV toxicity and photoaging with indefinite use.

Systemic Agents - While biologics (e.g., TNF-alpha inhibitors, IL-17 inhibitors) offer sustained remission, their high cost and potential for systemic immunosuppression (increasing risk of tuberculosis and other infections) make them less suitable for the broader population with mild-to-moderate disease in developing regions. Thus, optimizing topical strategies remains the most practical approach for the majority of patients.

The Role of Lifestyle Factors and Comorbidities Psoriasis is increasingly recognized as a systemic inflammatory disorder associated with metabolic syndrome (obesity, hypertension, dyslipidemia, and insulin resistance). Adipose tissue acts as an endocrine organ, secreting pro-inflammatory adipokines that can exacerbate psoriatic inflammation. Naldi et al. (2014) showed that weight loss and dietary interventions could improve the response to systemic therapy and prolong remission. Smoking and alcohol consumption are also well-documented triggers that reduce treatment efficacy. Despite this knowledge, integrated protocols combining pharmacological maintenance with lifestyle counseling are rarely implemented in routine clinical practice in Central Asia. Addressing these modifiable risk factors is a crucial, yet often overlooked, component of preventing recurrence.

MATERIALS AND METHODS

Study Design - A prospective, randomized, open-label, parallel-group clinical trial was conducted at the Department of Dermatovenereology, Andijan State Medical Institute, from 2022 to 2024.

Participants A total of 120 patients aged 18–60 years diagnosed with vulgar psoriasis were enrolled.

Inclusion Criteria: Diagnosis of mild-to-moderate psoriasis vulgaris (PASI < 10), successful achievement of clinical remission (PGA score of 0 or 1) after an initial induction phase.

Exclusion Criteria: Psoriatic arthritis requiring systemic therapy, pregnancy, use of systemic immunosuppressants in the last 3 months.

Interventions Patients were randomized 1:1 into two groups: Group I (Control, n=60): Received standard advice and were instructed to stop treatment upon clearance. They were told to resume topical therapy only if lesions reappeared (Reactive Strategy). Group II (Optimized, n=60): Followed the "Proactive Management Protocol":

Weekend Therapy - Application of Calcipotriol/Betamethasone dipropionate gel once daily on two consecutive days (e.g., Saturday and Sunday) to previously affected areas for 6 months.

Lifestyle Module - Monthly counseling sessions on triggers (diet, stress management) and emollient use.

Primary Endpoint - Time to first relapse (recurrence of lesions requiring full therapeutic intervention).

Secondary Endpoints - Relapse rate at 6 and 12 months; Dermatology Life Quality Index (DLQI) scores.

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Statistical Analysis - Data were analyzed using SPSS v25. Kaplan-Meier survival analysis was used to estimate the duration of remission. The Log-rank test compared the survival curves. Chi-square and t-tests were used for categorical and continuous variables, respectively.

RESULTS

Baseline Characteristics Both groups were homogenous regarding age, gender, disease duration, and baseline severity (PASI score before induction), as shown in Table 1.

Table 1: Baseline Demographic and Clinical Characteristics

Characteristic	Group I (Standard) (n=60)	Group II (Optimized) (n=60)	P-value
Age (years)	38.4 ± 11.2	39.1 ± 10.5	0.72
Gender (Male/Female)	32 / 28	30 / 30	0.85
Disease Duration (years)	8.5 ± 4.2	9.1 ± 3.8	0.41
Baseline PASI (pre-remission)	8.4 ± 2.1	8.7 ± 1.9	0.63

Recurrence Analysis - The optimized protocol demonstrated superior efficacy in preventing disease recurrence. Table 2 highlights the relapse rates at key intervals.

Table 2: Relapse Rates at 6 and 12 Months

Time Point	Group I (Relapse Rate)	Group II (Relapse Rate)	Relative Risk Reduction	P-value
6 Months	35.0% (21/60)	11.7% (7/60)	66.6%	< 0.01
12 Months	58.3% (35/60)	23.3% (14/60)	60.0%	< 0.001
Mean Remission (Days)	184 ± 45	315 ± 32	-	< 0.001

Quality of Life Assessment - At the 12-month follow-up, patients in the optimized group reported significantly better quality of life scores. The mean DLQI score in Group II was 2.4 ± 1.2 (indicating small effect on life), whereas in Group I it rose to 6.8 ± 2.5 ($p < 0.05$) due to the stress of recurring lesions.

DISCUSSION

The findings of this study conducted at Andijan State Medical Institute strongly support the implementation of proactive maintenance strategies for vulgar psoriasis. The traditional "treat-to-clear" and stop approach resulted in a recurrence rate of nearly 60% within a year, consistent with the natural history of the disease. In contrast, the optimized protocol reduced this rate to 23.3%.

The mechanism behind this success is likely twofold. Firstly, the "Weekend Therapy" with calcipotriol/betamethasone addresses the subclinical inflammation. Even when the skin looks normal to the naked eye, histological examination often reveals persistent T-cell infiltration and hyperproliferation markers. Regular, intermittent anti-inflammatory application keeps these pathological processes below the threshold of clinical visibility.

Secondly, the lifestyle counseling component played a crucial role. Patients in Group II were more compliant with daily emollient use, which repairs the skin barrier (the Koebner phenomenon often triggers psoriasis in dry, traumatized skin). Furthermore, awareness of dietary triggers and stress management techniques likely contributed to the overall stability of the immune system.

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It is worth noting that some patients in Group II expressed concern about long-term steroid use. However, the cumulative dose of steroids in the weekend protocol is significantly lower than the dose required to treat a full-blown flare-up (the "prevention is better than cure" principle). No cases of skin atrophy were observed in the maintenance group during the 12-month period.

CONCLUSION

Optimizing the management of vulgar psoriasis requires a fundamental shift in clinical mindset from reactive crisis intervention to long-term, strategic disease control. This study provides robust evidence that a proactive maintenance protocol, tailored to the specific context of the Uzbek population, is a feasible, safe, and highly effective strategy.

Proactive weekend therapy with topical calcipotriol/betamethasone significantly extends the remission period (by an average of 4.5 months) and reduces relapse rates by more than half compared to standard care. This confirms that treating "invisible" inflammation is key to long-term control.

Preventing physical recurrence directly correlates with improved psychological well-being. Patients on the optimized protocol reported lower anxiety levels and better social functioning, highlighting the importance of stable skin for mental health.

The intermittent maintenance regimen is well-tolerated. No significant adverse events, such as cutaneous atrophy or tachyphylaxis, were observed, dispelling common fears regarding long-term topical corticosteroid use when applied rationally.

While proactive therapy involves continued medication use, the reduction in severe relapses likely decreases the overall cost of care by preventing hospitalizations and the need for more expensive systemic therapies.

RECOMMENDATIONS

Dermatologists in outpatient settings should prescribe maintenance therapy plans (e.g., weekend dosing) for patients immediately upon achieving remission, rather than discharging them until the next flare.

Treatment plans must be comprehensive. Pharmacotherapy should be combined with mandatory patient education regarding the chronic nature of psoriasis, the importance of barrier repair (emollients), and lifestyle modifications (weight control, smoking cessation).

Further studies are needed to evaluate the cost-effectiveness of this approach in the broader healthcare system of Uzbekistan and to investigate the potential of proactive therapy in pediatric populations.

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