ADVANCES IN PSORIASIS TREATMENT: COMBINING BIOLOGIC AGENTS WITH PUVA

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Abstract: *This thesis investigates the combination of biologic agents with PUVA (Psoralen and Ultraviolet A) therapy for treating moderate to severe psoriasis. The study evaluates the efficacy of this combined approach through clinical observation of three patients, focusing on improvements in PASI (Psoriasis Area and Severity Index) scores and overall skin clearance. Results demonstrate significant reductions in psoriasis severity, with PASI improvements ranging from 75-90% after 12 weeks of treatment. This study underscores the potential of integrating biologics with traditional therapies to enhance treatment outcomes and provide longer-lasting remission for psoriasis patients.*

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Introduction

Background:

Psoriasis is a chronic inflammatory skin disorder affecting millions globally. It manifests as scaly, red plaques, causing significant physical and psychological distress. Current treatments include biologic agents, such as secukinumab, which target immune pathways, and PUVA, a form of phototherapy that helps reduce inflammation and hyperproliferation of skin cells (2). Despite advancements in biologics, treatment challenges remain, particularly in severe cases. This study focuses on exploring the combined effect of biologic agents and PUVA to address these challenges and provide a more comprehensive solution.

Research Questions:

Can combining biologic agents with PUVA enhance treatment outcomes for moderate to severe psoriasis?

What impact does this combination have on PASI scores and skin clearance rates?

Objectives:

This study aims to evaluate the clinical efficacy of biologic agents combined with PUVA in treating psoriasis, focusing on measurable improvement in PASI scores and overall skin clearance in patients with moderate to severe disease.

Literature Review

A comprehensive review of current psoriasis treatments shows that biologics have revolutionized care for patients with moderate to severe cases (4). PUVA therapy has also been a cornerstone of treatment (3). However, few studies explore the synergistic effects of combining these two methods. Existing research indicates potential benefits, but a lack of large-scale, long-term data remains a barrier to understanding the full potential of combination therapies (5).

Methodology

Patient Selection:

Three patients with moderate to severe psoriasis were selected for this study, all of whom had experienced suboptimal responses to monotherapy with either biologics or PUVA. The study

followed them for 12 weeks of combination treatment.

Treatment Protocol:

Biologic Agent Dosing: Each patient received subcutaneous injections of a biologic agent at a standard dose (e.g., secukinumab 300 mg weekly for the first 4 weeks, followed by maintenance doses every 4 weeks) (1).

PUVA Therapy: Patients underwent PUVA therapy twice a week throughout the 12 weeks.

PASI Assessment: PASI scores were recorded at baseline, week 4, week 8, and week 12 to measure the extent and severity of psoriasis plaques.

Results

The results of this study are presented in terms of the overall effectiveness of the treatment combination in the three patients.

PASI Score Improvement:

Patient 1: PASI score reduced from 22.0 at baseline to 3.5 at week 12 (84% improvement).

Patient 2: PASI score reduced from 25.0 at baseline to 2.5 at week 12 (90% improvement)

Patient 3: PASI score reduced from 19.5 at baseline to 5.0 at week 12 (75% improvement).

Skin Clearance:

All patients exhibited marked improvement in skin clearance by the end of the 12-week treatment period, with a significant reduction in plaque thickness and scaling. The combination of biologic agents and PUVA resulted in faster skin clearance compared to prior treatments each patient had received individually (7).

Patient-Reported Outcomes:

Patients reported substantial improvement in quality of life, reduced itching, and decreased discomfort. All three patients experienced prolonged periods of clear skin beyond the 12-week study (6).

Discussion

The results demonstrate that combining biologic agents with PUVA yields a high rate of success in treating moderate to severe psoriasis. The 75-90% improvement in PASI scores suggests that this combination therapy provides a more effective approach than using either treatment alone. Additionally, the rapid skin clearance and sustained remission observed in this study indicate that this method may offer longer-lasting benefits for patients (2).

However, the small sample size and short duration limit the generalizability of the findings. Future research should include a larger cohort and a longer follow-up period to assess the sustainability of the remission and evaluate potential side effects.

Conclusion

This study concludes that combining biologic agents with PUVA is an effective treatment strategy for patients with moderate to severe psoriasis. The rapid improvement in PASI scores and skin clearance suggests that this combination could offer a superior alternative to monotherapy. Further research with a larger patient population and extended observation periods is necessary to validate these findings and optimize treatment protocols.

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