ADVANCES IN PSORIASIS TREATMENT: COMBINING SECUKINUMAB WITH PHOTOTHERAPY

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Qabul qilindi: 29.10.2025
Ko'rib chiqildi: 30.10.2025
Tasdiqlandi: 31.10.2025

Abstract. This thesis explores the combination of secukinumab, a biologic agent, with phototherapy for treating moderate to severe psoriasis. The study investigates the effectiveness of this combined approach through clinical observation of five patients, aiming to evaluate improvements in PASI scores, skin clearance, and patient-reported outcomes. Results indicate a significant reduction in psoriasis severity, with PASI improvements of 80-95% after 12 weeks of treatment. This study highlights the potential of integrating biologics with traditional therapies to enhance treatment efficacy and provide longer-lasting remission for psoriasis patients.

Introduction. Psoriasis is a chronic inflammatory skin disorder affecting millions globally, characterized by scaly, red plaques that cause significant physical and psychological distress [1]. Current treatments include biologic agents like secukinumab, which target immune pathways [2], and phototherapy, particularly narrowband UVB, which helps reduce inflammation and hyperproliferation of skin cells [3]. Despite the advances in biologics, treatment challenges remain, particularly in severe cases. This study focuses on exploring the combined effect of secukinumab and phototherapy to address these challenges and provide a more comprehensive solution.

Research Questions

- Can combining secukinumab with phototherapy 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 secukinumab combined with phototherapy 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 like secukinumab have revolutionized care for patients with moderate to severe cases [2]. Phototherapy, particularly narrowband UVB, 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 [4].

Methodology

Patient Selection

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

The study followed them for 12 weeks of combination treatment.

Treatment Protocol

- Secukinumab Dosing: Each patient received subcutaneous injections of secukinumab at a standard dose (300 mg weekly for the first 4 weeks, followed by maintenance doses every 4 weeks).[5]

- Phototherapy: Patients received narrowband UVB phototherapy three times 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

PASI Score Improvement

- Patient 1: PASI score reduced from 18.3 at baseline to 3.1 at week 12 (83% improvement).

- Patient 2: PASI score reduced from 21.5 at baseline to 1.8 at week 12 (91% improvement).

- Patient 3: PASI score reduced from 19.0 at baseline to 2.9 at week 12 (85% improvement).

- Patient 4: PASI score reduced from 22.4 at baseline to 1.2 at week 12 (95% improvement).

- Patient 5: PASI score reduced from 20.2 at baseline to 4.1 at week 12 (80% 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 secukinumab and phototherapy resulted in faster skin clearance compared to prior treatments each patient had received individually.

Patient-Reported Outcomes

Patients reported substantial improvement in quality of life, reduced itching, and decreased discomfort.

Four out of five patients experienced complete remission of symptoms, with prolonged periods of clear skin beyond the 12-week study.

Discussion

The results demonstrate that combining secukinumab with phototherapy yields a high rate of success in treating moderate to severe psoriasis.

The 80-95% 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.

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 secukinumab with phototherapy 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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