

Dual Blocking of IL17A and IL36R for the Treatment of Refractory Hidradenitis Suppurativa: A Case Report

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Abstract: Hidradenitis suppurativa (HS), a chronic inflammatory disorder affecting approximately 1% of the global population, remains challenging to treat due to the limited efficacy of single biologics (TNF α /IL-17/IL-36 inhibitors) against draining tunnels (dT). A man with refractory HS (Hurley stage III) was treated with recibokibart (anti-IL36R antibody) and secukinumab (anti-IL17A antibody). Disease severity was assessed using previously validated clinical outcome measures and ultrasonography. Rapid clinical improvement was observed in this patient. HiSCR50 was achieved at week 2, and HiSCR100 (complete resolution of inflammatory nodules and abscesses without new dTs) by week 10. The pain score decreased from 8 to 2, and the exudation resolved. The size of the tunnels in the four intertrigonal areas was significantly reduced, as assessed by ultrasound. This case highlights the synergistic potential of dual IL-17/IL-36 blockade, particularly for dTs, and offers a novel therapeutic strategy for treating severe HS.

Keywords: Hidradenitis suppurativa, IL-17A, IL-36R

Introduction

Hidradenitis suppurativa (HS) is a chronic inflammatory disease characterised by painful purulent skin lesions and progressive destruction of skin architecture, with an estimated global prevalence of approximately 1%.¹ Currently, systemic therapies for HS targeting TNF- α (adalimumab), IL-17 (secukinumab and bimekizumab), and IL-36 (spesolimab) have expanded drug therapy options for moderate-to-severe disease, which were previously restricted to oral antibiotics, while only 40–50% of patients met the Hidradenitis Suppurativa Clinical Response (HiSCR) criteria after 12 weeks owing to their low response to tunnels.^{2,3} There is an unmet need for more effective targeted therapies. Herein, we present a patient with HS who achieved sustained improvement after recibokibart plus secukinumab treatment.

Case Report

A 37-year-old man with a 12-year history of HS (Hurley stage III) presented with dissecting scalp cellulitis. Previous treatment with isotretinoin, rifampicin, clarithromycin, and etanercept did not effectively control his symptoms. The patient had a body mass index (BMI) of 47.8 kg m². The patient received subcutaneous injections of secukinumab 450 mg per week (based on a weight of 130 kg) for three weeks, with minimal effect. After written informed consent was obtained, the patient was administered a recibokibart intravenous (IV) drip based on a spesolimab proof-of-concept study with a loading dose of 1080 mg at weeks 0, 1, and 2, and 1080 mg recibokibart every 2 weeks from weeks 4 to 10.³ Secukinumab treatment was continued over weeks 0, 4, and 8.

Disease severity was assessed using previously validated clinical outcome measures, including HiSCR/AN counts and IHS4 scores (Figure 1). We only observed a decrease in inflammatory nodular counts after three doses of secukinumab, but not for abscesses or draining tunnels (dT). The abscess decreased from week 2, while the dTs decreased by week 10.

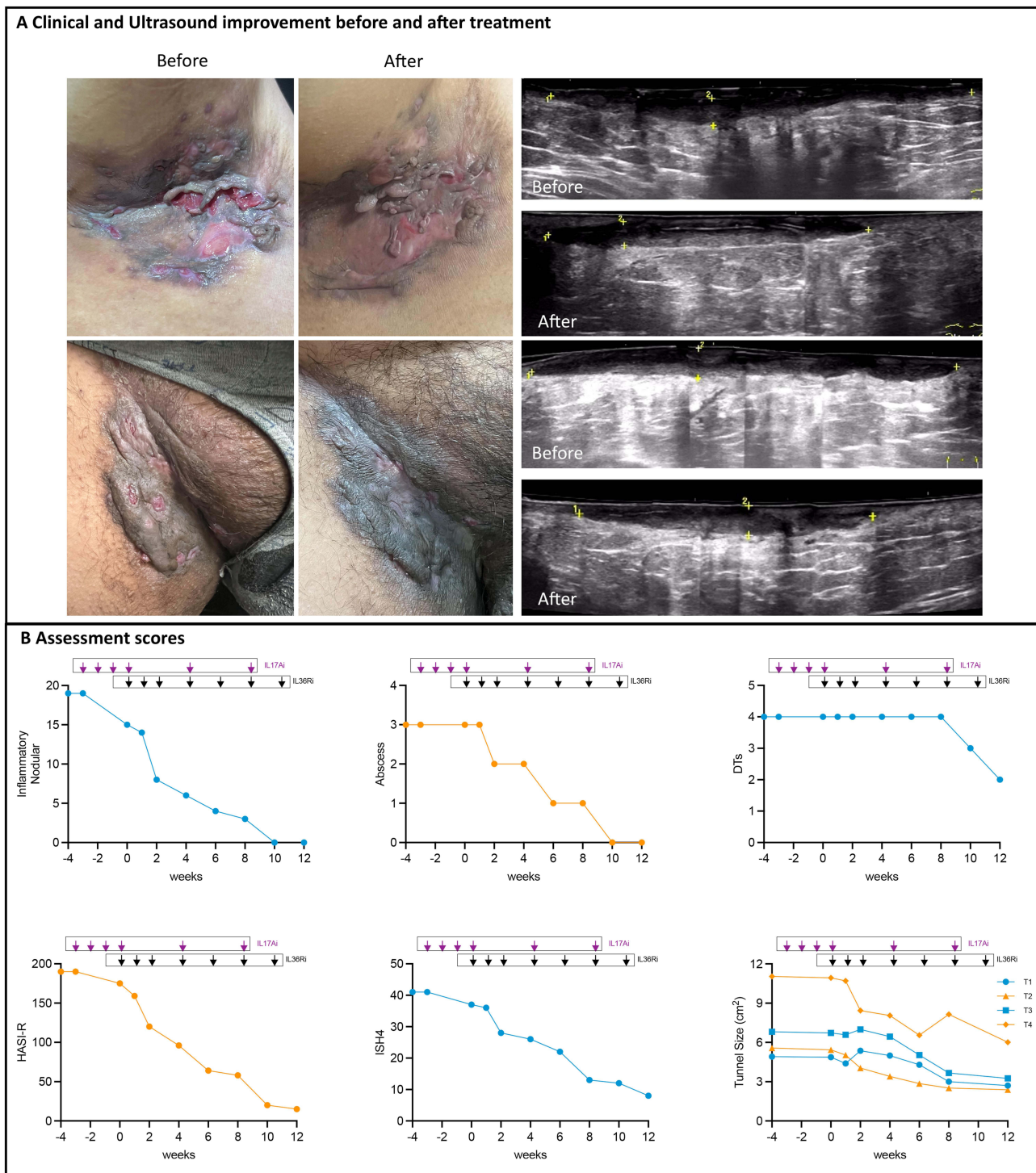


Figure 1 Response To Recibokibart Plus Secukinumab in a Patient with Refractory Hidradenitis Suppurativa. **(A)** Shows clinical and ultrasound improvement of the lesions in the right axilla and groin. Inflammatory nodules, abscesses, and exudations significantly improved after treatment. Ultrasound imaging showed that the fistulous tract had resolved after treatment, while its size was significantly reduced. **(B)** Shows the improvement in assessment scores for total inflammatory nodules and abscess count, draining tunnel (dT) count, International Hidradenitis Suppurativa Severity Score System (IHS4), Hidradenitis Suppurativa Area and Severity Index Revised (HASI-R), and tunnel size evaluated using ultrasound.

A rapid reduction in HiSCR was observed after the administration of racibokibart, with an improvement of 50% in HiSCR50 at week 2 and HiSCR100 at week 10. His pain visual analogue scale (VAS) score was significantly reduced from 8 to 2, and the exudation from the armpits and groin was significantly reduced after the administration of

recibokibart and had nearly disappeared at week 10. Ultrasound imaging showed a fistulous tract with an increased Doppler signal on the stump and oedema of the underlying subcutaneous tissue, while its size resolved after treatment. The size of the tunnels in the four intertrigo areas was significantly reduced, and the draining tunnels of the axilla disappeared at week 10. The patient did not report any adverse events.

Discussion

Hidradenitis suppurativa (HS) is a chronic, recurrent autoinflammatory skin disease characterised by painful nodules, abscesses, and draining sinus tracts in intertriginous areas.⁴ HS causes significant symptoms such as pain, pruritus, malodour, and suppuration, which profoundly affect the quality of life.⁵

The pathogenesis of HS is complex; however, it is generally concluded that it involves chronic inflammation leading to irreversible skin damage with tunnel formation.⁶ Both in vitro and in vivo evidence has suggested that IL-17 and IL-36 synergistically exacerbate HS by mutually amplifying inflammatory pathways, while IL-17 drives IL-36 production in keratinocytes and IL-36 reinforces Th17 activation and neutrophil recruitment, perpetuating tissue destruction and chronic inflammation.⁷ Their interplay creates a self-sustaining inflammatory loop, which may explain why clinical studies inhibiting IL-17 or IL-36 individually show limited efficacy and suggests that dual targeting of both cytokines may offer enhanced therapeutic efficacy in HS management. Recibokibart, a novel human anti-IL-36R IgG1 monoclonal antibody with unique complementarity-determining region (CDR) sequences, has demonstrated comparable affinity for IL-36R and efficacy in patients experiencing an acute generalised pustular psoriasis flare up of moderate-to-severe intensity.⁸

Successful treatment with recibokibart and secukinumab supports the hypothesis that IL-17 and IL-36 may have a synergistic effect on HS. In our patients, treatment with IL-17 plus IL-36 was highly effective and led to remission, especially in tunnels. Dual antibodies appear to be a useful treatment option in patients with severe HS.

Ethics Statement

The study protocol was approved by Shandong Provincial Institute of Dermatology and Venereology. The patient in this manuscript has provided written informed consent to the publication of his clinical data and accompanying images.

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Disclosure

The authors report no conflicts of interest in this work.

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