

Use of Tildrakizumab in Two Obese Patients with Severe Psoriasis: First Experience in Thailand

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ABSTRACT:

This report presents the first long-term follow-up experience in Thailand of tildrakizumab, a novel interleukin-23 inhibitor, for the treatment of severe psoriasis in two obese patients. Notably, both patients demonstrated rapid treatment response, achieving a 75% improvement on the Psoriasis Area and Severity Index (PASI 75) at week 4 following the first dose. During the one-year follow-up period, the symptoms were largely controlled for most of the duration but later slightly aggravated potentially caused by multiple external factors, particularly improper weight control. Effective weight management is essential for sustaining therapeutic response.

Key words: tildrakizumab, psoriasis, obesity, Thailand

Introduction

Tildrakizumab is an interleukin-23 inhibitor with an approved indication for moderate-to-severe psoriasis that is recently available in Thailand. To date, there is no published data on the clinical effectiveness of this biologic agent, especially regarding long-term follow-up in the Thai population. We report the first two cases of tildrakizumab use in Thai obese patients with severe psoriasis. Informed consents were obtained from the patients for the sharing of their photographs.

Case 1

A 26-year-old Thai female patient with obesity (weight 103.1 kg, height 162 cm; body mass index [BMI] 39.28 kg/m²) presented with erythrodermic psoriasis. Her medical history included dyslipidemia and psoriasis since childhood. The disease was managed with oral

acitretin (unknown dosage) and was subsequently transitioned to traditional Chinese medicine without satisfactory clinical improvement. Upon initial evaluation, the patient exhibited severe psoriasis at all body sites, which involved more than 90% of the body surface area (BSA). Tildrakizumab was initiated at the dose of 100 mg at weeks 0, 4, and every 12 weeks thereafter. An impressive improvement was observed following the first dose, with a reduction of Psoriasis Area and Severity Index (PASI) from 45.2 to 11.2. The disease was effectively controlled, as indicated by a reduction of BSA involvement to 8% and a PASI score of 2.0 (Table 1). Notably, there was an outstanding outcome in the rash on the arm, with markedly clearer skin. The lesions on the hand resolved and turned hypopigmented. (Figure 1)

The patient expressed that she felt extremely satisfied. On the fifth visit (week 40), flared lesions were noted in areas such as the abdomen, back, and arms, accompanied by a slight resurgence of BSA involvement and PASI. Potential contributing factors for the aggravated symptoms included a recent upper

respiratory tract infection and suboptimal weight control, with an increase of approximately nine kilograms. The disease was later successfully controlled upon continuation of the biologic. There were no adverse events observed during the entire treatment period.

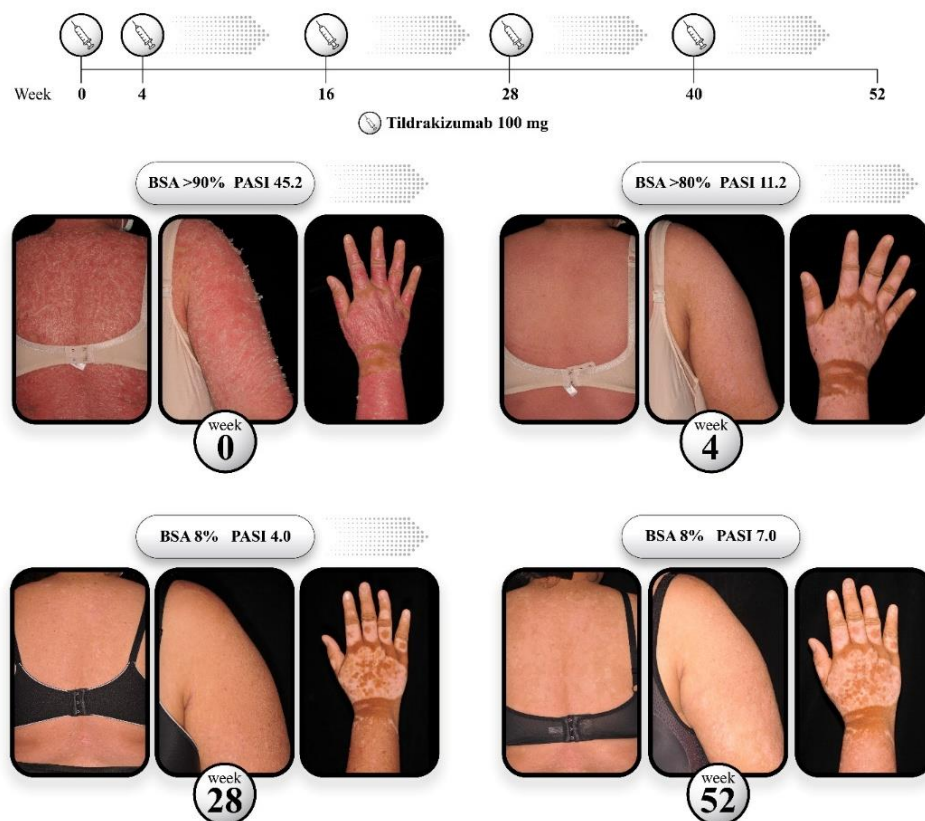


Figure 1 Treatment response of the first patient after tildrakizumab treatment

BSA: body surface area, PASI: Psoriasis Area and Severity Index

Table 1 Clinical progression of two patients undergoing treatment with tildrakizumab.

Week	0	4	16	28	40	52
Case 1						
BSA (%)	>90	>80	50	8	15	8
PASI	45.2	11.2	2.0	4.0	24.0	7.0
Case 2						
BSA (%)	60	10	2	3	3	5
PASI	21.4	4.9	2.0	3.3	4.2	3.8

BSA: body surface area, PASI: Psoriasis Area and Severity Index

Case 2

The second case is a 19-year-old male patient (weight 124.6 kg, height 178.5 cm; BMI 39.11 kg/m²) with underlying diseases of hypertension and type 2 diabetes mellitus. His current medication included manidipine for blood pressure control. He had been diagnosed with psoriasis for seven years and nine months. Methotrexate at 10 mg/week was prescribed for seven months but discontinued due to transaminitis. Subsequently, cyclosporine at 300 mg/day was administered for one year, without adequate treatment response. Physical examination revealed severe psoriasis characterized by multiple well-defined erythematous plaques with silvery scales on

trunk and all extremities, involving 60% of his BSA and a PASI score of 21.4. A standard regimen of tildrakizumab was prescribed, resulting in a favorable response after the first dose (Table 1, Figure 2), with the patient expressing satisfaction with the treatment. His psoriasis was controlled until week 40, when a relapse of rash on the legs occurred, which was likely attributable to a 10-kilogram increase in body weight from baseline. To enhance disease control, the dosage of tildrakizumab was increased to 200 mg at week 52, with clinical response evaluation pending on the upcoming follow-up visit. The treatment is safe with no documented adverse events observed.

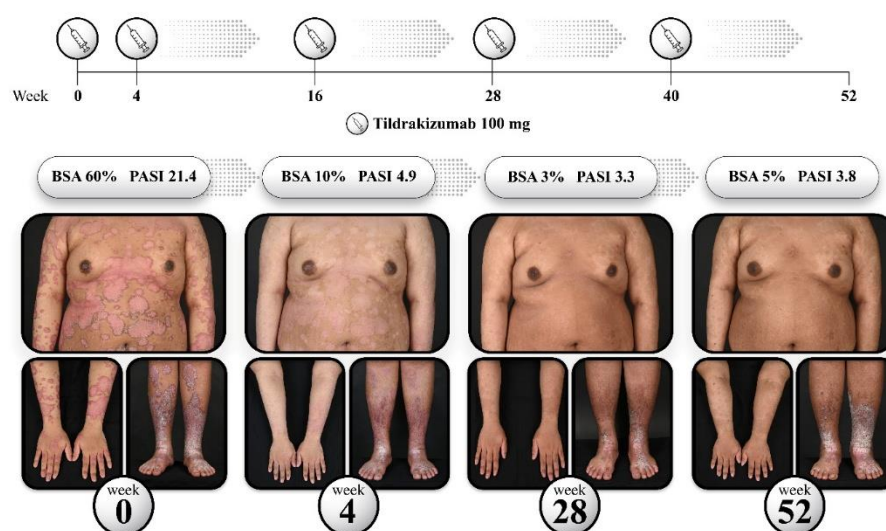


Figure 2 Treatment response of the second patient after tildrakizumab treatment

BSA: body surface area, PASI: Psoriasis Area and Severity Index

Discussion

These two cases demonstrate real-world effectiveness of tildrakizumab for managing severe psoriasis among the first two obese patients in Thailand. Long-term follow-up data from these cases provide comprehensive insights into the treatment course and the challenges encountered in maintaining clinical response throughout the patient journey. At the initiation of treatment, despite the suitability in

escalating the dosage from 100 mg to 200 mg in patients who weigh over 90 kg,¹ both patients initially received the standard 100 mg dose, and clinical success was achieved. Moreover, rapid treatment responses in achieving a 75% improvement on the Psoriasis Area and Severity Index (PASI 75) were observed at week 4 following the first injection. This onset of response was notably faster compared to those reported in the reSURFACE1 and

reSURFACE2 trials, where PASI 75 was generally achieved by week 12². This difference may be attributed to the patients being biologic-naïve. Moreover, the drug has shown benefits in terms of patient satisfaction, in accordance with evidence from the POSITIVE study that has demonstrated the benefits of tildrakizumab in quality of life, which extends beyond the efficacy of disease control³.

Numerous factors can exacerbate psoriasis symptoms and need to be controlled, particularly in treatment-experienced patients, which may pose a greater challenge in maintaining the treatment response. Infection can induce immune cells to produce inflammatory cytokines that can aggravate psoriasis⁴. Obesity causes inflammation and metabolic disturbance that could lead to immune dysregulation, resulting in compromised efficacy of psoriasis treatment⁵. Furthermore, environmental factors could also affect psoriasis control, as evidenced by the exacerbation of both patients' conditions during the cooler months in Thailand. Correlation between seasonal variation and psoriasis control was observed. While 50% of patients can be season-independent, approximately 30% show better disease management during the summer months, which might be affected by sunlight exposure and increased temperature⁶. Additionally, Thailand was facing issues of heightened air pollution during this period, where coarse particulate matter (PM) was found to be associated with worsening PASI⁷.

Weight gain of up to 10 kilograms was observed in two cases. Upon history taking, both patients reported poor eating habits, excessive food intake and a sedentary lifestyle. These external factors likely contributed to the weight gain, rather than effects of the disease or anti-interleukin-23 therapy. Among all potential contributing factors, improper weight control is proposed as the primary cause of the unsustainable treatment response. This assertion is supported by robust evidence,

including local data indicating that metabolic syndrome adversely affects psoriasis severity and treatment outcomes, with a BMI of 23 kg/m² or higher and abdominal obesity increasing the risk of treatment failure^{8,9}. Certain eating style has also been associated with psoriasis severity, as demonstrated in a cross-sectional study in Thailand¹⁰.

Consequently, finding from these cases underscores the critical importance of weight management in obese patients with psoriasis. Physicians should encourage patients to adopt a holistic approach that includes weight management strategies aimed at promoting weight loss or preventing further weight gain, particularly in patients who may neglect weight control following initial treatment success. To optimize disease management, the dosage of tildrakizumab can be increased to 200 mg, and early administration of this escalated dose may be beneficial for certain patient populations, such as those who are overweight, have metabolic syndrome, or are at risk of poor treatment adherence. Additionally, the escalated dose may also be considered for patients with a high disease burden, those who have failed prior biologic therapy, or patients with the disease in difficult-to-treat areas¹.

Conclusion

These two case reports present the effectiveness of tildrakizumab for managing severe psoriasis in Thai obese patients. Initiation of treatment with the standard 100 mg dose could result in a favorable and rapid therapeutic response. Nevertheless, a holistic approach that includes weight management and control of underlying metabolic syndrome is essential for sustaining clinical response.

Author Contributions

Conceptualization: [C.W., P.A.]; Methodology: [C.W, P.A]; Writing – review and editing: [C.W, P.A]; Supervision: [P.A]. All

authors have read and agreed to the published version of the manuscript.”

Ethics Statements

Ethical approval was not required due to a single case report from each institute. The informed consent was obtained from both patients for publication of their clinical information and photographs.

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Conflict of Interest

Author [C.W, P.A.] has received speaker honoraria from Ranbaxy (Thailand) Co.,Ltd.

AI Declaration

The authors declare that no generative artificial intelligence (AI) or AI-assisted technologies were used in the writing or preparation of this manuscript.

References

1. Dapavo P, Burlando M, Guarneri C, et al. Tildrakizumab: the value of a personalized and flexible approach for treating moderate-to-severe plaque psoriasis in patients with high body weight or high disease burden. *Expert Opin Biol Ther* 2024;24:133-8.
2. Reich K, Papp KA, Blauvelt A, et al. Tildrakizumab versus placebo or etanercept for chronic plaque psoriasis (reSURFACE 1 and reSURFACE 2): results from two randomised controlled, phase 3 trials. *The Lancet* 2017;390:276-88.
3. Mrowietz U, Sommer R, Gerdes S, et al. Patient-Reported Well-Being in Value-Based Routine Care Using Tildrakizumab: 52-week Interim Data of the Phase IV Positive Study. *Psoriasis (Auckl)* 2025;15:243-59.
4. Zhou S, Yao Z. Roles of Infection in Psoriasis. *Int J Mol Sci.* 2022;23:6955.
5. Vata D, Tarcau BM, Popescu IA, et al. Update on Obesity in Psoriasis Patients. *Life (Basel)* 2023;13:1947.
6. Jensen KK, Serup J, Alsing KK. Psoriasis and seasonal variation: A systematic review on reports from Northern and Central Europe-Little overall variation but distinctive subsets with improvement in summer or wintertime. *Skin Res Technol* 2022;28:180-6.
7. Bellinato F, Adami G, Vaienti S, et al. Association Between Short-term Exposure to Environmental Air Pollution and Psoriasis Flare. *JAMA Dermatol* 2022;158:375-81.
8. Chularojanamontri L, Wongpraparut C, Silpa-Archa N, Chaweekulrat P. Metabolic syndrome and psoriasis severity in South-East Asian patients: An investigation of potential association using current and chronological assessments. *J Dermatol* 2016;43:1424-8.
9. Boonkrong P, Shakya S, Kraunamkam W, Simmachan T. Dietary patterns and psoriasis severity in Thai patients: a machine learning approach for small sample data. *Sci Rep* 2025;15:33088.
10. Roongpisuthipong W, Klangjareonchai T. The Relationship between Eating Styles and the Severity of Psoriasis: A Cross-Sectional Study in Thailand. *Dermatol Ther* 2024;2024:6677244.