

A new ERA for global Dermatology 10 - 15 JUNE 2019 MILAN, ITALY

PSORIASIS

DEVELOPING A THERAPEUTIC WINDOW FOR SECUKINUMAB IN PSORIASIS: A STEP TOWARDS PERSONALIZED THERAPY

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Introduction: With the introduction of the newest biologicals like secukinumab, achieving excellent response (PASI < 3) must be sought. However, in clinical practice, psoriasis patients are still treated according to a 'one size fits all' approach which may lead to good response but potentially also over- and undertreatment. With a therapeutic window, the most optimal outcome can be achieved for each patient.

Objective: Development of an optimal therapeutic window for secukinumab in psoriasis

Materials and Methods: Serum was collected from 51 adult psoriasis patients who were treated with secukinumab 300 mg every four weeks for at least 12 weeks at trough. Secukinumab serum trough level (STL) was determined using an in-house developed ELISA and disease severity was assessed through measurement of Psoriasis Area and Severity Index (PASI).

Results: A negative correlation was found between secukinumab concentration and PASI at trough (r = -0.3675, p = 0.0110). Secukinumab concentrations were significantly higher in excellent responders (PASI \leq 3) compared to moderate responders (PASI > 3) (p = 0.0082). Confounding variables which were negatively correlated with STL levels and/or PASI were smoking, waist circumference, treatment duration and former treatment with adalimumab and/or ustekinumab. With an area under the curve of 74% (95% CI 0.59 – 0.88 and p = 0.00086), a secukinumab pivotal trough level of 33.2 µg/mL could be determined, corresponding to the most favourable trade-off value between sensitivity (75%) and specificity (71%).

Conclusions: We report for the first time a therapeutic threshold concentration of 33.2 µg/mL for secukinumab at serum trough in a psoriasis cohort. Patients with secukinumab trough











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concentrations below 33.2 μ g/ml may be potentially undertreated. These results state the correlation between serum secukinumab concentration and treatment response.



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