

# Comparative Study of Clinical Characteristics according to Therapeutic Efficacy of Cyclosporine or Methotrexate in Patients with Psoriasis Vulgaris

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## Introduction

- ❖ Cyclosporine (CsA) and methotrexate (MTX) are widely used to treat psoriasis, because of their cost-effectiveness and safety profile compared to biologic therapies.
- ❖ Studies comparing the efficacy of CsA with that of MTX
  - Similarly effective after 16 weeks (Heydendael et al.)
  - CsA is more effective after 12 weeks (Flytstrom et al.)
- ❖ No study has focused on the clinical and laboratory characteristics of psoriatic patients which may affect the therapeutic responses to CsA or MTX.

## Objective

- ❖ This study aimed to compare clinical and laboratory manifestations in the psoriatic patients treated with either CsA or MTX.

## Method

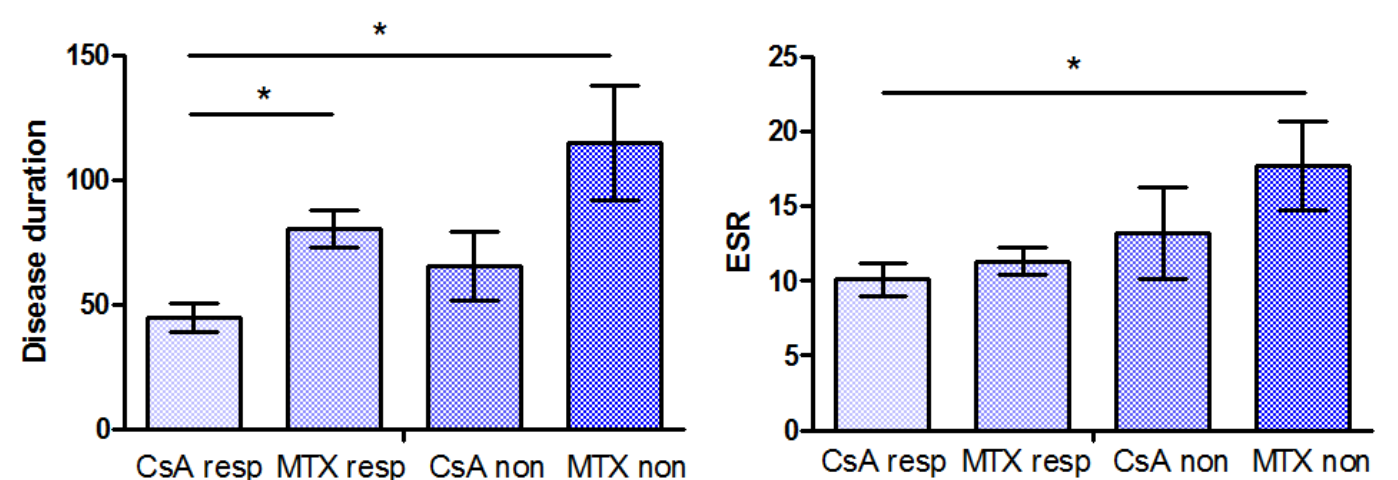
- ❖ Patients with psoriasis vulgaris were enrolled, who had been treated with either CsA or MTX from January 2012 to December 2016.
- ❖ The patients were divided into four subgroups including CsA responders, MTX responders, CsA non-responders, and MTX non-responders.
  - CsA or MTX responder was defined as a patient treated with a single systemic agent, either CsA or MTX.
  - CsA or MTX non-responder was defined as a patient who had switched from one agent to another. Oral acitretin was infrequently prescribed in our outpatient clinic setting.
- ❖ The clinical and laboratory information on medical records was retrospectively reviewed.

## Results

- ❖ A total of 488 patients with psoriasis vulgaris were enrolled, including 199 CsA responders, 199 MTX responders, 53 CsA non-responders, and 37 MTX non-responders.
- ❖ CsA responders had a shorter disease duration compared with other groups. The difference was statistically significant when compared with MTX responders and MTX non-responders.

- ❖ Body mass index (BMI) did not differ significantly among the groups.
- ❖ MTX non-responders showed a higher erythrocyte sedimentation rate (ESR) compared with other groups. The difference was statistically significant when compared with CsA responders.
- ❖ C-reactive protein (CRP) level did not differ significantly among the groups.

	CsA responders	MTX responders	CsA non-responders	MTX non-responders
Age (years)	43.6±1.2	42.5±1.1	38.6±2.0	44.0±2.8
Sex ratio (M:F)	1.8:1	1.9:1	1.7:1	1.5:1
Disease duration (mo)	45.1±5.8	80.8±7.4	65.6±13.7	115.1±22.8
Treatment duration (mo)	6.4±0.7	7.0±0.7	CsA: 9.9±1.5 MTX: 9.1±1.3	MTX: 26.0±5.5 CsA: 7.5±1.8
BMI (kg/m <sup>2</sup> )	23.9±0.4	24.7±0.4	23.0±0.7	24.3±0.7
Initial ESR (mm/hour)	10.1±1.1	11.3±0.9	13.2±3.1	17.7±3.0
Initial CRP (mg/dL)	0.3±0.1	0.3±0.1	0.7±0.6	0.8±0.5



## Discussion

- ❖ In biologics treatment, a higher baseline PASI and a lower baseline BMI are important predictors of favorable clinical responses. (J. Zweegers et al.)
  - Disease duration and biologic naivety are also postulated to affect treatment response.
- ❖ Among four groups,
  - CsA-responders tended to have a shorter disease course and lower ESR and CRP level.
  - In contrast, MTX-non responders tended to have a more prolonged disease course and higher ESR and CRP level.
- ❖ Further study with more clinical variables such as PASI score and body surface area might be needed.