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CLINICAL PREDICTORS OF RESPONSE TO TOCILIZUMAB IN PATIENTS WITH RHEUMATOID ARTHRITIS

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INTRODUCTION

Tocilizumab (TCZ), a recombinant humanized antibody targeting soluble and membrane IL-6 receptor, is commonly used in Rheumatoid Arthritis(RA) patients refractory to tumor necrosis factor inhibitors, demonstrating 60-80% effectiveness. Clinical parameters like years of disease prior to TCZ treatment, naïve for biological therapy (BT-naïve), baseline DAS28 and Health Assessment Questionnaire(HAQ), have been associated with response to TCZ, although with conflicting results. The identification of clinical predictors of response may lead to a better selection of BT alternatives in DMARDs-refractory RA patients.

MATERIAL AND METHODS

Retrospective cohorts study. Linear or logistic regression models were applied to evaluate the influence of clinical parameters (baseline DAS28, baseline HAQ, BT-naïve, years of disease prior to TCZ treatment, age at TCZ start, concomitant DMARDs and corticosteroids, baseline CRP and ESR) on TCZ effectiveness, measured according to relative percentage of variation of Disease Activity Score 28(DAS28), and EULAR response(responders vs non-responders), after 18 months of therapy in RA patients

OBJECTIVES

Assess the effectiveness of TCZ in RA patients and the influence of clinical parameters.

RESULTS

Sixty-one patients (83.6% women; 53.4 ± 12.6 years) were collected, with mean disease duration of 10 [7-18] years and 8 [3-13.5] years of disease evolution before TCZ therapy. Only 22 patients were naïve for BT (22/61; 36.1%). Baseline DAS28 and HAQ were 5.6 ± 1.15 and 1.66 ± 0.66 respectively. EULAR response was 88.5%(54/61), and relative percentage of DAS28 variation was -58,9% [-68.8,-44.7] at 18 months.

The decrease in the relative percentage of DAS28 variation (R^2= 0.229) was higher in patients with higher baseline DAS28 (Coef:-7.98; $CI_{95\%}$:-13.1,-2.8; p=0.03), lower baseline HAQ (Coef: 14.9; $CI_{95\%}$: 6.02, 23.8; p=0.01) and BT-naïve (Coef =-11.5, $CI_{95\%}$:-22.3, -8.0; p=0.036).

EULAR response was more frequent in patients with higher baseline DAS28 (OR: 3; $CI_{95\%}$:1.2, 8.3; p=0.048), lower time of disease prior TCZ treatment (OR: 0.8; $CI_{95\%}$:1.02, 1.5; p=0.026) and lesser number of BT failures (OR: 0.31; $CI_{95\%}$:0.11, 0.99; p=0.016).

CONCLUSIONS

TCZ effectiveness in RA patients after 18 months of therapy was over 88% (EULAR), with an approximated 60% of relative reduction in DAS28. High baseline DAS28, low baseline HAQ, BT-naïve patients, and lower time of disease prior to TCZ treatment have been identified as predictors of better response for TCZ therapy. In consequence, TCZ should become the first option of BT in refractory DMARDs RA patients.

DISCLOSURE PANEL

Authors of this work have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.