



Tocilizumab regulates serum levels of adiponectin and chemerin in rheumatoid arthritis patients: potential cardiovascular protective role of IL-6 inhibition

SCIENCE

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Key Take-Away:

The study results confirm that tocilizumab (TCZ) mono or combined therapy found to be safer and exhibited remarkable cardiovascular safety. A significant reduction of chemerin and increase of adiponectin in serum was observed in the patients subjected to the analysis.

Introduction:

Adipokines play an essential part in the pathophysiology of rheumatoid arthritis (RA), provide a link between the disease and overweight, explaining the enhanced cardiovascular (CV) risk. It also influences the response to disease-modifying antirheumatic drugs (DMARDs). This study aimed to determine the possible effects of intravenous (IV) tocilizumab (TCZ), an interleukin-6 receptor antagonist, on the serum levels of leptin, adiponectin, resistin, visfatin, and chemerin.

Method:

Total of 44 RA patients with active disease (DAS28-ESR ≥ 3.2) was treated with IV TCZ (8 mg/kg) once every four weeks for six months. And, 20 patients received TCZ as monotherapy and 24 in association with methotrexate (MTX). At baseline and monthly, before each infusion, body mass index, DAS28-ESR and Health Assessment Questionnaire (HAQ) were noted. The laboratory parameters, comprising the adipokines serum levels, were gathered at baseline and after six months.

Results:

Towards the cease of the follow-up, ESR, CRP, DAS28-ESR and HAQ results significantly ameliorated in patients who received TCZ as monotherapy or combined with MTX. The lipid profile portrayed only a significant increase in total cholesterol. A considerable reduction of chemerin and an increase of adiponectin were observed in the whole population and the subgroups of the patients assessed (TCZ mono or combined therapy) without any significant correlations with the clinical and biochemical parameters. There were no changes in the leptin and resistin levels.

Conclusions:

TCZ can regulate serum levels of chemerin and adiponectin in RA patients, independently of the disease treatment response, which contributes to explaining the CV safety of TCZ.

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