SARCOPENIA IN PATIENTS WITH RHEUMATOID ARTHRITIS: THE RELATIONSHIP BETWEEN THE ADMINISTRATION OF IL-6 INHIBITORS AND INSULIN RESISTANCE IN PATIENTS WITH ACTIVE RHEUMATOID ARTHRITIS

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Background: Rheumatoid arthritis (RA) is associated with an increased cardiovascular (CV) risk, due not only to the traditional risk factors (hypertension, insulin resistance/diabetes, obesity, smoking), but also to an inflammatory status as well. The blockade of interleukin-6 (IL-6) can regulate the glucose metabolism, reducing the glucose level and insulin resistance (IR). This beneficial effect is seen more in patients with normal values of body mass index (BMI), compared to the obese population.

Objectives: Given the mentioned existing data, we aim to demonstrate the positive effect of IL-6 inhibitors in active RA patients with normal or increased BMI.

Methods: We recruited 36 consecutive patients with definite active RA, non-responders/partial responders to conventional synthetic Drug Modifying Anti-Rheumatic Drugs (csDMARDs)/biological therapy. For a period of 52 weeks, patients received subcutaneous Tocilizumab (TCZ) in a dose of 162mg once a week, according to European League Anti-Rheumatism (EULAR) recommendation and National Protocol. We assessed demographics, RA-related parameters (clinical, inflammatory and immune) and metabolic markers, as well as the peripheral response to insulin, quantified by Homeostasis Model Assessment for insulin resistance (HOMA-IR) and the Quantitative Insulin Sensitivity Check Index (QUICKI). We did not include in the study the patients known with diabetes mellitus (DM) and those undergoing glucocorticoids.

Results: After 52 weeks of treatment, most of the patients showed a statistically significant reduction of HOMA-IR (3.61 ± 1.21 at the onset vs. 2.45 ± 1.46 at the end of the study, p<0.001), while QUICKI registered a slight increase (0.32 ± 0.01 at the onset vs. 0.33 ± 0.01 at the end of the study, p<0.001). Also, the decreased insulin and glucose levels were more obvious in patients with normal BMI, strictly related to disease activity.

Conclusion: Long-term administration of TCZ in active RA is associated with a significant reduction of disease activity and IR, especially in normal weight patients. This confirms that obesity, as a CV risk factor, represents one of the main causes of IR.

References:

EFFECT OF RITUXIMAB ON IMMUNOGLOBULIN LEVELS AND RISK OF ASSOCIATED INFECTION

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Background: Rituximab (RTX) is an anti-CD20 monoclonal antibody that suppresses B-lymphocytes and may induce hypogammaglobulinemia. Studies have shown that sustained low levels of immunoglobulins (Ig) are associated with significantly increased risks of infections.

Objectives: To determine the relationship between the serum Ig levels and risk of infection during (RTX) therapy for rheumatic diseases. We also aimed to identify the most common type of infections and pathogens associated with them.

Methods: A multi-centre retrospective observational study of patients with autoimmune diseases treated with RTX between 2009-2019. Serum Ig levels (IgM, IgG and IgA) were measured at baseline and 6-12 months after each cycle and noted in the National Protocol. We assessed demographics, RA-related parameters (clinical, inflammatory and immune) and metabolic markers, as well as the peripheral response to insulin, quantified by Homeostasis Model Assessment for insulin resistance (HOMA-IR) and the Quantitative Insulin Sensitivity Check Index (QUICKI). We did not include in the study the patients known with diabetes mellitus (DM) and those undergoing glucocorticoids.

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