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ABSTRACT

The use of rituximab in the treatment of multiple sclerosis

El uso de rituximab en el tratamiento de la esclerosis múltiple

O uso de rituximab no tratamento de esclerose múltipla

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Introduction: Multiple sclerosis presents itself in three forms: relapsing-remitting (RRMS), primary progressive, and secondary progressive characterized by the activation of T lymphocytes (TL), B lymphocytes (BL), and macrophages that can overcome the blood-brain barrier, destroying the myelin sheath of neurons located in the central nervous system (CNS)[1,2].

Objective: To elucidate findings on the efficacy of rituximab in the treatment of patients with RRMS.

Methodology: This is a literature review of articles published in the last five years obtained from Google Scholar, PubMed, and SciELO, using the descriptors: "Multiple Sclerosis", "Treatment" and "Rituximab". Four articles in English were used in this paper.

Results and Discussion: Multiple sclerosis (MS) is a debilitating neurodegenerative disease in which antibodies attack the myelin sheath of neurons in the central nervous system. Rituximab is an anti-CD20 monoclonal antibody that causes loss of BL, reducing the number of defense cells capable of attacking the myelin sheaths of neurons in the central nervous system, thus preventing flare-ups, especially in patient's refractory to first-line treatment[3]. Studies show that the use of rituximab, even off-label, has been positive since the depletion in the number of B cells prevents their penetration into the BBB, which consequently suppresses inflammatory activity so that fewer lesions are observed on MRI. However, despite this promising preliminary evidence, there is a significant gap in knowledge about the role of rituximab in the treatment of MS, especially regarding its relationship with the increased risk of infections[2-4].

Conclusion: It is known that most existing studies have methodological limitations since the samples are small and there is a lack of control groups for conducting research. Furthermore, well-designed studies should be carried out to validate the therapeutic efficacy of rituximab in the treatment of MS, since it would benefit patients with this disease. Among the drugs that can be used to treat MS, RTX has one of the best cost-benefit ratios. In addition, it is a drug that has proven efficacy in the treatment of rheumatological and hematological diseases, allowing the personalization of therapy according to the clinical condition of each patient.

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