

previous searches and the network of friends, we created a new profile specifying only name, sex and age: "Prueba, Prueba", male, 26 years. We also disabled cookies and location services. When taking data for each page, we considered the time since the last post, the country of origin and the page type; the latter was classified in accordance with the publication as 1 of 3 types: "patient support" (messages of emotional support), "promotional/marketing" (messages promoting products or treatments) and "information" (messages providing information on the disease and its treatment).

Of a total of 110 pages returned in the search, we excluded 47 as they were not in Spanish and 1 page that was from Wikipedia, meaning a total of 62 pages. The maximum number of "likes" was 33,342 and the minimum was 21. The minimum time since the last post was 45 min and the maximum was 4 years. Concerning the country of origin, it was specified in only 41 pages: 19 (46.3%) were from Spain, 8 (19.5%) from Argentina, 4 (9.7%) from Mexico and 10 (24.5%) from the remaining Spanish-speaking countries. Depending on the page type, 25 (40.3%) corresponded to "patient support", 22 (35.5%) to "promotional/marketing" and 15 (24.2%) to "information". On the other hand, those providing "patient support" had the highest number of "likes", with a median of 1008, and a shorter time since the last post, with a median of 3 days.

The number of "likes" involves a type of "word-of-mouth" marketing; that means, a greater diffusion depending on the interest of the individuals. In our case, we observed that the "patient support" page type received the greatest number of "likes", possibly because they share emotive messages that been shown to have the greatest response from visitors.³ On the other hand, there is a shorter time since the last post in the "patient support" type, suggesting that there may be a greater activity. These features (follow-up and

activity) should be taken into account to ensure an effective use of the pages.^{2,3} We consider it important to report these results because they may serve as guidelines to the health organizations that administer Facebook™ pages related to fibromyalgia. The purpose is to achieve greater dissemination of the information, while maintaining the quality of the content.

References

- Van Uden-Kraan CF, Drossaert CH, Taal E, Shaw BR, Seydel ER, van de Laar MA. Empowering processes and outcomes of participation in online support groups for patients with breast cancer, arthritis, or fibromyalgia. Qual Health Res. 2008;18:405–17.
- Hale TM, Pathipati AS, Zan S, Jethwani K. Representation of health conditions on Facebook: content analysis and evaluation of user engagement. J Med Internet Res. 2014;16:e182.
- Kite J, Foley BC, Grunseit AC, Freeman B. Please like me: Facebook and public health communication. PLOS ONE. 2016;11:e0162765.

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Rheumatoid Arthritis and Ocular Myasthenia Gravis: Effectiveness of Rituximab in the Management of These Two Diseases[☆]



Artritis reumatoide y miastenia gravis ocular: efectividad del rituximab en el manejo de ambas enfermedades

To the Editor,

Myasthenia gravis (MG) is an autoimmune disease that affects the neuromuscular junction of the striated muscles. It provokes a fluctuating weakness of the voluntary muscles, mainly due to the direct attack of autoantibodies against the acetylcholine receptor (AChR).¹

Our patient was a 66-year-old woman, diagnosed with rheumatoid arthritis (RA) in 2012. She was being treated with 20 mg/week of methotrexate. After 23 months of good clinical control, her disease became active, and treatment was begun with etanercept at 50 mg/week. After 6 doses of etanercept, she came to the emergency department with complete ptosis of right eye with a fluctuating course, that had developed 3 days earlier. She had a limitation of upgaze and, thus, was admitted by the neurology department with suspected ocular MG. During her hospital stay, she underwent brain magnetic resonance imaging and chest computed tomography, both of which were normal. Laboratory tests

showed normal erythrocyte sedimentation rate and C-reactive protein, antinuclear antibodies and extractable nuclear antigens were negative, rheumatoid factor was 232 IU/mL (normal level 0–14), anti-cyclic citrullinated peptide antibodies >300 IU/mL (0–20) and anti-AChR antibodies 29.52 nmol/L (0–0.25). Electromyogram revealed an increase in mean jitter, presence of right frontalis muscle blocks and a decrease in the amplitude at rest of facial nerve signal to nasalis muscle, compatible with a postsynaptic neuromuscular transmission defect. With the confirmation of the diagnosis of ocular MG, it was decided to discontinue etanercept. Three weeks after the interruption of etanercept therapy, which was replaced by 30 mg/day of prednisone, the patient's neurological status improved. However, over the course of 12 weeks, during which the prednisone dose was being tapered, she developed a polyarticular flare and the ocular symptoms reappeared. It was decided to administer a course of rituximab (2 doses of 500 mg separated by 15 days), followed by retreatment (500 mg every 6 months), with which control of the joint and neurological symptoms was achieved (Fig. 1).

Approximately 5% of the population has one or more autoimmune diseases, and the prevalence is highest in middle-aged women.² Patients who have an autoimmune disease are more susceptible to developing a second one. Myasthenia gravis is associated with RA in up to 4% of the patients.³

This association may be due to immunological factors that favor the activation of autoreactive B and T cells, epigenetic factors and genetic susceptibility to certain groups of genes, particularly those belonging to the major histocompatibility complex.³ Thus, if we consider that the overlap of autoimmune disorders is a reflection of the existence of common pathogenic mechanisms, the therapeutic approach should be the same.

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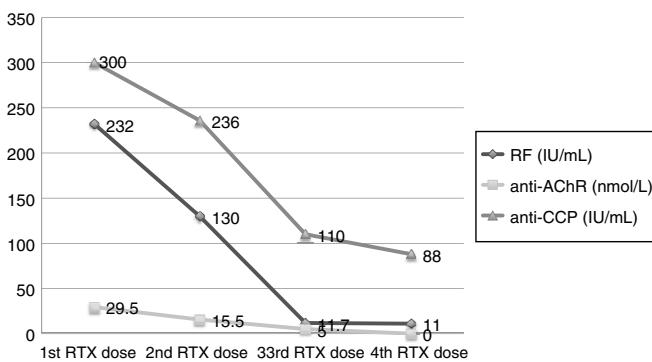


Fig. 1. Monitoring of the levels of rheumatoid factor (RF), anti-acetylcholine receptor (anti-AChR) and anti-cyclic citrullinated peptide (anti-CCP) antibodies in terms of the clinical response to rituximab (RTX). There was a progressive decrease in anti-AChR which was not detectable following the fourth dose.

Anti-tumor necrosis factor alpha (TNF α) agents have favored the treatment and prognosis of rheumatic diseases like RA, in addition to being employed in other autoimmune diseases. In fact, etanercept has produced satisfactory results in the treatment of refractory MG,⁴ with no effect on serum anti-AChR levels or changes in circulating TNF α . Paradoxically, the literature includes the report of 1 case of MG in a patient with RA being treated with etanercept,⁵ in whom the discontinuation of the drug resulted in the improvement of the myasthenic signs.

Although there is no clear causal association, the development of neurological disorders, especially demyelinating diseases (Guillain-Barré syndrome, multiple sclerosis, mononeuritis or chronic demyelinating polyneuropathy^{6,7}), has occasionally been related to anti-TNF α agents. Should they occur, the main recommendation is to discontinue the treatment.

In the present case, there existed the possibility of there being an association between 2 autoimmune diseases or, on the other hand, a probable adverse effect of etanercept. The decision was made to

interrupt the drug and begin treatment with rituximab, the utility of which has been reported in the treatment of refractory MG.⁸ Its mechanism of action provokes a depletion of B cells and the resulting reduction in antibodies, enabling the clinical control of both diseases. The doses administered are generally 375 mg/m², with retreatment every 6 months given the half-life of this agent,⁹ although there is still no consensus concerning the guidelines for its administration in MG.

References

1. Sieb JP. Myasthenia gravis: an update for the clinician. *Clin Exp Immunol*. 2014;175:408-18.
2. Nacu A, Andersen JB, Lisnic V, Owe JF, Gilhus NE. Complicating autoimmune diseases in myasthenia gravis: a review. *Autoimmunity*. 2015;48:362-8.
3. Mao ZF, Yang LX, Mo XA, Qin C, Lai YR, He NY, et al. Frequency of autoimmune diseases in myasthenia gravis: a systematic review. *Int J Neurosci*. 2011;121:121-9.
4. Rowin J, Meriggioli MN, Tüzün E, Leurgans S, Christadoss P. Etanercept treatment in corticosteroid-dependent myasthenia gravis. *Neurology*. 2004;63:2390-2.
5. Fee DB, Kasarskis J. Myasthenia gravis associated with etanercept therapy. *Muscle Nerve*. 2009;39:866-70.
6. Tejera-Segura B, Ferraz-Amaro I. Biological therapy and neurological manifestations. What do we know? *Reumatol Clin*. 2017;13:102-6.
7. Hanaoka BY, Libecco J, Rensel M, Hajj-Ali RA. Peripheral mononeuropathy with etanercept use: a case report. *J Rheumatol*. 2008;35:182.
8. Stieglbauer K, Topakian R, Schäffer V, Aichner FT. Rituximab for myasthenia gravis: three case reports and review of the literature. *J Neurol Sci*. 2009;280:120-2.
9. Zebarast N, Patwa HS, Novella SP, Goldstein JM. Rituximab in the management of refractory myasthenia gravis. *Muscle Nerve*. 2010;41:375-8.

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