Actas Dermosifiliogr. 2018;109(1):69–70

ACTAS Dermo-Sifiliográficas

Full English text available at www.actasdermo.org

RESIDENT'S FORUM

The Good and Bad News About New Drugs for Treating Alopecia Areata☆

FR-Luces y sombras de nuevos fármacos en el tratamiento de la alopecia areata

D. Morgado-Carrasco, E. Rodríguez-Lobato, J. Riera-Monroig, J. Ferrando*

Department of Dermatology, Hospital Clínic, Universitat de Barcelona, Barcelona, Spain

KEYWORDS
Alopecia areata;
Statins;
JAK inhibitors;
Tofacitinib;
Ruxolitinib

PALABRAS CLAVE
Alopecia areata;
Estatinas;
Inhibidores JAK;
Tofacitinib;
Ruxolitinib

Alopecia areata (AA) is an autoimmune disease that is difficult to treat and has a limited therapeutic arsenal. In some publications it has been suggested that the lipid-lowering drugs, statins, may be effective in the treatment of a number of dermatoses, such as psoriasis. In 2015, Lattouf et al.[1] conducted a prospective study of 29 patients with AA affecting 40% to 70% of the scalp, treating them with a combination of simvastatin, 40 mg, plus ezetimibe, 10 mg, once a day for 24 weeks. By 16 to 24 weeks, 14 of the 29 patients had developed hair regrowth greater than 20%. Subsequently, treatment was withdrawn in 7 of the responding patients, leading to recurrence of the alopecia in 5 of them. These promising results were considered to be produced by the anti-inflammatory and immunomodulatory effects of the statins. However, a similar study performed recently, using simvastatin plus ezetimibe at the same dose and for the same period in 20 patients with severe AA (involvement of more than 70% of the scalp), produced little effect, with sparse hair growth in only 1 patient. Additionally, 15% of the individuals presented adverse effects, such as headache or myalgia.[2] The difference in the results of these studies could be due to the different degrees of severity of AA in the patients studied. Mild or moderate AA can improve spontaneously, whereas severe forms tend to be more refractory to treatment. Our experience has been similar. We have observed a poor clinical response to simvastatin plus ezetimibe in severe AA.

In recent years, there have been reports of cases of AA with a clinical response to treatment with Janus kinase (JAK) inhibitors in patients with myeloproliferative disorders or psoriatic arthritis, and JAK/STAT (signal transducer and activator of transcription) overexpression has been detected in AA.[3] A recent clinical trial using ruxolitinib, a JAK1/2 inhibitor, 20 mg by mouth twice a day for 3 to 6 months, produced encouraging results in 12 patients with moderate or severe AA followed up for 3 months after completing

☆ Please cite this article as: Morgado-Carrasco D, Rodríguez-Lobato E, Riera-Monroig J, Ferrando J. The Good and Bad News About New Drugs for Treating Alopecia Areata. Actas Dermosifiliogr. 2018;109:69–70.

* Corresponding author.
E-mail address: juanferrandobarbera@gmail.com (J. Ferrando).

1578-2190/

treatment: 75% of the individuals presented considerable hair growth (mean, 92%). Surprisingly, this hair growth was observed after 4 weeks of treatment and the incidence of adverse effects was very low. Some patients presented hair loss after treatment withdrawal, but none returned to pretreatment levels.[4] Similar findings were reported in a retrospective study of 90 patients treated with tofacitinib, a JAK1/3 inhibitor, after a mean treatment period of 12 months, with a clinical response in 79%.[5] Furthermore, in the clinical trial with ruxolitinib, biopsies were taken from affected areas of the scalp at trial entry and after 12 weeks of treatment, measuring gene expression related to γ-interferon and cytotoxic T-cell activation. A notable reduction was observed in the expression of these inflammatory mediators of a type I immune response, which could help to explain the effect of this drug.

New treatment protocols are now being designed with ruxolitinib, baricitinib, and tofacitinib (http://www.clinicaltrials.gov), JAK kinase inhibitors that we believe could revolutionize the treatment of AA. In contrast, we do not consider the widespread use of statins to be justified in this disease.

Bibliografía

1. Lattouf C, Jimenez JJ, Tosti A, Miteva M, Wikramanayake TC, Kittles C, et al. Treatment of alopecia areata with simvastatin/ezetimibe. J Am Acad Dermatol. 2015;72:359–61.
2. Loi C, Starace M, Piraccini BM. Alopecia areata (AA) and treatment with simvastatin/ezetimibe: Experience of 20 patients. J Am Acad Dermatol. 2016;74:e99–100, http://dx.doi.org/10.1016/j.jaad.2015.09.071.
3. Alves de Medeiros AK, Speeckaert R, Desmet E, Van Gele M, De Schepper S, Lambert J. JAK3 as an emerging target for topical treatment of inflammatory skin diseases. PLoS ONE. 2016;11, http://dx.doi.org/10.1371/journal.pone.0164080.
4. Mackay-Wiggan J, Jabbari A, Nguyen N, et al. Oral ruxolitinib induces hair regrowth in patients with moderate-to-severe alopecia areata. JCI Insight. 2016;1:e89790, http://dx.doi.org/10.1172/jci.insight.89790.
5. Liu LY, Craiglow BG, Dai F, King BA. Tofacitinib for the treatment of severe alopecia areata and variants: A study of 90 patients. J Am Acad Dermatol. 2017;76:22–8, http://dx.doi.org/10.1016/j.jaad.2016.09.007.