CSR11

Psoriasis Exacerbation during Ocrelizumab Therapy for Relapsing Multiple Sclerosis: A Case Report

Hannah M. Geils[1], Joshua D. Katz[1], Ellen S. Lathi[1], India C. Stribling[1]
[1]The Elliot Lewis Center for Multiple Sclerosis Care, Wellesley, MA

Background

Plaque psoriasis is an autoimmune chronic inflammatory skin disease, occurring more frequently in individuals of North American and European descent. It has a prevalence of 1-3% in the general population[1] but 5% in individuals with multiple sclerosis (MS). A Canadian study in 2017 reported that the risk of psoriasis in MS was 54% higher than in the general population[2]. There are several published reports that interferon-β and natalizumab may induce or exacerbate psoriasis in MS patients[3,4]. Ocrelizumab (OCR) is a humanized monoclonal antibody targeting CD20+ B-cells, approved for the treatment of relapsing remitting (RRMS) and primary progressive multiple sclerosis (PPMS), and its impact on psoriasis is unknown. However, there are published reports of patients with either rheumatoid arthritis or lupus who developed psoriasis after treatment with rituximab[5,6], which may have relevance for MS patients treated with OCR.

Objectives

To describe a case of preexisting psoriasis with acute disseminated psoriasis following treatment with OCR.

Case Report

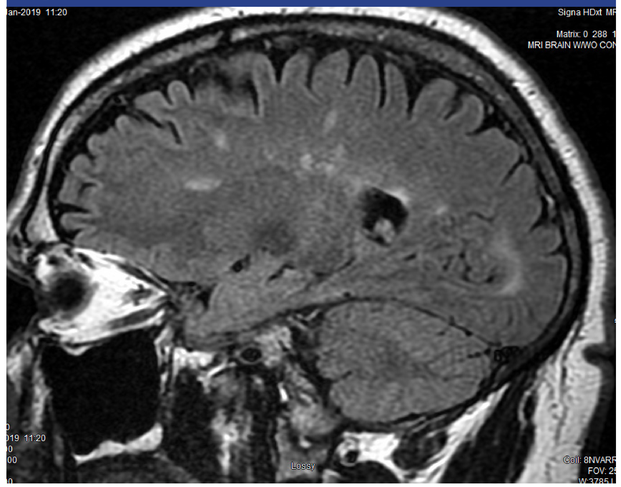
A 45-year old man was diagnosed with RRMS at age 27 and plaque psoriasis at age 30. There was no family history of MS, but both his mother and maternal grandmother had psoriasis.

The MS was treated at diagnosis with IFNb-1a, discontinued after 5 years because of ongoing disease activity. He transitioned to natalizumab for the next 4 years, followed by rituximab for 2 years before being lost to follow-up and without MS treatment for the subsequent 5 years. Treatment with OCR was initiated at age 44, and he was treated with one cycle of OCR (two doses of 300 mg each).

Psoriasis was mild to moderate throughout his MS course. Lesions variously affected his extremities, scalp, and trunk, but were never disseminated and required only intermittent topical treatment. However, within 6-8 weeks of initial OCR dosing he developed severe disseminated psoriasis (face, scalp, trunk, limbs). He did not receive a second cycle of OCR, and beginning about 6 months after initial OCR dosing, the psoriasis began to clear spontaneously and returned to its pre-OCR status. Treatment with an IL-17 antagonist (ixekizumab or secukinumab) is planned before resuming OCR.

Figure 1: Psoriasis Exacerbation after OCR

Figure 2: Stable MRI 4 Months after OCR



Conclusions

MS and psoriasis to some degree may share a common pathology, have similar genetic risk factors, and both respond to treatment with oral fumarates. A 2018 report showed that secukinumab (COSENTYX), a fully humanized monoclonal anti-IL-17 antibody used to treat psoriasis, may reduce MRI lesion activity in relapsing MS[7]. In contrast, both interferon-β and natalizumab have been reported to induce or exacerbate psoriasis. There are reports of new-onset and exacerbation of preexisting psoriasis with B-cell depletion after rituximab treatment for rheumatoid arthritis and other autoimmune disorders[5,6], but this has not been reported in patients with MS.

This is the first report of a psoriasis exacerbation associated with rituximab or OCR in MS. Until other cases are reported, it is unclear whether there is a causal relationship.

References

1. Rachakonda TD, Schupp CW, Armstrong AW et al. Psoriasis Prevalence among Adults in the United States. *Journal of the American Academy of Dermatology*, 2014 Jan 2; 70(3):512-6.
2. Marie RA, Patten SB, Tremlett H et al. Increased Incidence and Prevalence of Psoriasis in Multiple Sclerosis. *Multiple Sclerosis and Related Disorders,* 2017 Feb 20; 13:81-86
3. Hong J, Bernstein D. A Review of Drugs that Induce or Exacerbate Psoriasis. *Journal of Psoriasis and Psoriatic Arthritis*, 2012 Mar 1; 18a (1): 2-11.
4. La Mantia L, Capsoni F. Psoriasis during Interferon Beta Treatment for Multiple Sclerosis. *Neurological Sciences,* 2009 Nov 19; 31(3):337-9.
5. Guidelli GM, Fioravanti A, Rubegni P et al. Induced Psoriasis after Rituximab Therapy for RA: a Case Report and Review of the Literature. *Rheumatology International,* 2012 Nov 8; 33(11): 2927-30.
6. Thomas L, Canoui-Poitrine F, Gottenberg JE et al. Incidence of New Onset and Flare of Preexisting Psoriasis during Rituximab Therapy for RA: Data from French AIR Registry. *Journal of Rheumatology,* 2012 May; 39(5):893-9.
7. Havrdová E, Belova A, Goloborodko A et al. Activity of secukinumab, an anti-IL-17A Antibody, on Brain Lesions in RRMS, *Journal of Neurology,* 2016 May 3; 263(7): 1287-95