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CASE REPORT



Combined treatment with omalizumab and etanercept in a patient with chronic spontaneous urticaria and rheumatoid arthritis

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ABSTRACT

We present a case report of a 64-year old female patient with rheumatoid arthritis and chronic spontaneous urticaria. She was treated with a combination of etanercept and omalizumab with good results and no adverse effects. In selected patients with severe inflammatory disease activity it is worth considering combined biologic therapy. However, treatment should be closely monitored as short-term and long-term side effects are not properly elucidated.

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KEYWORDS

Omalizumab; combined biologic therapy; etanercept; CSU

Introduction

Omalizumab is a humanized monoclonal anti-IgE antibody, which binds to IgE and prevents its binding to the high-affinity IgE receptor (FcεRI) on basophils and mast cells. Omalizumab was initially approved for treatment of severe allergic asthma in 2005 and chronic spontaneous urticaria (CSU) in 2014 (1). The recommended dose of CSU is 300 mg every 4th week. Several clinical studies have established the high efficacy and safety of omalizumab in patients with CSU (2–5), however, data on concomitant treatment with omalizumab and other biologic drugs are lacking.

Herein, we describe a female patient who was treated with omalizumab for CSU and concurrently with etanercept (anti-TNF) for rheumatoid arthritis (RA).

Case presentation

The patient was a 64-year old woman with RA for many years, subclinical hypothyroidism and CSU for four years. She was successfully treated with levothyroxine for hypothyroidism. For RA she was initially treated with 10 mg methotrexate (MTX) once weekly. However, due to lack of response, she was given add-on treatment with 50 mg etanercept s.c. every 2nd week from June 2012.

In September 2016, she was referred to our dermatology department for CSU and mild angioedema. A thorough medical history was collected and blood samples were obtained. The basophil urticaria histamine release (HR) test was negative. Blood tests such as red and white blood count, kidney- and liver function, CRP including total IgE levels were normal. The UAS7 (weekly Urticaria Activity Score) at baseline was 28, while DLQI (Dermatology Life Quality Index) score was 2. Initially, the patient was treated with 360 mg fexofenadine (oral non-sedating antihistamine) twice daily for three months. At first, she experienced a good response, but after three weeks she reported partly relapse of urticaria symptoms. At three months follow up, the patient was almost asymptomatic (UAS7 = 2; DLQI = 1), and on her own, she

had decreased the daily dose of fexofenadine to 360 mg. The patient was advised to continue with antihistamines daily. Eleven months later the patient again had severe urticaria symptoms despite 360 mg fexofenadine three times daily for two months (UAS = 28; Urticaria Control Test (UCT) = 1; DLQI = 2). The patient was still treated with 50 mg s.c. etanercept every 2nd week and 10 mg MTX once weekly for RA.

Due to severe urticaria symptoms in spite of treatment with high dose antihistamines, we decided to treat the patient with 300 mg omalizumab s.c. every 4th week. At three months follow up, the patient was almost asymptomatic (UAS7 = 7; UCT = 11; DLQI = 0). She was using 180 mg fexofenadine daily at bedtime due to mild itch. She experienced no adverse effects of the combined treatment and all blood tests were normal.

Experience with concomitant treatment with two or more biological drugs is lacking, however recently four cases of successful concomitant biological treatment of psoriasis and psoriatic arthritis (PsA) with anti-TNF agents and ustekinumab (anti-IL12/23) has been described (6). A higher risk of infectious complications such a relapse of herpes zoster and retrotonsillar abscess was seen in two patients. Due to the immunosuppressive nature of some biologic drugs, it is likely that there is an even more increased risk of infections when combined. Similar observations were made in a case report about a 63 year old man with plaque psoriasis and PsA, who was successfully treated with ustekinumab and etanercept (7). The patient experienced a cardiovascular event during the treatment, however he had known comorbidities; obesity, metabolic syndrome, diabetes and hypertension, which are associated with cardiovascular morbidity. Another case report (8) presented a patient known with severe palmoplantar pustulosis treated with adalimumab and ustekinumab with great effect and no adverse events.

There is only a little knowledge about concomitant treatment with biologic agents. Combined treatment with anti-IgE (omalizumab) and anti-TNF (etanercept) was shown to be effective and safe in our patient with CSU and RA. In selected patients with

severe inflammatory disease activity it is worth considering combined biologic therapy. However, treatment should be closely monitored as short-term and long-term side effects are not properly elucidated. Prospective studies are needed to assess the efficacy and safety of combined biologic therapy in selected inflammatory diseases, however such studies are expensive and might not take place. Registry studies are possible and CURE (The Chronic Urticaria Registry) may be involved.

Disclosure statement

No potential conflict of interest was reported by the authors.

References

1. Zuberbier T, Aberer W, Asero R, et al. The EAACI/GA²LEN/EDF/WAO guideline for the definition, classification, diagnosis and management of urticaria. *Allergy*. 2018;73:1393–1414.
2. Maurer M, Rosén K, Hsieh HJ, et al. Omalizumab for the treatment of chronic idiopathic or spontaneous urticaria. *N Engl J Med*. 2013;368:924–935.
3. Kaplan A, Ledford D, Ashby M, et al. Omalizumab in patients with symptomatic chronic idiopathic/spontaneous urticaria despite standard combination therapy. *J Allergy Clin Immunol*. 2013;132:101–109.
4. Saini SS, Bindslev-Jensen C, Maurer M, et al. Efficacy and safety of omalizumab in patients with chronic idiopathic/spontaneous urticaria who remain symptomatic on H₁ antihistamines: a randomized, placebo-controlled study. *J Clin Invest Dermatol*. 2015;135:925–975.
5. Maurer M, Altrichter S, Bieber T, et al. Efficacy and safety of omalizumab in patients with chronic urticaria who exhibit IgE against thyroperoxidase. *J Allergy Clin Immunol*. 2011;128:202–209.
6. Gniadecki R, Bang B, Sand C. Combination of antitumour necrosis factor- α and anti-interleukin-12/23 antibodies in refractory psoriasis and psoriatic arthritis: a long-term case-series observational study. *Br J Dermatol*. 2016;174:1145–1146.
7. Babalola O, Lakdawala N, Strober BE. Combined biologic therapy for the treatment of psoriasis and psoriatic arthritis: a case report. *JAAD Case Rep*. 2015;1:3–4.
8. Torre KM, Payette MJ. Combination biologic therapy for the treatment of severe palmoplantar pustulosis. *JAAD Case Rep*. 2017;3:240–242.