**Title:** Effect of efgartigimod, a neonatal Fc receptor blocker, on humoral vaccine responses in autoimmune patients

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**Introduction:**

Immunosuppressive agents used to treat generalized myasthenia gravis (gMG) have been associated with an increased risk of infection and reported to impair immunogenicity to vaccines, specifically the recently developed SARS-CoV-2 vaccines. MG has also been suggested as a risk factor for severe Covid. Efgartigimod, a modified human IgG1 Fc fragment with increased affinity for neonatal Fc receptor (FcRn), blocks FcRn-mediated IgG recycling, leading to a rapid reduction of IgG. It is being evaluated in multiple autoimmune diseases, including gMG.

**Methods:**

We identified patients who were treated with efgartigimod that had been vaccinated prior to or during clinical studies in gMG (n=12) and pemphigus (n=15). Protective IgG antibody serum titers were measured for several pathogens in pemphigus patients throughout the study, regardless of vaccination history. Patients with gMG were vaccinated during the clinical studies and IgG levels were monitored to evaluate immune response.

**Results:**

gMG patients were vaccinated during and prior to efgartigimod treatment, at variable time points. Most patients received an influenza vaccine, and one also received a pneumococcal vaccine. Clear immune responses were seen to all pneumococcal and most influenza strains, except in one patient. The response persisted even with additional efgartigimod treatment. In the pemphigus study, anti-vaccine antibody titers followed the total IgG reduction but remained above determined protective levels in most cases, returning to baseline with treatment cessation.

**Conclusions:**

The data from these studies indicate that vaccination during or prior to efgartigimod treatment, does not hinder the ability of gMG patients to mount an immune response to those vaccines studies.

**Disclosures:**

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