Researchers suggest myasthenia gravis drug be tested for use in post-COVID-19 patients

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A significant proportion of patients who survive COVID-19 develop a constellation of life-altering symptoms that persist long after the initial infection has resolved. This post-COVID-19 syndrome may result from

the development of autoreactive IgG antibodies that cause inflammation and tissue injury.

The authors of a new article published in *Acta Materia Medica* suggest that efgartigimod, a drug approved for the treatment of generalized myasthenia gravis, be tested for use in patients with post-COVID-19.

Efgartigimod is a humanized IgG Fc fragment containing five point mutations that significantly increase affinity for the Fc region of the neonatal crystallizable fragment receptor (FcRn). FcRn is involved in the pathogenesis of autoimmune diseases via the IgG recycling pathway because FcRN binds to autoreactive IgG antibodies and prevents the antibodies from being catabolized.

Efgartigimod is a modified immunoglobulin that competitively displaces endogenous IgG from FcRn, thus increasing the level of unbound IgG, which is then catabolized and leads to decreased circulating levels of autoreactive as well as normal IgG.

The researchers suggest that efgartigimod be evaluated in a random, double-blind placebo-control trial in adults with post-COVID-19 for at least two months. If re-purposing this myasthenia gravis-approved drug for post-COVID-19 is successful, additional bioengineered FcRn antagonists should be tested for efficacy in patients with post-COVID-19.

More information: Sandra E. Reznik et al, Efgartigimod, an FcRn antagonist, as a potential treatment for post COVID-19 syndrome, *Acta Materia Medica* (2023). DOI: 10.15212/AMM-2023-0004

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