

## Intravenous immunoglobulin in treatment of multiple sclerosis

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**Background:** Intravenous immunoglobulin (IVIg) is a biologic immune-modulatory agent composed of polyclonal antibodies, derived from the plasma of a large pool of healthy donors. It is used to treat a number of autoimmune disorders, idiopathic diseases and infections. In addition to approved disease by U.S Food and Drug Administration (FDA), however, it is increasingly used for off-label it has indications in several other autoimmune disorders. Because of the high costs of this treatment, determining of patients, who may benefit from IVIg treatment is essential.

**Objective:** Evaluate effectiveness and safety of IVIg therapy as a potential treatment for multiple sclerosis (MS).

**Material and methods:** PubMed database was searched for all the recent studied associated with treatment of MS with IVIg. Essential data were extracted from studies and analyzed to determine the efficiency of IVIg treatment in patients with MS. The frequently of Possible side effects of IVIg treatment also were discussed.

**Results:** It was revealed that IVIg treatment in patients with MS caused a reduction of relapse rate (RR). The dose of IVIg also was effective in final treatment responses. High IVIg dose were demonstrated as a more effective compare to treatment with IVIg in lower dose. Additionally, a high-dose IVIg treatment was associated with more side effects.

**Conclusion:** IVIg could be introduced as an alternative second-line treatment in patients with MS, However, with regarding to relatively low number of studies; it still needs to be confirmed in additional studies in future, as dose determination of the optimal IVIG dose.

**Keywords:** Intravenous immunoglobulin, Multiple sclerosis, Relapse rate, Autoimmune disease