

CADTH Reference List

Intravenous Immunoglobulin Therapy for Neurological and Autoimmune Conditions

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Authors: Camille Santos, Jennifer Horton

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Key Message

No evidence was identified regarding the clinical effectiveness of IV immunoglobulin therapy in patients with neurological and/or autoimmune conditions.

Research Question

What is the clinical effectiveness of IV immunoglobulin therapy in patients with neurological and/or autoimmune conditions?

Methods

Literature Search Methods

A limited literature search was conducted by an information specialist on key resources including MEDLINE, the Cochrane Library, the University of York Centre for Reviews and Dissemination (CRD) databases, the websites of Canadian and major international health technology agencies, as well as a focused internet search. The search strategy comprised both controlled vocabulary, such as the National Library of Medicine’s MeSH (Medical Subject Headings), and keywords. The main search concepts were immunoglobulins and IV administration. Search filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, or network meta-analyses, randomized controlled trials, controlled clinical trials, or any other type of clinical trial. Comments, newspaper articles, editorials, and letters were excluded. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2016 and October 27, 2021. Internet links were provided, where available.

Selection Criteria

One reviewer screened literature search results (titles and abstracts) and selected publications according to the inclusion criteria presented in Table 1. Full texts of study publications were not reviewed.

Table 1: Selection Criteria

Criteria	Description
Population	Individuals of all ages with the following neurological and/or autoimmune conditions: Chronic inflammatory demyelinating polyneuropathy, Guillain-Barré Syndrome, idiopathic thrombocytopenic purpura and multifocal motor neuropathy
Intervention	IVIG products (i.e., Gammagard Liq, Gammagard S/D, Gamunex, IGIVnex, Octagam, Panzyga, Privigen)
Comparator	Alternative IVIG product (i.e., Gammagard Liq, Gammagard S/D, Gamunex, IGIVnex, Octagam, Panzyga, Privigen)

Criteria	Description
Outcomes	Clinical effectiveness (e.g., infection rate, hospitalization rate, HRQoL), safety (e.g., headache, pyrexia, hemolytic anemia, infusion-related reactions)
Study designs	Health technology assessments, systematic reviews, randomized controlled trials, non-randomized studies

HRQoL = health-related quality of life; IVIG = IV immunoglobulin.

Results

No health technology assessments, systematic reviews, randomized controlled trials, or non-randomized studies were identified regarding the clinical effectiveness of IV immunoglobulin therapy in patients with neurological and/or autoimmune conditions.

References of potential interest that did not meet the inclusion criteria are provided in Appendix 1.

References

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

No literature identified.

Randomized Controlled Trials

No literature identified.

Non-Randomized Studies

No literature identified.

Appendix 1: References of Potential Interest

Non-Randomized Studies

No Comparator

1. Arbach O, Taumberger AB, Wietek S, Cervinek L, Salama A. Efficacy and safety of a new intravenous immunoglobulin (Panzyga R) in chronic immune thrombocytopenia. *Transfus Med*. 2019;29(1):48-54. [PubMed](#)
2. Belmokhtar C, Lozeron P, Adams D, et al. Efficacy and Safety of Octagam R in Patients With Chronic Inflammatory Demyelinating Polyneuropathy. *Neurol Ther*. 2019;8(1):69-78. [PubMed](#)
3. Siddiqi ZA, Courtney K, Hanna K, Mondou E, Bril V. Gamunex R in Guillain-Barre Syndrome: A Postmarketing, Retrospective, Observational Study. *Can J Neurol Sci*. 2017;44(6):711-717. [PubMed](#)

Review Articles

4. Merkies ISJ, van Schaik IN, Leger JM, et al. Efficacy and safety of IVIG in CIDP: Combined data of the PRIMA and PATH studies. *J Peripher Nerv Syst*. 2019;24(1):48-55. [PubMed](#)
5. Wietek S. Octagam R for chronic inflammatory demyelinating polyneuropathy: results from three observational studies. *Neurodegener Dis Manag*. 2018;8(4):227-231. [PubMed](#)
6. Frenzel W, Wietek S, Svae TE, Debes A, Svorc D. Tolerability and safety of Octagam R (IVIG): a post-authorization safety analysis of four non-interventional phase IV trials. *Int J Clin Pharmacol Ther*. 2016;54(11):847-855. [PubMed](#)