



Title Subcutaneous Versus Intravenous Immunoglobulin for Primary Immunodeficiencies: Systematic Review and Economic Evaluation

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Aim

To assess the clinical and cost effectiveness of subcutaneous immunoglobulin (SCIg) compared with intravenous immunoglobulin (IVIg); to investigate the budget impact of switching between therapies; and to investigate the use of immunoglobulin (Ig) in Canadian patients with conditions other than primary immunodeficiencies (PIDs).

Conclusions and results

The clinical evidence suggests similarities between SCIg and IVIg in terms of most outcome measures, except quality of life (QoL), which was higher among SCIg patients. A switch from hospital IVIg to SCIg or home IVIg would save 700 to 1000 Canadian dollars (CAD) per person yearly, given certain assumptions. Home IVIg yields the larger net gain by avoiding hospital and treatment or diagnostic charges. Compared to home IVIg, SCIg is attractive, if decision makers are willing to pay CAD 39 500 for a QALY. Information about the magnitude of initial investment, including training costs and comparative effectiveness, is needed to validate this. The comparison between IVIg and SCIg is based on limited clinical and economic information. SCIg may be considered as a reasonable alternative for patients with contraindications to IVIg and poor venous access.

Recommendations

Until reliable comparative clinical and cost-effectiveness conclusions can be drawn, an option for Canadian decision makers may be to gradually establish SCIg as an alternative for patients who are willing and clinically suitable to switch to SCIg.

Methods

A systematic review of the clinical and economic evidence from published and unpublished literature was conducted using accepted methods for the literature search, article selection, data extraction, and quality assessment. For the clinical review, randomized con-

trolled trials (RCTs) and non-RCTs comparing clinical outcomes and adverse events for IVIg and SCIg were included. For the economic review, non-Canadian comparative cost-minimization studies were summarized. The cost effectiveness of SCIg versus IVIg was examined using two approaches: cost-minimization analysis (CMA) and cost-utility analysis (CUA). The budget impact on the provincial healthcare system if patients were switched between therapies was estimated. Reviews and consensus documents were examined to identify the evidence for the use of Ig in conditions other than PIDs.

Further research/reviews required

Clinical and economic information comparing IVIg and SCIg is limited. High quality RCTs are needed.