



Title: Immunoglobulins in Transplant Medicine. Prevention and Therapy of Cytomegalovirus Infection

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Reference: ITA-Reports, August 2/2001

Aims and Background:

Cytomegalovirus (CMV) infections are one of the most common infection complications in transplant recipients. The most important criteria for risk evaluation are: CMV – antibody constellation between donor and recipient, the type of immune-suppressive therapy, and the transplanted organ itself. The most favorable prophylactic treatment/therapy regime and the starting point of the intervention have been discussed for some time. The aim of this assessment is to analyze the clinical effectiveness of immunoglobulins (IG) in the prevention/therapy of CMV infections in transplant patients and to compare IG with other prevention/therapy regimes (virustatica, eg, Ganciclovir) with regard to clinical effectiveness and cost-effectiveness.

Results:

- With IG there is a significant reduction in CMV infections and diseases in comparison to placebo or no prophylactic treatment or therapy.
- A comparison of efficacy based on systematic reviews and meta-analyses offers no evidence that IG is more effective than virustatica. There is no evidence for additional effects of IG in antiviral therapy.
- A review of cost-effectiveness studies shows that virustatica are the most cost-effective option for prophylaxis and therapy of CMV.

Conclusions:

- Active CMV infection can be diagnosed by laboratory tests even before clinical symptoms appear. This allows for a combined CMV management consisting of risk-adapted prophylactic treatment in high-risk groups and the start of preemptive therapy.
- Despite lower toxicity of IG, this added value is only marginal because of the many times higher costs and the similar, inclining lower clinical efficacy in comparison to virustatica (eg, Ganciclovir).

Methods:

This assessment is based on a systematic review and meta-analysis of IG for prevention/therapy of cytomegalovirus. Additionally, basic knowledge on CMV infection, the frequency of transplantation, and cost issues are analyzed.

This assessment is available in German only. Full report at: www.oeaw.ac.at/ita/hta