



## Hypogammaglobulinemia and risk of severe infection in kidney transplant recipients

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## Background

Recent data have outlined a link between hypogammaglobulinemia (HGG) and infection risk and suggested that HGG correction may decrease post-transplant infections.

## Methods

We analyzed the risk factors of HGG and the relationship between HGG and the risk of severe infection in a cohort of 318 kidney transplant recipients (KTR) who were transplanted between 2003 and 2013. Immunoglobulin (Ig) concentration was measured prospectively at day 15 (D15), month 6 (M6), month 12 (M12), and month 24 (M24) post transplant.

## Results

The prevalence of IgG HGG was 56% and 36.8% at D15 and M6, respectively. Age was the sole identified risk factors for D15 IgG HGG (odds ratio [OR] 1.02,  $P = 0.019$ ). Risk factors for M6 IgG HGG were the presence of D15 IgG HGG (OR 6.41,  $P < 0.001$ ) and treatment of acute rejection (OR 2.63,  $P = 0.014$ ). Most infections occurred between D15 and M6 post transplant. Only age (hazard ratio 1.03,  $P < 0.001$ ) was identified as a risk factor of infection between D15 and M6 post transplant. Survival free of infection (overall infections and bacterial or viral infections) did not differ significantly between patients with or without D15 IgG HGG. Only septicemia occurring between M6 and M12 post transplant was more frequently observed in patients with HGG. The low prevalence of severe HGG ( $<400$  mg/dL) did not allow conclusions on the infectious risk associated with this patient subgroup.

## Conclusions

This study does not support the existence of a strong link between post-transplant HGG and the risk of severe infections in KTR. Correction of HGG to minimize the risk of severe infections in KTR is thus questionable and needs to be reevaluated in prospective studies.

## Résumé en anglais

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