

The Role of Cytokines and Cytokine Gene Polymorphism in T-cell Activation and Allograft Rejection

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Abstract

Introduction: Cytokines are largely responsible for the regulation of immunoregulatory events and therefore play an important role in transplantation immunology. Recent advances in genetics have made it possible to study the role of cytokine gene polymorphisms in allograft rejection. **Methods:** This review describes studies that have analysed genetic variants in relation to renal disease and transplantation. **Results and Conclusion:** Polymorphism of cytokine gene promoters can significantly influence the level of cytokine production, which in turn affects the amount of immunosuppression needed. It is possible that in future, genotyping of transplant recipients with respect to their cytokine gene polymorphisms may help determine their risk of allograft rejection, and thus, provide a guide to individualised immunosuppression in the post-transplant period.

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