【Symposium 3-2】

Immunosuppression and cardiovascular disease

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Although current immunosuppression has afforded excellent short-term outcomes in kidney transplant, the off-target effects of these medications may contribute to cardiovascular disease risk. These include increased hypertension (calcineurin inhibitors and steroids), dyslipidemia (steroids and mTOR inhibitors), and post-transplant diabetes (calcineurin inhibitors, steroids, and mTOR inhibitors). Studies have examined if adjustment of immunosuppression regimens may improve cardiovascular disease risk factors, but often, one factor is helped at the exacerbation of another. For example, studies of conversion from calcineurin inhibitors to mTOR inhibitors after kidney transplant found no changes in post-transplant diabetes risk but a significant increase in hypercholesterolemia, acute rejection, proteinuria, and anemia. The potential benefits of altering immunosuppression regimens must be weighed against the risk of allograft rejection and is not recommended as standard-of-care management aiming to reduce cardiovascular risk factors. Modification of immunosuppression may only be considered in the presence of resistant hypertension, refractory hyperglycemia, uncontrolled dyslipidemia in the absence of any other cause, when graft function is stable and there have been no recent rejection episodes.