

# Are Cytomegalovirus-Naive Kidney Transplant Recipients at Increased Risk of Vascular Thrombosis?

Farahnak Assadi\*

Distinguished Professor Emeritus, Department of Pediatrics, Division of Nephrology, Rush University Medical Center, Chicago, IL USA.

**\*Corresponding Author**

Farahnak Assadi, MD,

Email: [fassadi@rush.edu](mailto:fassadi@rush.edu)

Human cytomegalovirus (CMV) infection is the most common opportunistic pathogen after solid organ transplantation (1). CMV infections following transplantation are associated with increased risk of thromboembolic events in the kidney transplant recipients (2-6). Hypercoagulability, graft dysfunction, and cardiovascular events are the leading morbidity and mortality risks in the solid organ transplant recipients (2, 7,8). Recent data suggests a CMV donor positive/recipient negative (D+/R-) transplantation is associated with a higher risk of thromboembolic events than in a CMV donor negative/recipient negative (D-/R-) or donor negative/recipient positive (D-/R+) following kidney transplantation (9). Whether thrombosis following acute CMV infection in transplants patients is a consequence of direct viral replication or indirect immune effect is unclear. The rate of post transplant thromboembolic events in the setting of acute CMV infection is higher in male than in female (6.1/1) (10,11). The higher rates of thromboembolic events in men are more likely due to higher incidence of cardiovascular risk factors such as hypertension and cigarette smoking. The high rates of venous thrombosis in women may be related to obesity and estrogen exposure.

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