



Intravenous literature: Montagnana, M., Meschi, T., Borghi, L. and Lippi, G. (2011) Thrombosis and occlusion of vascular access in hemodialyzed patients. *Seminars in thrombosis and hemostasis*. 37(8), p.946-54.

Abstract:

Patients undergoing chronic hemodialysis have a high risk of arterial thrombotic events as well as vascular access thrombosis (VAT). The latter complication has been consistently associated with inherited (i.e., the prothrombin 20210 polymorphism, and polymorphisms in the genes encoding for transforming growth factor- β 1, nitric oxide synthase, plasminogen activator inhibitor-1, angiotensin converting enzyme, and methylene tetrahydrofolate reductase), and acquired thrombotic risk factors (i.e., diabetes, obesity, atrial fibrillation, hypertension, hyperhomocysteinemia, hyperlipoproteinemia(a), low serum albumin, antiphospholipid antibodies, autoantibodies against protein C and S, erythropoietin administration, malnutrition, and cytomegalovirus infection). The three main factors involved in the pathogenesis of VAT overlap those of venous thrombosis and therefore include endothelial cell injury, blood stasis, and hypercoagulability. These changes are characteristic of patients affected by end-stage renal disease and might be further aggravated during and after hemodialysis. The aim of this review is to describe the epidemiology and pathogenesis of thrombosis of dialysis vascular access and to discuss the application of therapeutic interventions in prevention and treatment of this clinical problem.



