

Effects of frequent hemodialysis on blood pressure

Division of Nephrology, Department of Internal Medicine
Incheon Christian Hospital

Do Hyung Kim

All over the world, most patients with end-stage renal disease (ESRD) on maintenance hemodialysis (HD) receive treatment on a thrice-weekly pattern, thus remain outside dialysis for two short intervals (~2 days in duration) and for a longer interval (~3 days) at the end of each week. Because of the consequent shifts and fluctuations in volume status and metabolic parameters during the dialysis-free periods, observational studies associate long dialysis intervals with an excess risk for mortality and cardiovascular disease hospitalizations. In recently, frequent HD regimens have been proposed with the aim to improve survival and other important patient outcomes. Previous observational studies support that more frequent dialysis resulted in higher quality-of-life scores and lower systolic blood pressure and left ventricular mass, control of phosphorous levels and other intermediate end points when compared with conventional thrice-weekly in-center HD. But, it also led to more vascular access procedures and more episodes of intradialytic hypotension. Additionally, long nocturnal HD resulted in more rapid residual kidney function loss and increased perceived caregiver burden. So, frequent HD must be carefully selected according to the condition of the patient.