Large-volume ultrafiltration during dialysis tended to increase VA failure in hemodialysis patients. We thus recommend smaller ultrafiltration volumes during hemodialysis to secure VA safely” Asano et al (2016).

Abstract:

INTRODUCTION: The relationship between intradialytic ultrafiltration volume and vascular access (VA) patency remains unclear. Using data from the Japan Dialysis Outcomes and Practice Patterns Study, we analyzed whether large-volume ultrafiltration was associated with VA failure in hemodialysis patients.

METHODS: We included 2736 patients for whom it was possible to evaluate VA patency and bodyweight change during dialysis. Patients were divided into three groups according to the tertile of intradialytic ultrafiltration by bodyweight: low, -9.5%-3.8%; middle, 3.8%-5.1%; and high, 5.1%-13.7%. Primary VA patency was defined as the time to first VA intervention, and secondary patency as the time to creation of a new VA. Hazard ratios for VA failure were compared across groups by using Cox regression models adjusted for age, sex, body mass index, diabetes, hemoglobin and phosphorus levels, Kt/V, and erythropoiesis-stimulating
agent and antiplatelet use.

RESULTS: For the low, middle, and high groups, the incidences of primary and secondary VA patency were 4.7, 5.6, and 6.7 events/100 person-years and 1.3, 1.6, and 1.7 events/100 person-years, respectively. Adjusted hazard ratios for primary VA patency in the middle and high groups versus the low group were 1.16 (95% confidence interval , 0.88-1.52) and 1.41 (95% CI, 1.07-1.87), respectively; those for secondary VA patency were 1.29 (95% CI, 0.78-2.13) and 1.45 (95% CI, 0.86-2.45), respectively.

DISCUSSION: Large-volume ultrafiltration during dialysis tended to increase VA failure in hemodialysis patients. We thus recommend smaller ultrafiltration volumes during hemodialysis to secure VA safely.

Reference:


Thank you to our partners for supporting IVTEAM