Influence of intradialytic systolic blood pressure changes on arteriovenous access thrombosis in long-term hemodialysis patients

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Abstract

Background: Arteriovenous access (AV) thrombosis is important and preventable problem among chronic hemodialysis (HD) patients. On the other hand, systolic blood pressure (SBP) alteration relates with higher cardiovascular mortality among these patients. In this study, we investigated the relation between SBP changes and arteriovenous access (AV) thrombosis. Methods: 50 HD patients with thrombosis and 50 HD patients without thrombosis were included in the study. Odds ratios and 95% confidence intervals were estimated with multivariate adjusted logistic regression models to determine the association between potential thrombosis-related risk factors and thrombosis risk. Results: Elder adults, women, and patients with arteriovenous grafts, lower intradialytic SBP and higher SBP variations during dialysis sessions had higher incidence of AV access thrombosis. Chronic inflammation and mineral metabolism related parameters were also found to be abnormal at the time of AV access thrombosis. Conclusions: Close monitoring and management of intra-dialytic hypotension, SBP variation in every dialysis session and correction of biochemical parameters are critical for earlier identification and prevention of AV access thrombosis in HD patients.

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