Thrombophilia screening in cuffed hemodialysis catheter thrombosis

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Background: In patients with renal failure in need of hemodialysis in some cases we are forced to use cuffed catheters. Cuff thrombosis is one the prevalent complications in these patients. Various factors are recommended as a cause of thrombosis that thrombophilia is recommended as one of these causes. In this study, we evaluated hereditary thrombophilia factors in hemodialysis patients and their role in thrombosis of permanent catheters.

Methods: in this cross-sectional descriptive study, 60 patients with renal failure including 13 male and 47 female with mean age of 60.30±8.69 years whom permanent dialysis catheters were implanted, selected and levels of INR, PTT, prothrombin C and S, Anthithrombin III, Lupus anticoagulant, Factor V leiden were measured. Patients were followed for three months and thrombosis incidence was evaluated in these patients.

Results: High blood pressure and diabetes were common causes for renal failure (41.67% and 31.67%, respectively). Protein C in 35%, protein S in 23.3% and anthithrombin III in 15% of cases were lower than normal range. Factor V leiden was also positive in 3.33% and lupus anticoagulant was negative in all cases. Catheter thrombosis during follow-up was occurred in 36.7%. there was no significant difference in hereditary thrombophilia factors between patients with and without thrombosis.

Conclusion: Despite high incidence of hereditary thrombophilia factors in hemodialysis patients, there were no significant differences between patients with and without thrombosis and so the role of hereditary thrombophilia factors in causing catheter thrombosis in these patients is not clear.

Keywords: Renal failure; Hemodialysis; Catheter; Thrombosis; Thrombophilia