Pharmacomechanical Thrombolysis versus Surgical Thrombectomy for the Treatment of Thrombosed Haemodialysis Grafts

Keerati Hongsakul, ¹MD, Sorracha Rookkapan, ¹MD, Jitpreedee Sungsiri, ¹MD, Ussanee Boonsrirat, ²MD, Boonprasit Kritpracha, ³MD

Abstract

Introduction: The key to treatment of a thrombosed dialysis graft is restoration and maintenance of function as long as possible. The objective of this study was to compare the outcomes of pharmacomechanical thrombolysis and surgical thrombectomy in the treatment of thrombosed haemodialysis grafts. 

Materials and Methods: During a 3-year period, 108 patients with 114 thrombosed dialysis grafts were referred to our institute for treatment. Fifty thrombosed dialysis grafts underwent pulse-spray catheter thrombolysis using recombinant tissue plasminogen activator (rt-PA) with angioplasty, and 64 thrombosed dialysis grafts underwent surgical thrombectomy. The procedural success rates, complications and average patency times and patency rates were compared between the 2 procedures. 

Results: There were no statistically significant differences between the pharmacomechanical thrombolysis group and the thrombectomy group in the procedural success rates (94% and 93.8%, P = 0.15) or average patency times (6.24 months and 6.30 months, P = 0.17). The primary and secondary patency rates at 12 months were 28.0% ± 8.4% and 54.3% ± 7.8% for the thrombolysis with angioplasty group, and 30.0% ± 6.3% and 57.0% ± 4.8% for the thrombectomy group, respectively (P = 0.65 and P = 0.49, respectively). There were no procedural-related major complications.

Conclusion: Our study found no differences in outcomes between patients treated with pharmacomechanical thrombolysis and surgical thrombectomy for thrombosed haemodialysis grafts. Pharmacomechanical thrombolysis can be considered as an alternative treatment for dialysis graft thrombosis.

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¹Vascular & Interventional Unit, Department of Radiology, Faculty of Medicine, Prince of Songkla University, Thailand
²Division of Nephrology, Department of Medicine, Faculty of Medicine, Prince of Songkla University, Thailand
³Vascular Surgery Unit, Department of Surgery, Faculty of Medicine, Prince of Songkla University, Thailand

Address for Correspondence: Dr Keerati Hongsakul, Vascular & Interventional Unit, Department of Radiology, Faculty of Medicine, Prince of Songkla University, 15 Kanchanavanit Road, Hat Yai, Songkhla 90110, Thailand.

Email: keerati.hongsakul@gmail.com