

Abstract Submission No.: A-0541**Immediate and Short-term Outcomes of Endovascular Thrombectomy of Arteriovenous Access with Vacuum-assisted Thrombectomy Device**

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Objectives : Percutaneous angioplasty or thrombectomy is increasingly relevant in the salvage of thrombosed arteriovenous fistula or graft in end-stage renal disease (ESRD) patients on haemodialysis. Mechanical techniques such as vacuum-assisted thrombectomy devices may offer potential benefits to procedural success and reduce complication rates. In this study, we aim to analyse the angiographic and clinical outcomes of percutaneous thrombectomy or angioplasty assisted by vacuum-assisted thrombectomy catheter in acute arteriovenous fistula or graft thrombosis.

Methods : Participants with acute thrombosis of arteriovenous fistula or graft who underwent percutaneous angioplasty with vacuum-assisted mechanical thrombectomy device were included in this study. A cohort of 33 patients who underwent the procedure between 21 Feb 2023 to 16 Nov 2023 were included in this preliminary analysis. Endpoints of study were defined as angiographic success, clinical success and 3-month access circuit primary patency (ACPP). The Kaplan-Meier analysis was used to analyse the survival rate of vascular access following successful procedure.

Results : Of the 33 cases included in the analysis, 67% were arteriovenous fistula while the remaining 33% were arteriovenous graft. 63.6% of the access were aneurysmal. Angiographic and clinical success was achieved in 87.9% cases (29/33). Complications occurred in 15.2% of cases. The complications reported were perforation (n=3) and pseudoaneurysm (n = 2). None of the complications was device-related. Residual thrombus was present in 39.4% of cases. The mean procedure time was 161.5 ± 67.4 min. The median fluoroscopy time, skin dose and dose area product were 19.1 (IQR 14.4, 33.8) min, 33 (IQR 18,28) mGy and 503 (IQR 338, 674) μGycm², respectively. Kaplan-meier analysis demonstrated median post intervention ACPP of 157 (95% CI 122 -193) days.

Conclusions : Vacuum-assisted mechanical thrombectomy may be an effective and safe alternative method to perform endovascular thrombectomy. Longer-term patency result is needed.