Perspective

Journal of Interventional Nephrology

Dialysis Access Thrombectomy: Restoring Function in Thrombosed Vascular Access

Olivia Grant*

Dept. of Interventional Medicine, Northshore University, Canada

*Author for correspondence: olivia.grant@nshore.ca

Received: 01-Jun-2025, Manuscript No. oain-26-184859; **Editor assigned:** 03-Jun-2025, PreQC No. oain-26-184859 (PQ); **Reviewed:** 17-Jun-2025, QC No. oain-26-184859; **Revised:** 21-Jun-2025, Manuscript No. oain-26-184859 (R); **Published:** 30-Jun-2025, DOI: 10.37532/oain.2025.8(3).380-381

Introduction

Reliable vascular access is essential for effective hemodialysis, and arteriovenous (AV) fistulas and grafts serve as lifelines for patients with end-stage renal disease. Thrombosis remains one of the most common causes of access failure and can abruptly interrupt dialysis treatment, leading to increased morbidity and reliance on temporary central venous catheters [1,2]. Dialysis access thrombectomy refers to a range of surgical and endovascular techniques aimed at removing thrombus and restoring access patency. Timely intervention is critical to preserve access function and prevent permanent loss.

Discussion

Dialysis access thrombectomy is typically indicated when an AV fistula or graft becomes acutely occluded. Endovascular thrombectomy has become the preferred initial approach in many centers due to its minimally invasive nature and high technical success rates. These procedures are performed under fluoroscopic guidance and often combine mechanical clot disruption, aspiration, and pharmacologic thrombolysis to rapidly clear thrombus. Common techniques include balloon-assisted thrombectomy, rheolytic devices, and rotational or aspiration systems [3,4].

Successful thrombectomy requires identification and treatment of the underlying cause of thrombosis, most commonly venous outflow stenosis. Following thrombus removal, percutaneous transluminal angioplasty is routinely performed to correct the causative lesion and reduce the risk of recurrent thrombosis. In selected cases, stent grafts may be placed to maintain long-term patency, particularly in recurrent or resistant stenoses.

Surgical thrombectomy remains an important option, especially for large clot burdens, complex anatomy, or when endovascular therapy is unsuccessful or unavailable. Surgical approaches allow direct clot removal and access revision but are associated with longer recovery times and higher procedural morbidity. Regardless of technique, early intervention—ideally within 24 to 48 hours of thrombosis—significantly improves access salvage rates.

Complications of dialysis access thrombectomy include bleeding, embolization, vessel injury, and infection. Careful patient selection, experienced operators, and post-procedural monitoring are essential to minimize risks. Regular access surveillance and prompt treatment of stenosis play a key role in preventing thrombosis [5].

Conclusion

Dialysis access thrombectomy is a critical intervention for preserving functional hemodialysis access and maintaining continuity of patient care. Endovascular techniques have become the mainstay of treatment, offering effective clot removal with minimal invasiveness and rapid recovery. When combined with correction of underlying lesions and vigilant follow-up, thrombectomy can significantly extend access lifespan. A multidisciplinary approach involving nephrologists, interventional specialists, and dialysis

staff is essential to optimize outcomes and reduce the burden of access-related complications.

References

1. Parkinson J (2002) An essay on the shaking palsy. J Neuropsychiatry Clin Neurosci 14:223-236.
2. Morris AD, Rose FC, Birkhauser, Boston, MA (1989) James Parkinson His Life and Times, Deaths associated with neurological conditions in England.
3. GBD 2015 Neurological Disorders Collaborator Group (2017) Global, regional, and national burden of neurological disorders during 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. Lancet Neurol 16:877-897.
4. Wilson MR, Sample HA, Zorn KC, Arevalo S, Yu G, et al. (2019) Clinical met genomic sequencing for diagnosis of meningitis and encephalitis. N Engl J Med 380:327-340.
5. Johnson TP, Nath A (2018) Neurological syndromes driven by post infectious processes or unrecognized persistent infections. Curr Opin Neurol 31:318-324.