Unwarranted variation in renal protection for high-risk peripheral angioplasty: A modifiable patient safety gap

Nijat Rzayev, Abhinav Deshwal, April Herathge, Murtaza Salem
Nottingham University Hospitals NHS Trust, Nottingham

Background

Post-contrast acute kidney injury (PC-AKI) is associated with prolonged hospitalisation, cardiovascular events, and increased mortality. Patients with chronic kidney disease (CKD) or eGFR <60 mL/min/1.73m^2 are at highest risk. International guidance, including KDIGO and the European Society of Urogenital Radiology, recommends structured renal risk stratification, intravenous isotonic hydration, medication optimisation, and post-procedure renal monitoring. While coronary pathways are protocolised in our institution, no equivalent vascular-specific guidance exists for peripheral angioplasty.

Methods

A retrospective audit of 160 consecutive patients undergoing peripheral angioplasty over five months was performed. Forty patients (25%) had baseline eGFR <60 mL/min/1.73m^2 and were classified as high risk. Compliance with renal protective measures and incidence of PC-AKI (≥26 µmol/L creatinine rise within 48–72 hours) were assessed against established standards.

Results

Among high-risk patients (n=40), pre-procedure hydration was delivered in 80%, post-procedure hydration in 65%, and combined hydration in 65%. Twenty percent received no documented periprocedural hydration. Nephrotoxic medications were appropriately managed in 80% of cases. Post-procedure renal function was reassessed in 85%. PC-AKI occurred in 5% (2/40); notably, both cases occurred in patients who received neither hydration nor medication optimisation.

Conclusions

Significant variation exists in renal protective practice for high-risk peripheral angioplasty. One in five patients received no documented preventative measures, and all AKI events occurred in unprotected patients. This represents a clearly modifiable patient safety gap. Standardising vascular renal protection pathways offers a low-cost, high-impact opportunity to reduce preventable harm and improve peri-procedural equity of care.

Are we in equipoise? Open versus hybrid aorto-iliac revascularisation and implications for UK national trial recruitment

Georgios Georgallides, Mohammed Fageer, Jae Seon Hong, Albagir Altahir, Tamer El-Sayed, Sandip Nandhra
Northern Vascular Centre, Freeman Hospital, Newcastle Upon Tyne

Background

Aorto-iliac occlusive disease (AIOD) threatens limb and function. Open repair in the past was seen as preferred, yet contemporary practice increasingly favours endovascular and hybrid strategies. Whether this shift is evidence-driven or preference-driven remains unclear — a central issue for the UK EVOCC trial. Can reviewing our own real-world data restore genuine equipoise and support balanced national recruitment?

Methods

A retrospective review was performed of CLTI patients who underwent aorto-iliac intervention at a single tertiary vascular centre between January 2023 and December 2024. Outcomes assessed included hospital stay, 30-day readmission, re-occlusion, re-intervention, surgical site infection, amputation, cardiovascular events, and mortality.

Results

In total, 104 patients were identified: 23 (22.1%) underwent open repair and 81 (77.9%) hybrid procedures. The hybrid cohort was older with higher ASA grades and rates of hypertension ($p < 0.05$). No statistically significant differences were observed for any 30-day outcome. Hybrid repair demonstrated a shorter hospital stay (median 5 vs 7 days), lower rates of re-admission (9 [12.3%] vs 5 [26.3%]) and re-occlusion (5 [6.4%] vs 4 [18.2%]), however not significant. Mortality was higher after open repair (3 [13%] vs 4 [4.9%]), though again not significant. Overall complication rates were similar.

Conclusions

Even accounting for selection bias, short-term outcomes were comparable between open and hybrid repair. In the context of evolving practice patterns, this reinforces genuine equipoise and highlights the responsibility to recruit into the UK EVOCC trial rather than default to preference-driven treatment.

Patient reported outcomes after iliofemoral deep venous thrombosis: The experience of a tertiary centre in the United Kingdom

Youssef Ramadan, Ahamed Mohideen, Ahmed Abdel Rahim, Paul Jenkins, Devender Mittapalli
University Hospitals Plymouth NHS Trust, Plymouth

Background

Post-thrombotic syndrome (PTS) after iliofemoral deep venous thrombosis (DVT) can negatively impact patients' quality of life. Intervention can mitigate that by reducing the risk of PTS. The aim of this study was to compare quality-of-life outcomes of iliofemoral DVT patients managed with intervention to those managed medically at a tertiary centre in the United Kingdom (UK).

Methods

Data was collected retrospectively for iliofemoral DVT patients between January 2020 and December 2024, including demographics, diagnosis, length of stay, management, and complications. After excluding deceased and uncontactable patients, a telephone survey was administered comprising a EuroQol EQ-5D survey and Venous Disability Score (VDS). Statistical analyses were done using Mann-Whitney U-tests, Chi-squared tests, Fisher's exact tests or Student's t-tests.

Results

Of 106 iliofemoral DVT patients, 90 (84.9%) were managed medically and 16 (15.1%) underwent intervention. 34 deceased and 20 were uncontactable were excluded. 45 of the remaining 52 patients (86.5%) participated in the survey (33/45 medical management cohort; 12/45 intervention cohort). Median ages were 67 (range 28-91) and 50 (range 22-62) years in the medical and intervention cohorts, respectively. Medical management was anticoagulation and compression hosiery. Intervention patients underwent catheter directed thrombolysis, with 8/12 (75.0%) also undergoing mechanical thrombectomy. Mobility, usual activity and VDS were significantly better in the intervention cohort ($p = <0.05$, 95% Confidence Interval). Differences between self-care, pain/discomfort and anxiety were not statistically significant.

Conclusion

This study supports existing evidence that patients undergoing intervention for iliofemoral DVT experience better functional outcomes compared to those managed medically.

Who and when: Real-world selection and timing for DVT recanalization

Fernanda Binati, Zahi Qamhawi, Andrew Wigham, Emma Wilton
Oxford NHS Trust Hospital, Oxford

Background

Endovascular therapy for DVT may reduce long-term complications such as post-thrombotic syndrome by restoring venous outflow. While international guidelines support early thrombus removal in selected patients, particularly those with iliofemoral or central involvement, real-world referral patterns, access to intervention, and decision-making processes remain underreported.

Aim

To evaluate referral patterns, time to treatment, procedural types, and reasons for non-intervention in patients referred with DVT.

Methods

A retrospective audit was performed on 154 patients referred to a tertiary vascular unit between April 2024 and July 2025. Data collected included demographics, thrombosis location, active malignancy, review-to-intervention interval, type of intervention, and clinician-documented reasons for conservative management. Comparative analysis was conducted between intervention and non-intervention groups.

Results

Of 154 patients, 43 (28%) underwent endovascular intervention. Treated patients were younger (median 48 vs 66 years, $p<0.001$) and less likely to have active cancer (12% vs 36%, $p<0.01$). IVC involvement (42%) and upper-limb DVT (41%) were associated with higher rates of intervention. Median time from specialist review to procedure was 3 days (IQR 1–7). Therapies included aspiration thrombectomy (51%), mechanical thrombectomy (47%), venous stenting (40%), and no thrombolytic infusions . Among 111 non-treated patients, common reasons included clinical improvement (16), distal clot burden (13), frailty or comorbidity (12), and minimal symptoms (9).

Conclusion

Most patients referred with DVT were treated conservatively. Treatment decisions were influenced by age, cancer status, clot location, and clinical evolution. Increased awareness of referral criteria and prompt access to vascular expertise may improve equity in endovascular treatment delivery.

Time between referral and angioplasty in CLTI patients and its impact on patient outcomes

Kathryn Reid
University of Glasgow, Glasgow & University Hospital Hairmyres, East Kilbride

Background

Chronic limb threatening ischaemia (CLTI) represents the most severe form of peripheral arterial disease and carries a high risk or amputation and mortality. Timely revascularisation through angioplasty is vital for limb salvage. National guidance from the Vascular Society of Great Britain and Ireland (VSGBI) recommends angioplasty within five days of referral for inpatients and 14 days for outpatients. The aim was to evaluate compliance with national revascularisation targets and identify causes of delay in patients with CLTI at a specific hospital.

Methods

A retrospective project was conducted of 120 CLTI patients referred for angioplasty between February 2025 and June 2025. Data was collected from electronic patient records and Picture Archiving and Communication System (PACS), including referral date, procedure date and inpatient/outpatient status. The interval between referral and angioplasty was calculated and compared with national standards.

Results

The median inpatient interval was 7 days (IQR 4–16), with 38% meeting the five day target. The median outpatient delay was 49 days (IQR 29.5–70.5), with only 12% achieving the 14 day standard. Primary causes of delay were likely limited interventional radiology capacity, delays in pre-procedural imaging and inconsistent referral prioritisation.

Conclusion

The hospital assessed in this project demonstrates partial compliance with national CLTI revascularisation timelines. While inpatient delays were moderate, outpatient waiting times were substantially prolonged. Service redesign, including a fast-track CLTI imaging pathway, dedicated angioplasty lists and improved referral process is recommended to reduce delays and align local practice with national standards.