Suprainguinal Inflow For Distal Bypasses Have Acceptable Patency and Limb Salvage Rates

Molly Ratner[1], Heepeel Chang, MD[2], Mikel Sadek, MD[1], Jeffrey J. Siracuse, MD MBA[3], Thomas Maldonado, MD[1], Neal Cayne[1], Glenn Jacobowitz, MD[1], Caron Rockman, MD[1], Karan Garg, MD[1].

[1]New York University Langone Hospital, New York, NY, USA, [2]Westchester Medical Center, New York, NY, USA, [3]Boston Medical Center, Boston, MA, USA.

NYU Langone Health — Division of Vascular Surgery

BACKGROUND

The purpose of this study is to report outcomes after lower extremity bypass (LEB) originating from aortoiliac arteries to infra-femoral targets.

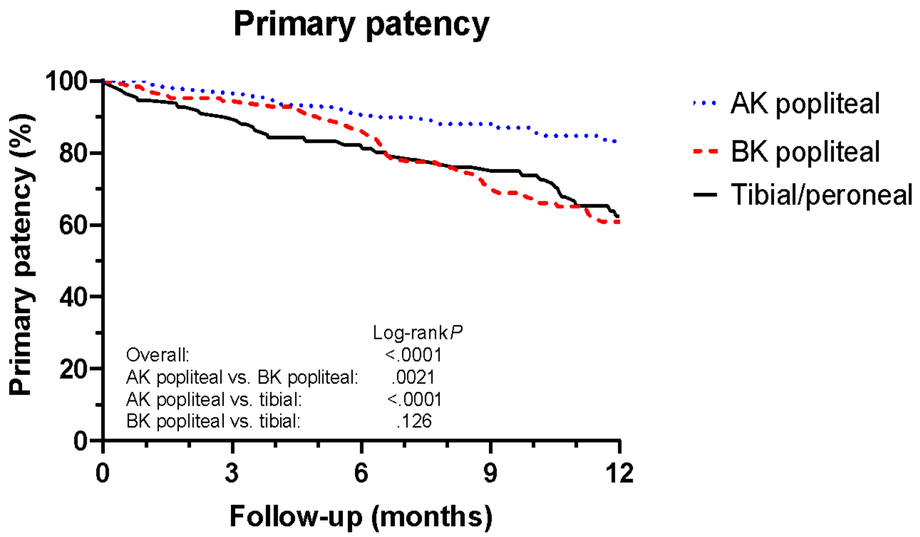
METHODS

VQI was queried for patients undergoing LEB from the aortoiliac arteries to the popliteal and tibial arteries.

Patients were stratified into three cohorts based on outflow targets (above-knee [AK] popliteal, below-knee [BK] popliteal and tibial arteries [TA]).

Perioperative and 1-year outcomes including primary patency, amputation-free survival, and major adverse limb events (MALEs) were compared.

Figure 1: One Year Primary Patency of Above-knee popliteal, Below-knee popliteal and Tibial Artery Bypasses



RESULTS

PERIOPERATIVE:
- Of 403 LEBs: 389 originated from the external iliac artery with the remaining originated from the aorta or common iliac
- Distal target: AK (28.8%), BK popliteal (27.5%), TA (43.7%)
- BK pop and TA more commonly performed in patients with CLTI
- Vein conduit was more often used for TA bypasses than popliteal bypasses
- Perioperative: BK popliteal and TA bypasses associated with higher reoperation rates (17% and 14% vs 5%; P = .015) and lower primary patency (91% and 90% vs 96%; P = .044)

ONE YEAR FOLLOW-UP
- BK and TA bypasses, compared to AK pop, demonstrated lower primary patency (60.9% and 62.3% vs 83.3%; P < .001; Fig 1) and amputation-free survival (69.1% and 66.4% vs 79.4%; P = .0223)
- Freedom from MALE was comparable
- On multivariable analysis, TA bypasses were independently associated with increased loss of primary patency (HR 1.9, 95% CI 1.03-3.51, p = .039)

CONCLUSION

LEB with supra-inguinal inflow appear to have acceptable rates of 1-year patency and limb salvage in patients at high risk of bypass failure. Tibial outflow target was independently associated with worse primary patency but not with MALE.

The authors have no conflicts of interest to report.