

Table 4. Algorithmic Approach for BK Interventions

1. Ipsilateral antegrade access under US and fluoroscopic guidance
2. Endoluminal crossing and POBA first.
 - a. If unsuccessful → careful SI crossing is attempted
3. SI crossing:
 - b. Avoid damaging distal target vessel
 - c. Be prepared for worsening ischemia due to damaged collaterals if you are unable to reenter or damage the target vessel
 - d. If SI unsuccessful
 - i. Patient uncomfortable but the limb stable, or high contrast and radiation dose → staged procedure
 - ii. Otherwise, proceed with careful retrograde approach
4. Retrograde approach:
 - e. Can be adopted as primary approach when:
 - i. Flush occlusion of the tibial vessels
 - ii. Complete chronic occlusion of the distal popliteal artery extending into the three tibial vessels
 - f. Proximal access in the CFA (antegrade approach allows for catheter to be in the SFA)
 - g. Distal access:
 - i. Enable more proximal puncture if possible, otherwise,
 1. Pedal artery → ATA
 2. Retromalleolar → PTA
 - ii. Use 21-22 gauge micropuncture short needle
 - iii. Under US (or road map) guidance
 - iv. No sheath, use 3 Fr dilator, 0.014 wire + low profile microcatheter (“bareback”) or low profile OTW balloon (Amphirion Deep – Invatec)
 - v. Snare kit to capture wire in SFA
 - vi. Hemostasis obtained by prolonged, low-pressure (“touch-up”) balloon inflation and hemostasis must be verified angiographically
5. PTA first approach always advocated
 - h. Provisional/bailout stenting as needed
 - i. Use dedicated SE stents BTK stents for dissection and/or suboptimal result
 - ii. Use BE drug-eluting stents for calcific and/or ostial lesions
6. Vessel perforation can be a serious complication and may cause compartment syndrome. Immediate balloon inflation over the presumed inflation site is recommended.