

Primary Stenting and Standard Balloon Angioplasty for the Below-Knee Arterial in Patients underwent Percutaneous Transluminal Angioplasty

Background Although percutaneous transluminal angioplasty (PTA) is considered as an effective treatment in patients (pts) with critical limb ischemia (CLI), below-knee (BTK) CLI is particularly challenging. This study sought to compare primary stenting and standard plan old balloon angioplasty (POBA) in BTK artery on 1-year clinical outcomes. **Method:** This study consisted of 357 (400 limbs, 697 lesion) consecutive lower extremity arterial disease pts with BTK lesion. All the enrolled pts were received primary stenting (111 limbs in 102 pts) or POBA (289 limbs in 255 pts) with PTA. Procedural success, complications and clinical outcomes were compared between the two groups up to 1-year. **Results:** After PSM analysis, 2 propensity-matched groups (93 pairs in pts, $n=186$; 101 pair in limbs, $n=122$, $C\text{-statistic}=0.808$) were generated, and the baseline clinical characteristics of both groups were balanced. Procedural success, complication incidences were similar between both group. Six to 9-month CT or angiographic follow-up, there were similar incidence of binary restenosis, primary, and secondary patency. One-year clinical, there were similar incidence of individual hard endpoints including mortality, myocardial infarction, limb salvage, and any extremity amputations except the target extremity revascularization (TER) were more incidence in primary stenting group (18.9 % vs. 11.1%, $p=0.002$) than POBA group. **Conclusion:** Although the TER was increased with BTK stenting, other major individual clinical outcomes and limb salvage rates were similar between the POBA and stenting for the BTK lesions. Stenting could be a reasonable treatment option in the treatment of BTK lesion depending on clinical and baseline lesion characteristics.