

2021 Novel Technique of Percutaneous Intraluminal Cracking Using Puncture Needle for Severe Calcified Lesions of Below-the-knee or Below-the-ankle arteries

Hemodialysis patients with critical ischemic limbs has severe calcified below-the knee or ankle arterial lesions (BTKA), which balloon catheters sometimes could not cross or dilate even though successful guidewire crossing. We report the new debulking method: Percutaneous INtraluminal Cracking (PINC), which breaks down calcified plaques by 20 or 21G puncture needles intraluminal crossing along guidewires from the distal puncture sites. We attempted PINC for 7 BTKA lesions with failed ballooning because of severe calcifications. PINC succeeded in all the lesions without complication such as vascular perforation and guidewire fracture, but one lesion had suboptimal result. PINC was feasible and effective for BTKA with severe calcified lesions.