

Physician - Physician Abstract » Peripheral Artery Diseases and Surgery/Percutan Interventions**[MSB-56]****Comparison of Drug-Coated Balloon Angioplasty Alone and Directional Atherectomy Combined with Drug-Coated Balloon Angioplasty in Patients with Lower Extremity Peripheral Arterial Disease with Claudication**Ali Aycan Kavala¹, Yusuf Kuserli¹, Gülsüm Türkyılmaz¹, Mehmet Ali Yeşiltaş², Saygın Türkyılmaz¹, Necdet Kılıçaslan¹¹Department of Cardiovascular Surgery, Bakırköy Dr. Sadi Konuk Education and Research Hospital, İstanbul, Türkiye,²Department of Cardiovascular Surgery, Prof. Dr. Cemil Taşçioğlu City Hospital, İstanbul, Türkiye

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Objective: The objective of the study was to compare drug-coated balloon (DCB) angioplasty alone and directional atherectomy (DA) combined with DCB angioplasty in patients with lower extremity peripheral arterial disease (LE-PAD).

Methods: A total of 226 patients treated with DCB angioplasty alone (Group A) and DA combined with DCB angioplasty (Group B) were enrolled in the retrospective study. Patients with severe and occluded LE-PAD were included. Demographic data, atherosclerotic vessel properties, and procedural data were recorded. Success rates (technical, procedural, and clinical) were presented for both groups.

Results: For baseline characteristics, only tobacco use and hyperlipidemia were higher in Group B ($p=0.001$ and $p=0.010$, respectively). For the ankle-brachial index, no significant difference existed at the 1-, 3-, 6-, 12- or 24-month follow-ups. No significant difference existed for the Rutherford class at the first, third, sixth, or 12th months according to the groups. A significant difference was found at the 24-month Rutherford levels. The incidence of severe claudication in Group A was significantly higher than in Group B ($n=13$, 12.4% vs. $n=3$, 2.8%; $p=0.035$). The stenosis rate after predilatation in Group B was significantly higher than in Group A (54.56 ± 5.36 vs. 59.20 ± 6.21 , $p=0.012$). The distribution of full patency at 12 months was significantly higher in Group B than in Group A. The rate of 70 to 100% stenosis at 12 months was significantly higher in Group A than in Group B. The distribution of the patients who were lost to follow-up and those who died during the follow-up, secondary results, primary patency rates, and two-year disease-free survival rates were also similar between the groups.

Conclusion: Directional atherectomy combined with DCB is superior for the long-term treatment of LE-PAD.

Keywords: Atherectomy, balloon angioplasty, peripheral arterial disease, vessel preparation.