The New 0.014" CiTop™ Guidewire for the Treatment of Chronic Total Occlusions in Peripheral Arteries: Results of the First-in-Man Randomized Clinical Study

Alexander Belenky [1], Sergey Litvin [1], Mickey Scheinowitz [2], Amit Segev [2]

[1] *Inerventional Radiology, Rabin Medical Center, Petach Tikva,* [2] *Interventional Cardiology, Chaim Sheba Medical Center, Ramat Gan, Israel*

Background: Despite the development of novel interventional devices, chronic total occlusion (CTO) still remains a challenging problem in endovascular peripheral intervention, mostly due to inability to cross the lesion with the guide-wire. We describe herein the first in man randomized study comparing the new 0.0014" CiTop guide-wire to conventional wires in peripheral CTOs.

Methods: Nineteen patients with 24 peripheral CTOs were randomly assigned to the CiTop™ guide-wire or to conventional wires as a first wiring attempt to penetrate a total occlusion. Study endpoint was a successful crossing of CTO in distal true lumen without a device-related adverse event.

Results: CiTop™ guide-wire successfully crossed the CTO in 13 out of 14 occlusions (92.3%), whereas a standard wire was able to cross in 4 out of 10 occlusions (40%). From this group of patients, 5 CTOs were crossed over to CiTop™ guide-wire attempts where successful crossing was observed in 4 cases (80%). No technical problems or adverse events associated with the CiTop™ guide-wire usage were noted. **Conclusions:** Our preliminary results demonstrate that the new 0.014" CiTop™ guide-wire is safe and efficacious for the treatment of peripheral CTOs. The CiTop™ guide-wire may serve as an excellent first choice wire in attempting peripheral CTO re-canalization.