

IMAGES IN INTERVENTION

Parallel Wire Technique With 40-g Tip-Load Guidewire for Severely Calcified Chronic Total Occlusion in the Infrainguinal Artery

Heaviness Makes the Difference

Naoki Maniwa, MD, Osami Kawarada, MD, PhD, Teruo Noguchi, MD, PhD, Satoshi Yasuda, MD, PhD



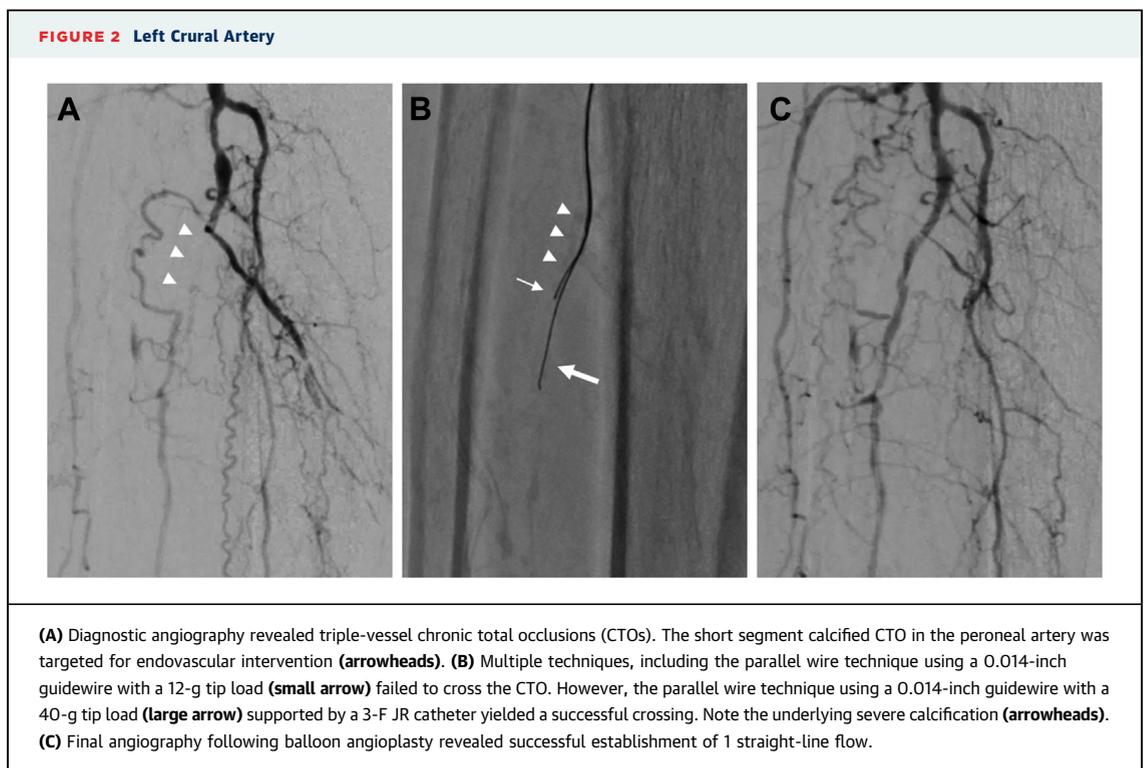
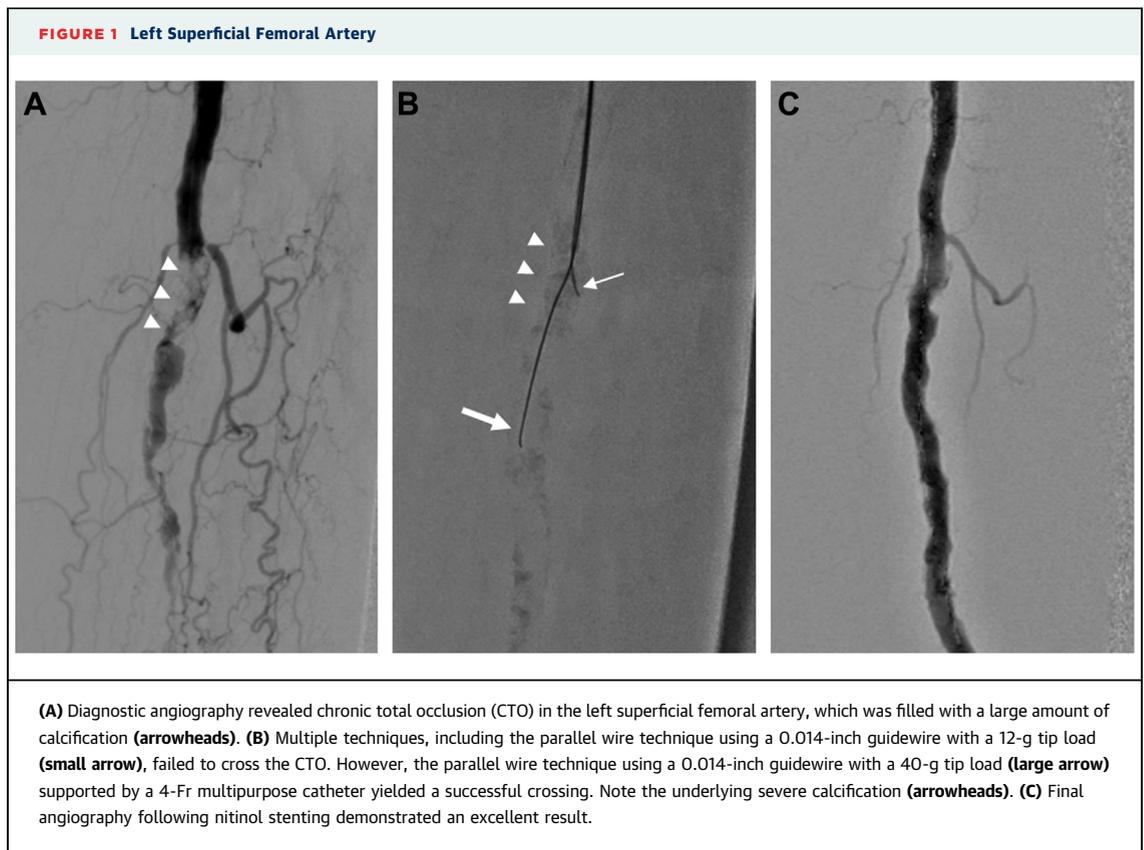
Endovascular intervention for severely calcified chronic total occlusions (CTOs) remains technically challenging (1). In coronary CTO intervention, guidewires have a tip load of up to 12 g (2). A wider variety of guidewires are available for challenging peripheral interventions (3).

An 80-year-old woman on hemodialysis with lifestyle-limiting claudication (Rutherford category 3) was referred to our institution for the endovascular treatment of severely calcified CTO in the left superficial femoral artery (Figure 1A). The lesion could not initially be crossed using the traditional CTO crossing method, namely the parallel wire technique using a 0.014-inch guidewire with a “12-g” tip load (Astato XS 9-12, Asahi Intecc, Japan). However, a 0.014-inch guidewire with a “40-g” tip load (Astato XS 9-40, Asahi Intecc) led to successful crossing by the parallel wire technique (Figure 1B). Following subsequent nitinol stenting, final angiography demonstrated excellent results (Figure 1C). The patient’s ankle brachial index increased from 0.62 to 0.75 on the left, and she was uneventfully discharged with relief of claudication.

A 78-year-old man on hemodialysis with ischemic gangrene (Rutherford category 5) was referred to our institution for the treatment of peroneal artery CTO with severe calcification (Figure 2A). Although several methods were ineffective, including the parallel wire technique using a 0.014-inch guidewire with a “12-g” tip load, successful crossing was achieved with the parallel wire technique using a 0.014-inch guidewire with a “40-g” tip load (Astato XS 9-40, Asahi Intecc) (Figure 2B). Following subsequent balloon angioplasty, final angiography demonstrated excellent results (Figure 2C). The skin perfusion pressure of the right foot increased from 23 to 64 mm Hg, suggesting a high likelihood of wound healing (4).

The liberal application of a “40-g” tip load guidewire could increase the potential of the parallel wire technique for severely calcified CTO in the infrainguinal artery.

REPRINT REQUESTS AND CORRESPONDENCE: Dr. Osami Kawarada, Department of Cardiovascular Medicine, National Cerebral and Cardiovascular Center, 5-7-1 Fujishiro-dai, Suita, Osaka 565-8565 Japan. E-mail: kawarada.osami.hp@ncvc.go.jp.



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