

Antegrade Wire Escalation (AWE) with Raider Polymer Jacketed Guidewire of a Chronic Total Occlusion (CTO) of the Proximal Left Anterior Descending Coronary Artery (LAD)

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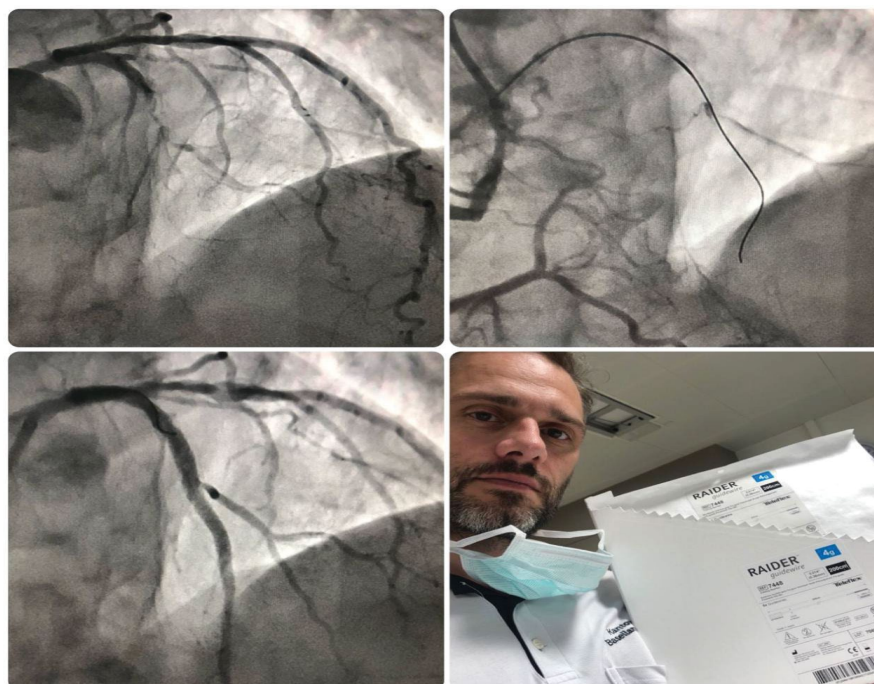


Figure 1. Teleflex specialty guidewires surface in Switzerland. Below an antegrade CTO-PCI of the proximal LAD with the Raider™ Guidewire. CTO body stented with a XIENCE Xpedition 3.0/48 and the mid LAD treated with a DCB (MagicTouch 2.5/40)

Clinical Image

Coronary chronic total occlusions (CTOs) were identified as coronary lesions with thrombolysis in myocardial infarction (TIMI) grade 0 flow for the duration of at least 3 months. Percutaneous coronary intervention (PCI) of chronic total occlusions (CTOs) can be opted to derive significant clinical benefits in terms of alleviation of stable angina, improvement in left ventricular function, enabling long term survival and in improvement of quality of life. Previously the CTO recanalization success rates were low ranging from 51 to 74%. The CTO crossing techniques include antegrade wire escalation, antegrade dissection-reentry and retrograde approach. Over the recent years clinical research and development has resulted in finer elucidation and understanding of histopathology associated with chronic total occlusions and concomitant technological progress in the material science and medical instrumentation led to the development of new techniques, procedures and equipment for CTO-PCI with over 80% success rates. However the ability to

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cross the occlusion remains the main challenge. Antegrade wire escalation (AWE) along with intimal tracking is especially preferred as initial method for short CTO (Figure 1).

Guide wire in CTO-PCI

A typical guidewire consists of central core, distal tip, covering material and coating material. Guide wires are essential for tracking the vessel, allow access and cross the lesion using interventional devices. Guidewires are chosen based on the anatomy of the vessel, type of lesion, and the technique for the treatment. The most common reason for failure of PCI-CTO is the inability to cross the lesion using a guidewire. Therefore, the selection of a guidewire is critical for successful coronary intervention. The weight of the tip or tip load is very important for intended usage. It was previously observed that damage was more common with nonpolymer coated guidewire. Most commonly used guide wires for AWE are polymer jacketed stiff guide wires that provide high crossing rates without increasing MACE or perforation. The Raider™ Guidewire offered by Teleflex is a mid-tip, non-tapered, polymer jacketed specialty wire with 10 cm radiopaque tip to promote precise positioning under fluoroscopy. The guide wire is designed for tougher occlusions and the coating is designed to minimize friction during prolonged cases.

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