

# Cutting and partially retrieving an entrapped guidewire using a novel retrograde rotablation technique

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A 52-year-old man was referred to the documented hospital because a SION guidewire was entrapped during percutaneous coronary intervention of the right coronary artery chronic total occlusion in a local hospital. The initial attempt was to retrieve the guidewire with the support of microcatheter and balloon, but this ended in failure. The patient refused emergent open surgery. It had been over 6 hours since the right coronary artery percutaneous coronary intervention attempt and the patient became uncooperative. Thus, the plan was to cut and partially retrieve the entrapped guidewire using a novel retrograde rotablation technique. The procedure was as follows: 1. Disengaged the initial guiding catheter (GC). A second GC was used to approach the initial GC. 2. A workhorse guidewire was retrogradely advanced into the initial GC. Trapped the

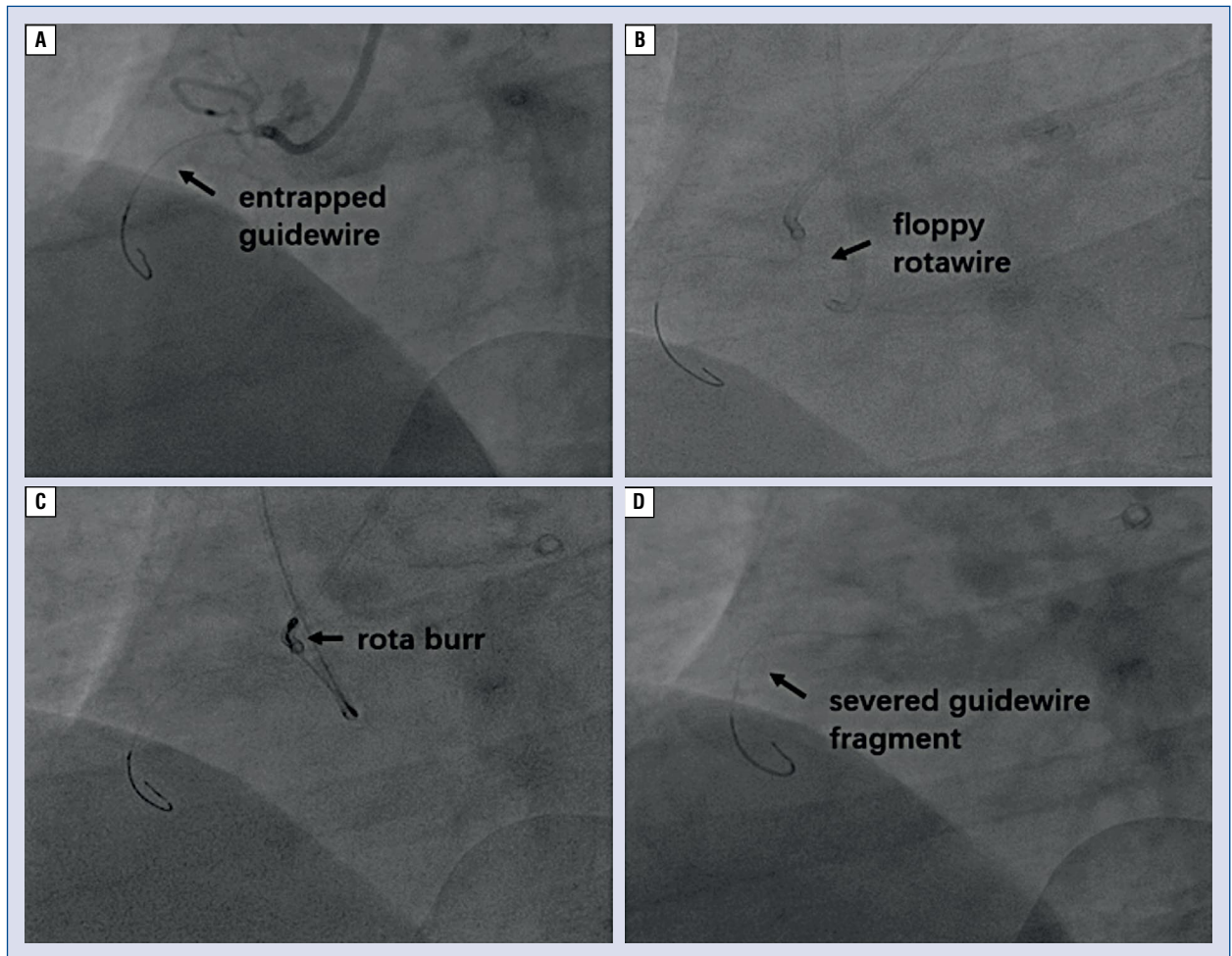
retrograde guidewire using a semi-compliant balloon and tried to bring the two GC as close as possible. 3. Advanced a floppy rotawire from the second GC into the initial GC. Then initiated rotablation at the tip of the initial GC. After the retrograde rotablation procedure, the entrapped guidewire was fractured and then partially retrieved (Fig. 1). Entrapment of guidewire is a rare complication of percutaneous coronary interventions. Dr. Jae Young Cho and Soon Jun Hong reported the first case of cutting the entrapped guidewire using rotational atherectomy device in 2017. The present case highlights a novel method for cutting and retrieving entrapped guidewires using a retrograde rotablation technique. In the application of this technique, the rotablation is performed in GC rather than the coronary artery, thus being safer and more efficient.

**Conflict of interest:** None declared

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**Figure 1.** The procedure of cutting and retrieving an entrapped guidewire using a novel retrograde rotablation technique. **A.** A SION guidewire was entrapped during percutaneous coronary interventions of right coronary artery chronic total occlusion (CTO); **B.** Advanced a floppy rotawire from the second guiding catheter (GC) into the initial GC; **C.** Then initiated rotablation at the tip of the initial GC; **D.** After the retrograde rotablation procedure, the entrapped guidewire was fractured and retrieved, while the severed guidewire fragment was retained within the CTO lesion.