

The “Wand-Seeker” A Chronic Occlusion crossing and Re-entry Device



A coronary catheters able to potentially facilitates faster and more successful wire positioning across a coronary occlusion during a reverse controlled antegrade and retrograde tracking procedure (reverse CART).

Background

In the reverse CART technique, a catheter and a wire are positioned on opposite sides of the coronary occlusion. Through different manipulation of the catheter and the wire, the wire is, ultimately, aligned with the tip of the antegrade catheter, crosses the occluded coronary segment, and gets “externalized” converting a CTO in a regular PCI. Unfortunately, it is not always straightforward to cross the retrograde wire into the antegrade catheter tip to externalize the retrograde wire as a mean to convert the re-CART in a conventional PCI.

New Device Features

The new device and system can facilitate the alignment, crossing and wire re-entry in the antegrade guiding catheter with reduction in time, radiation exposure for the patient/operator, risk of coronary perforation, and the need for “investment procedure”. The new technology uses a guiding catheter who enables the formation of a “wire bias” on one side of the occlusion (e.g., the retrograde side) so that the crossing wire on the retrograde side can be externalized through or around the occlusion toward the guiding catheter. The wire bias will direct the tip of the wire toward the tip of the antegrade catheter as an additional help to the tactile and visual feedbacks commonly utilized in retrograde crossing of a coronary occlusion.

Potential Advantages

1. Increase success rate in re-CART
2. Reduced procedural time/ radiation exposure for the patient/operator
3. Reduced risk of perforation of the coronary artery
4. Alternative device/mechanism to existing re-entry devices

Potential Applications

- Coronary Procedures, including sub-intimal space application
- Vascular Procedures, including peripheral

Intellectual Property Status

Provisional Patent Application Filed; available for licensing

Stage of Development

Early, preclinical

About the Inventor



Angelo Nascimbene, MD, is the inventor of this device and is an interventional cardiologist. Dr. Angelo Nascimbene graduated with honors from the University of Milan, Italy where he earned his medical degree. In Houston, Texas, he completed his residency at McGovern Medical School at UTHealth and fellowships in cardiovascular disease and interventional cardiology at Baylor College of Medicine.

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