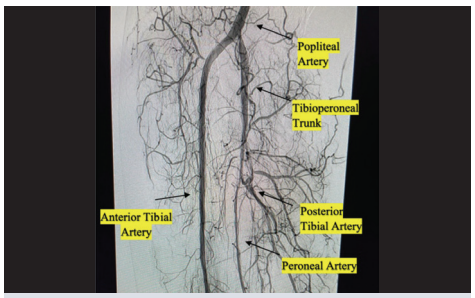
Cath Lab Digest

A product, news & clinical update for the cardiac catheterization laboratory specialist



CASE REPORT

Single Transpedal Access and Novel Use of Equipment During Multivessel Infrapopliteal Revascularization

Mehreen F. Ali, HSIII; Amal Khan, MSIII; Som A. Bailey, DO; Akif Azmi Mohammed, MD, MRCP, FACC

Below-the-knee retrograde access or transpedal access has become increasingly popular for peripheral interventionalists. Access through the pedal arteries may offer benefits in peripheral intervention that are similar to the transradial approach in coronary intervention when both are compared to the transfemoral approach.[1,2] One major benefit may be a lower risk of bleeding complications, including retroperitoneal bleed. Many operators can successfully access the pedal artery from the ankle or foot, and revascularize a below-the-knee vessel as well as inflow arteries through a single access site.[3]

continued on page 22

In This Issue

Femoral Hemostasis: When to Avoid a Vascular Closure Device
Morton J. Kern, MD
page 6

Enabling Improved Patient Outcomes and Reduced Costs: TYRX Outcomes Protection Program
James Mullin, MD; Laurie Niemet; Kristin Doster; Ruben Weber; Eric E. Johnson, MD
page 26

Kinked Catheter Unravelment in the Right Upper Extremity: An Unconventional Solution
Richard Casazza, MAS, RT(R)(CI); Enrico Montagna, RT(R)(CI); Avraham Miller, MD; Ravi Jayanti, MD; Bilal Malik, MD, FACCS
page 34

ORIGINAL RESEARCH

Nurses' Compliance and Confidence With a Hand-Off Process for Patients Post Femoral Arterial Access Before and After a Standardized Approach

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This study encompassed the Intensive Care Unit (ICU), Step Down Unit (SDU), and Progressive Care Units (PCU), along with the Heart Center staff, at Excela Health Westmoreland Hospital in Greensburg, Pennsylvania, which includes three community hospitals with 578 licensed beds. There are approximately 50 patients monthly who receive femoral arterial access for procedures in the Heart Center and who are then transferred to an inpatient critical care unit.

continued on page 14

CASE REPORT

Pushing Boundaries: Transradial Access for Complex PCI

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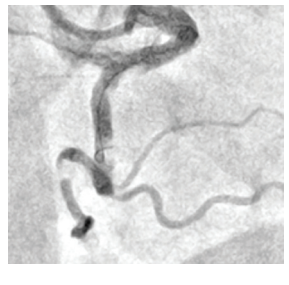

continued on page 20

Pushing Boundaries: Transradial Access for Complex PCI

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Location: Cleveland Clinic, Cleveland, Ohio

TAKERU PTCA Balloon Dilatation Catheters have been recently launched by Terumo. In this report, we summarize our initial experience with the TAKERU balloon catheter. Since July 1, 2019, we have used these balloon catheters routinely in our complex PCIs.

Background

TAKERU PTCA Balloon Dilatation Catheters have been recently launched by Terumo. In this report, we summarize our initial experience with the TAKERU balloon catheter. Since July 1, 2019, we have used these balloon catheters routinely in our complex percutaneous coronary interventions (PCIs).

The 1.5 mm balloon catheter has a single mid-point Platinum-Iridium radiopaque marker (larger diameter balloon catheters have two markers) and is equipped with a 108 cm stainless steel proximal shaft and 21 cm stainless steel core middle shaft. The unique feature of this balloon catheter is the 23 cm hydrophilic coating that allows excellent tracking ability. The TAKERU 1.5 balloon catheter's entry profile is 0.43 mm, relatively larger compared to the Sprinter Legend (1.25 mm) (Medtronic). However, the TAKERU balloon catheter has greater pushability based on bench testing results.

Clinical Case

A 70-year-old gentleman presented with Canadian Cardiovascular Society (CCS) class III angina despite two anti-anginals (Metoprolol XL 25 mg daily and ranolazine 500 mg BID). His myocardial perfusion imaging demonstrated medium-sized inferior wall reversible defect with normal left ventricular function. His other comorbidities included chronic atrial fibrillation (on apixaban 5 mg BID), hypertension, and hyperlipidemia (on rosuvastatin 40 mg daily). His angiography revealed severe stenosis of the mid right coronary artery (RCA) involving a 360-degree loop. Further analysis of the angiogram revealed multiple contiguous lesions in the RCA with severe calcific lesions proximal and distal to the loop (Figures 1 and 2). Given severe tortuosity, rotational atherectomy would be challenging and we were hoping to achieve a good result using a balloon catheter strategy.

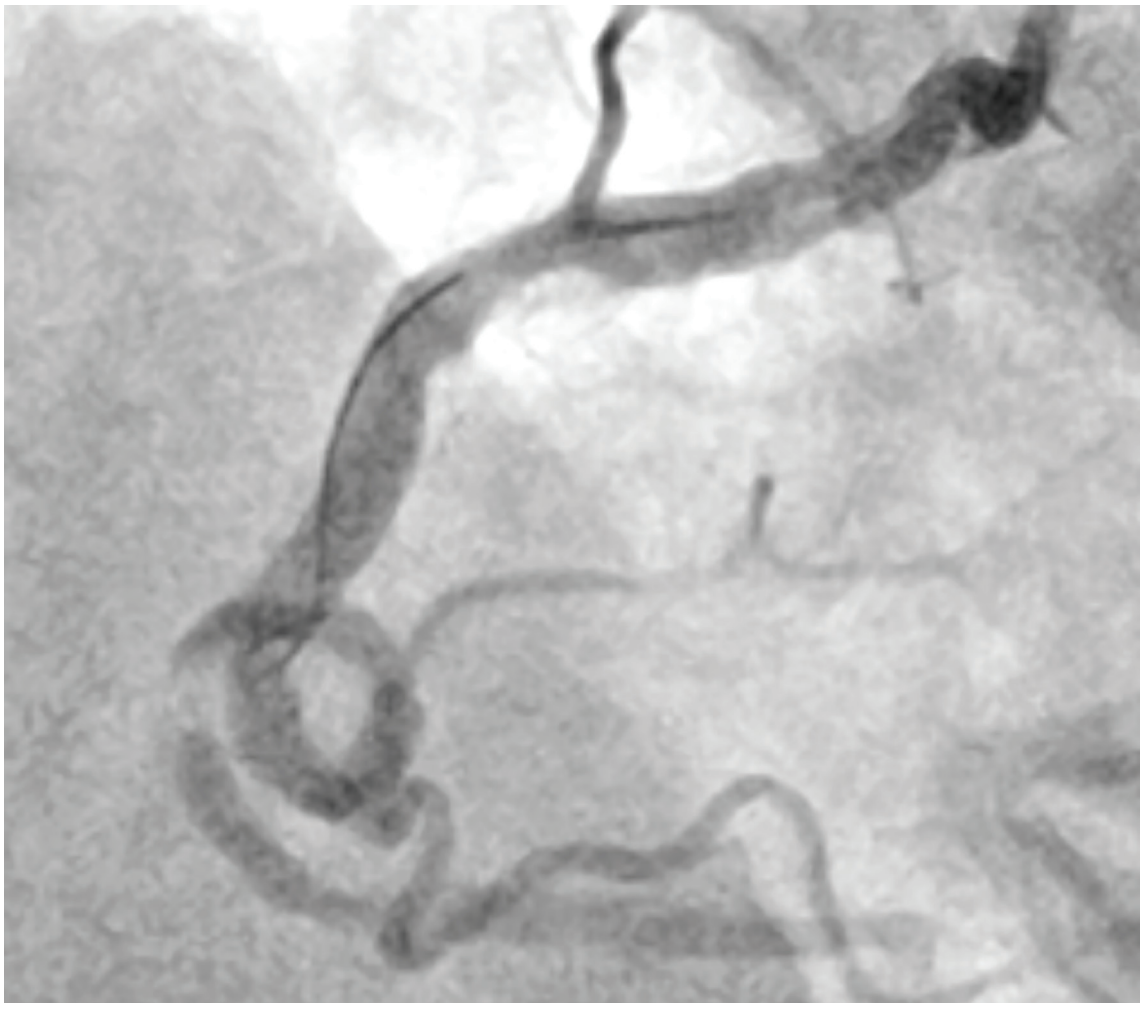

Figure 1. LAO projection demonstrating a 360-degree loop.

Procedure

The RCA was engaged with the AL1 7 French (Fr) guide catheter via the right radial approach. After administering heparin to a goal ACT of >250s, we advanced a floppy coronary wire to the distal PDA using a microcatheter and subsequently exchanged it for a supportive guidewire. The loop did not unravel after placing the support wire and hence we introduced a 7 Fr guide catheter extension. We serially pre-dilated the lesions initially with a 1.5 mm x 15 mm, 2.0 mm x 20 mm TAKERU balloon catheter at 14 atm (Figure 3). We advanced the guide catheter extension further to the mid RCA using balloon catheter-assisted tracking and delivered several overlapping drug-eluting stents which were aggressively post-dilated with noncompliant balloons. Final angiography (Figure 4) showed no evidence of dissection or perforation. There was TIMI-3 flow and 0% residual stenosis. The patient was placed on triple therapy (aspirin 81 mg daily/clopidogrel 75 mg daily/apixaban 5 mg BID) for one month along with a proton pump inhibitor later dual therapy for 12 months.

Products Used

- Cordis 7 Fr AL1 Guide Catheter via right radial approach
- Asahi Grand Slam guidewire
- Medtronic Telescope guide extension
- Asahi Caravel microcatheter
- 1.5 mm x 15 mm RX TAKERU balloon catheter
- 2.0 mm x 20 mm RX TAKERU balloon catheter

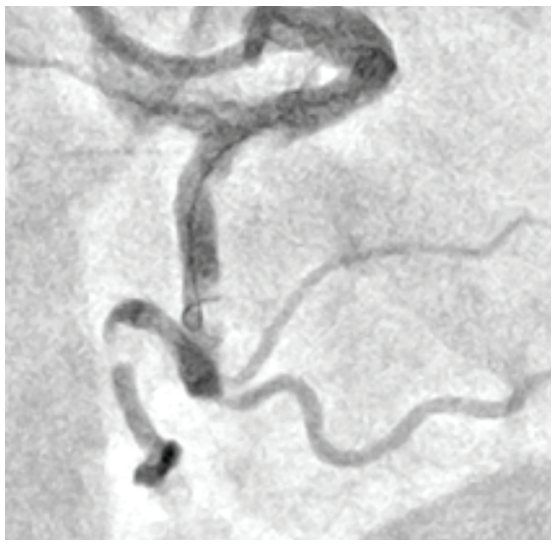

Figure 2. RAO projection demonstrating multiple contiguous lesions in the RCA with severe calcific lesions proximal and distal to the loop.

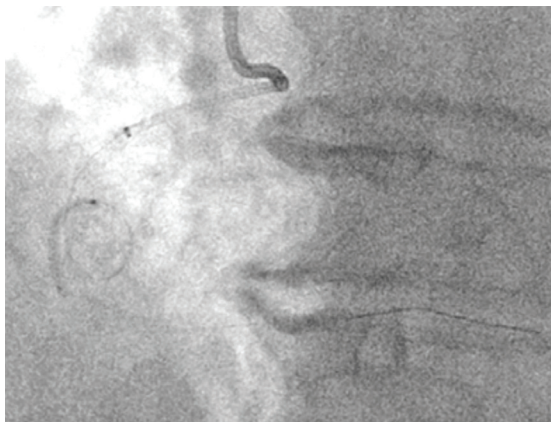

Figure 3. 2 mm x 20 mm TAKERU balloon catheter successfully crossing the lesion with the assistance of a supportive guide, guide extension catheter, and support wire.

Conclusion

TAKERU balloon catheters offer excellent pushability and tracking ability courtesy of the hydrophilic coating and low profile. This case demonstrates the aforementioned qualities in complex, calcific coronary anatomy. ■

Figure 4. Final result.

TAKERU balloon catheters offer excellent pushability and tracking ability courtesy of the hydrophilic coating and low profile. This case demonstrates the aforementioned qualities in complex, calcific coronary anatomy.

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