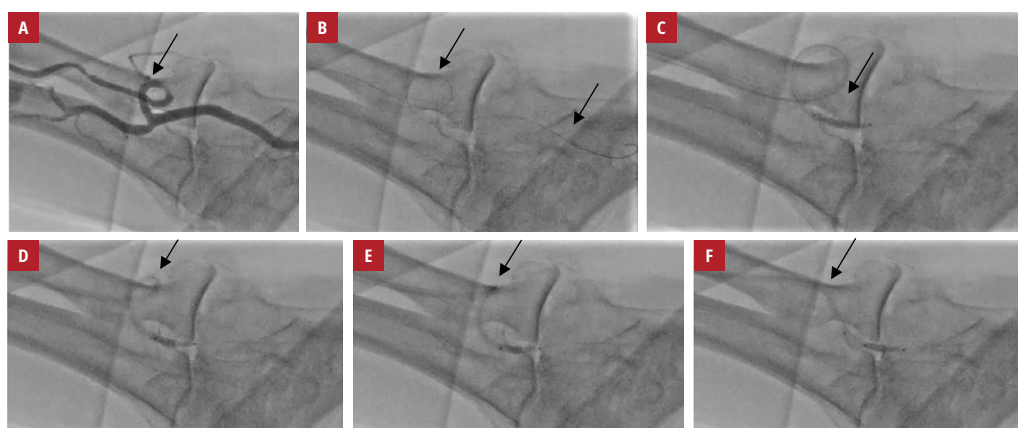


# A 360-degree radial loop negotiated by a novel maneuver

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**FIGURE 1** **A** – 360-degree radial loop (arrow); **B** – radial loop successfully traversed by an angioplasty wire (arrows); **C** – balloon-assisted tracking of the radial loop (arrow); **D-F** – counterclockwise rotation of the guiding catheter to straighten the loop (arrows)

The transradial approach for percutaneous coronary intervention significantly reduces the risk of bleeding complications and mortality as compared with the transfemoral access. However, certain anatomical variants can pose a great challenge, which may result in a failure to complete the procedure and compel the operators to switch the access site to the femoral artery, contralateral radial artery, or even ipsilateral ulnar artery.<sup>1-3</sup> A radial loop is one such obstacle that is associated with the highest failure rates among all anatomical variants.<sup>1,2</sup> Even if it is negotiated with guidewires, straightening of the loop can be challenging. Without this, it is difficult to complete the procedure and catheter knotting may occur, which is likely to be catastrophic and may require surgical intervention.<sup>4</sup>

Here, we report the case of a 360-degree radial loop that was encountered while undertaking complex distal left main angioplasty in a 78-year-old woman via the right radial approach (FIGURE 1A; Supplementary material,

Video S1). The loop was traversed with an angioplasty wire (0.14-inch), as the conventional 0.35-inch guide wire failed (FIGURE 1B; Supplementary material, Video S2), but we were unable to advance the guiding catheter. Using balloon-assisted tracking, the guiding catheter was successfully negotiated (FIGURE 1C; Supplementary material, Video S3), but the loop failed to straighten. It was eventually straightened with a gentle counterclockwise rotation (FIGURE 1D-1F; Supplementary material, Videos S4 and S5) and the catheter was successfully delivered to the aortic root to complete the procedure.

Balloon-assisted tracking is a well-described technique that aids in negotiating anatomical obstacles in the radial and brachial arteries. However, this is the first report on a 360-degree radial loop negotiated by a combination of balloon-assisted tracking and counterclockwise rotation to straighten it. The shaft of the balloon provided the adequate support to perform the maneuver of counterclockwise rotation to

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straighten the loop. We suggest that the type of rotation (clockwise or counterclockwise) should be guided by the way the loop responds to initial torsion. In our case, the clockwise torsion made the loop worse, but the counterclockwise rotation straightened it.

## SUPPLEMENTARY MATERIAL

Supplementary material is available at [www.mp.pl/kardiologiapolska](http://www.mp.pl/kardiologiapolska).

## ARTICLE INFORMATION

**CONFLICT OF INTEREST** None declared.

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