

IMAGES IN INTERVENTION

Differences in Guiding Catheter Positions According to Left and Right Radial Approaches



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During percutaneous coronary intervention (PCI) procedures, there are cases in which different types of guiding catheters (GCs) are needed depending on different approach sites. However, it is not clear how the approach site affects GC engagement.

At our hospital it is possible to perform electrocardiographically gated cardiac computed tomography (CT) during PCI without having to transfer the patient (1). Unlike angiography, CT can show the GC and ascending aorta, which enables understanding of the position of the GC in the ascending aorta.

A 52-year-old man with diabetes with effort angina was found to have a totally occluded mid left anterior descending coronary artery on coronary angiography. We revascularized the lesion using biradial-approach PCI. During the procedure, an XB4.0 GC was engaged in the left coronary artery (LCA) from the left radial artery, and CT was performed. The GC was then engaged from the right radial artery, and CT was repeated. The superimposed 3-dimensional computed tomographic images combined with the

pre-operative cardiac computed tomographic images showed that the GC from the right radial artery was anterior and more coaxial to the left circumflex artery, while the GC from the left radial artery was posterior and more coaxial to the left anterior descending artery (Figure 1).

Although each catheter was differently positioned in the ascending aorta, each was attached to the contralateral side of the aorta (Figure 2), which is important for better backup force (2). This is the first report of the use of CT to visualize different positions of a GC in the aorta after engagement in the LCA via different approach sites. Further research may provide a more detailed understanding of the GC within the aorta, which can lead to successful PCI with a better strategy.

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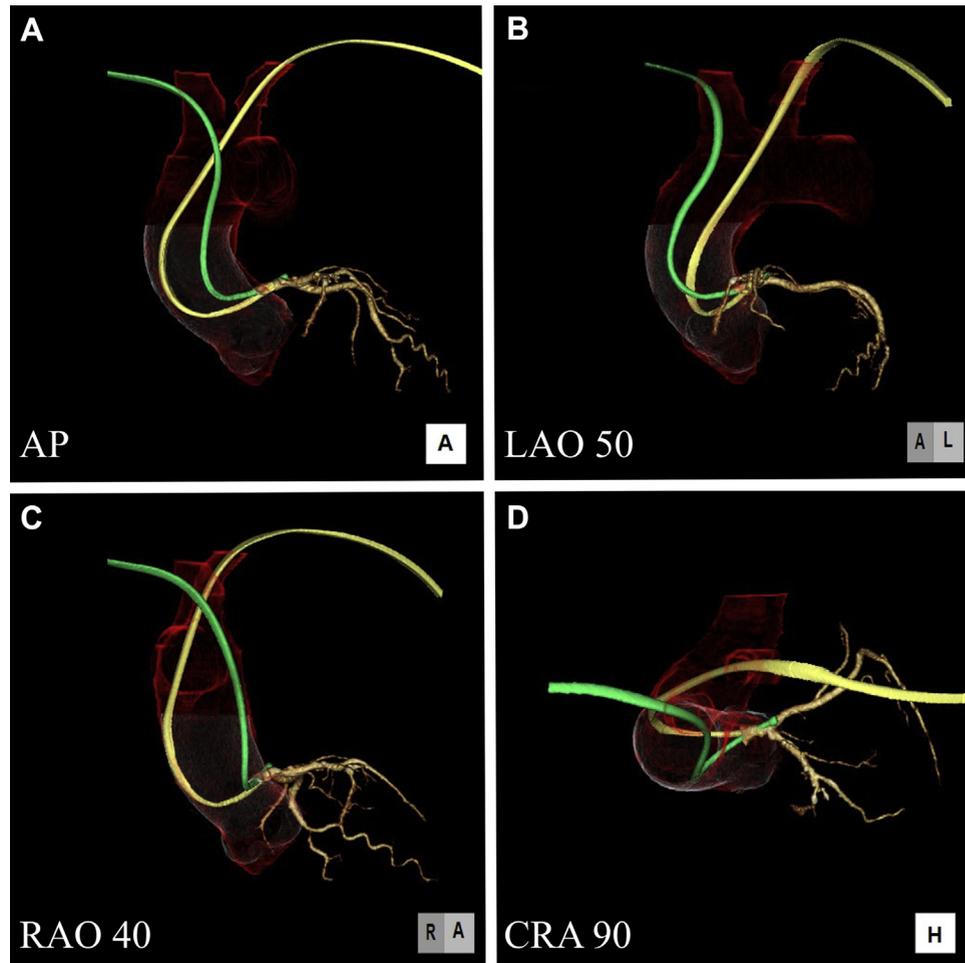
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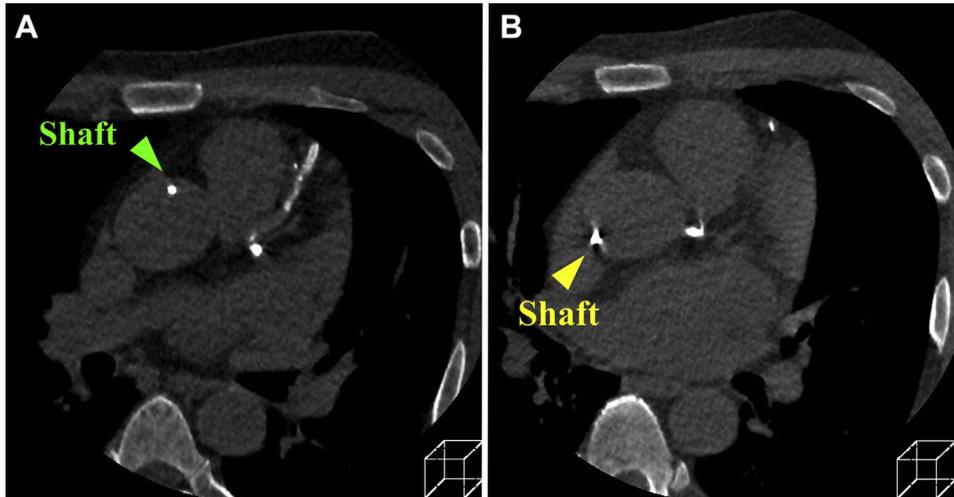
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FIGURE 1 Superimposed 3-Dimensional Reconstructed Computed Tomographic Images During Percutaneous Coronary Intervention Combined With Pre-Operative Cardiac Computed Tomographic Images



(A) Anteroposterior (AP) oblique, **(B)** left anterior oblique (LAO), **(C)** right anterior oblique (RAO), and **(D)** cranial oblique (CRA) views. The **green catheter** is from the right radial artery and the **yellow catheter** is from the left radial artery.

FIGURE 2 Short-Axis Computed Tomographic Image



(A) Right radial approach and (B) left radial approach.

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