Myocardial Bridge: Accurate Diagnosis by Noninvasive Coronary Angiography

A 35-year-old man diagnosed with infundibular pulmonary stenosis was referred to our department to complete his clinical assessment with a cardiac computed tomography (CT) study. The examination, which was performed on a 64-slice Aquilion Toshiba unit, confirmed the diagnosis, and noninvasive coronary angiography was then carried out. The left anterior descending artery was seen to run in a deep intramyocardial course (Figure 1).

Conventional coronary angiography was undertaken to rule out a “milking” effect (Figure 2). We will discuss some aspects of the myocardial bridge and the potential application of cardiac CT in this condition.

Myocardial bridging is a congenital anomaly in which a segment of an epicardial coronary artery runs within the thickness of the myocardium. “Milking” or “bridging” is the term used when the diameter of the segment decreases during systole. This anomaly is usually an incidental finding; however, it sometimes compromises distal arterial flow, causing symptoms. When coronary surgery is contemplated for these patients, it is essential to know the precise intramuscular course of the artery to avert complications, such as perforation of the right ventricular wall, when exposure of the intramuscular arterial segment is attempted.

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