

Clinical Image

# Intermittent Coronary Spasm Opens Arteries of Collateral Circulation

**Sugimoto T, Nomura T\*, Urata R and Kikai M**  
 Department of Cardiovascular Medicine, Nantan General Hospital, Japan

**\*Corresponding author:** Tetsuya Nomura,  
 Department of Cardiovascular Medicine, Nantan General Hospital, 25, Yagi-Ueno, Yagi-cho, Nantan City, Kyoto 629-0197, Japan

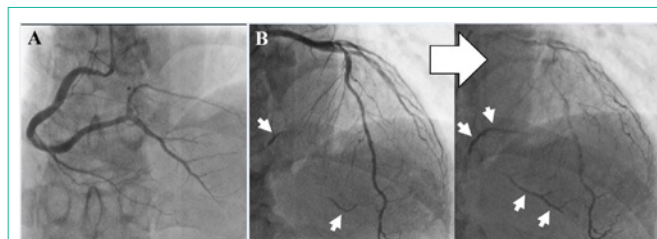
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A 60-year-old man was admitted for further examination of rest angina that had occurred early in the morning almost every day for two years. The Right Coronary Artery (RCA) angiography initially showed no stenosis (Figure 1A). Next, Left Coronary Artery (LCA) angiography also demonstrated an intact artery and collateral circulation from LCA to RCA (Figure 1B). What was occurring in his coronary arteries? Coronary spasm provocation test provoked significant spasms in both the arteries (Figure 2). Coronary collateral circulation is an alternative source of blood supply to the myocardium, which develops when the original blood flow is insufficient. This is more frequently seen in patients with severe atherosclerotic stenosis or occlusion in coronary arteries. Also, it is less common to identify well-developed collateral circulation due to coronary spasm, because this phenomenon usually cannot be detected without the occurrence of spontaneous coronary spasm in a contra lateral artery.



**Figure 1A, 1B:** The Right Coronary Artery (RCA) angiography initially showed no stenosis. Next, Left Coronary Artery (LCA) angiography also demonstrated an intact artery and collateral circulation from LCA to RCA.



**Figure 2:** Coronary spasm provocation test provoked significant spasms in both the arteries.