

Catheter Induced Coronary Spasm: A Beginner's Trap

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1. Short Communication

A 50-year-old male undergoing evaluation for chest pain was subjected to diagnostic coronary angiogram. Trans-radial coronary angiography was performed. On left coronary artery injection, obstructive disease was noted in the proximal LAD (Left anterior Descending) coronary artery, with maximum luminal narrowing of 50% (**Figure 1**). Left circumflex coronary artery revealed mild plaques, but no significant obstruction (**Figure 1**).



Figure 1: Left Coronary Artery Injection.

The operator faced difficulty in hooking the right coronary artery (RCA), and excessive torque was applied which led to the deep seating of the diagnostic catheter. On RCA injection, a tight stenosis was noted in the proximal segment (**Figure 2**) and this was believed to be the cause of his chest pain. Thus the patient was subjected to the percutaneous coronary intervention of RCA.

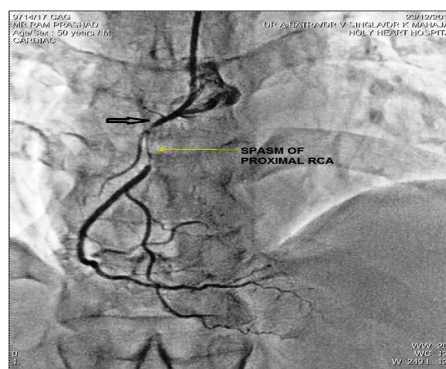


Figure 2: Right coronary artery injection showing spasm of the proximal RCA. Note the deeply seated diagnostic catheter (black arrow).

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However to our surprise, when we hooked RCA with the guiding catheter, there was no disease in RCA (**Figure 3**). We confirmed it on multiple views. Notably, there was no deep hooking of RCA this time when compared to the diagnostic angiography. The stenosis apparent at diagnostic angiography was likely to have been a manifestation of the catheter induced spasm, which was caused as a result of deep cannulation. Finally the procedure was abandoned and the patient was saved of an unnecessary intervention.

Catheter-induced spasm can mostly be prevented by avoiding deep cannulation of the coronary arteries and the use of less aggressive catheters. While catheter-induced spasm is considered to be rare, it needs to be ruled out to avoid unnecessary revascularization [1]. Routine use of intracoronary nitrates in all patients undergoing diagnostic angiography would minimise the confounding effects of vasospasm and enhance reproducibility of coronary measurements [2].

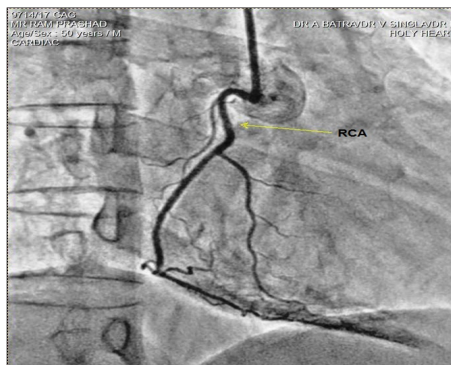


Figure 3: Injection with the guiding catheter showed no disease in RCA. Note that the catheter was not deeply seated this time.

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