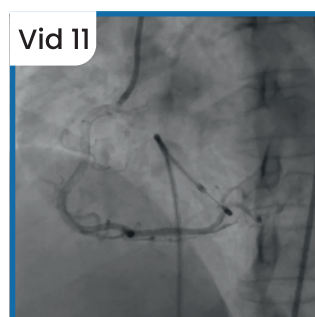
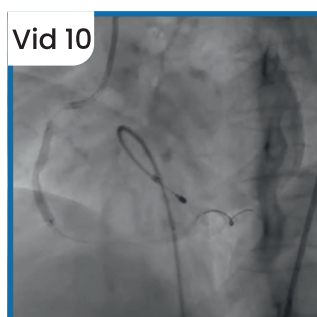
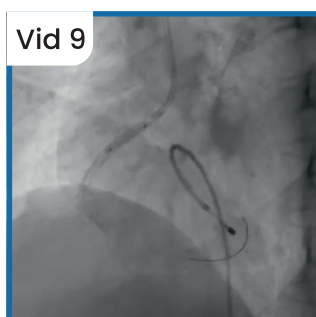
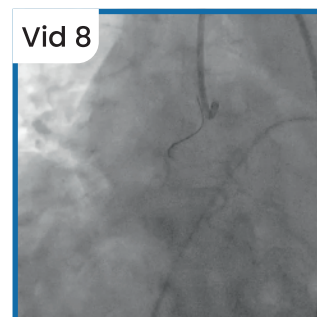
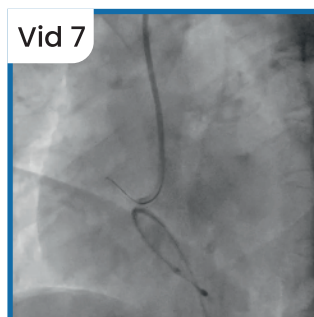
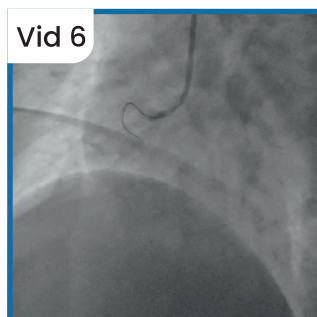
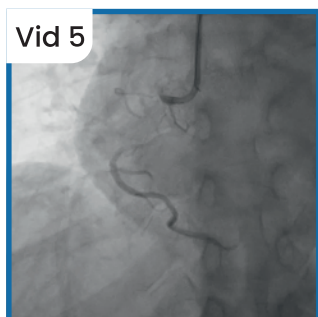
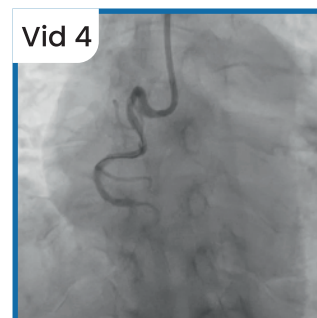
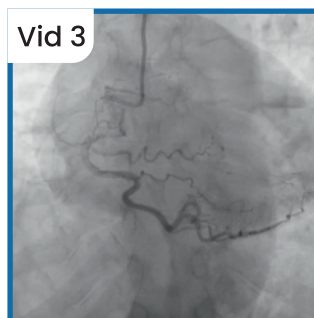
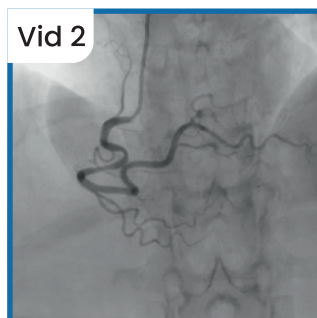
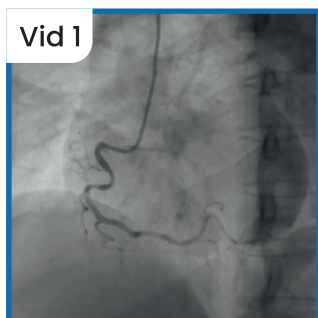


Ugly Guide-wire Induced Coronary Dissection

In one of the previous issues of the chronicles, we discussed a case of guide catheter induced life threatening spiral dissection of RCA. Today we discuss a case of guide-wire induced ugly dissection of RCA and its bail out!

A 58 y male with unstable angina was taken for PCI of a critical lesion in second part of a very tortuous RCA (Videos 1,2,3). The RCA was engaged with a 6F JR catheter. A Run-through guide-wire could not be negotiated beyond the second part of RCA because of marked tortuosity of the vessel (Video 4). Hence a Run-through hypercoat guide-wire was taken. While it was being negotiated through proximal part of RCA, patient complained of chest pain. Angiogram showed an ugly dissection of RCA in proximal part with mild contrast staining (Video 5). The guide-wire was again changed to run-through wire but it kept on entering the false channel (Video 6). Bradycardia and hypotension ensued. Temporary pacing was performed and intravenous fluids with pressors were administered. The guide catheter was then pulled out of coronary ostium and the guide-wire was then "air- mailed" into the true lumen of the artery (Video 7,8). The artery was then treated with two stents (Video 9,10) with excellent final angiographic result (Video 11).



Important Points to Remember

1. Guide-wire induced coronary dissections occur with hydrophilic guide-wires when they are manipulated in tortuous or calcified coronary arteries. Loss of tactile feedback with hydrophilic guide-wires increases the risk of dissection.
 2. Once a guide-wire induced dissection is diagnosed, repeated injections of contrast should be avoided in order to prevent further extension of dissection
 3. The catheter should be disengaged and repositioned at the ostium with its tip positioned slightly outside the ostium. Without this repositioning, the guide wire will continue to enter the false lumen of the dissected vessel
 4. A dual lumen catheter can be used to access the true lumen by keeping its tip in the false lumen and using another guide-wire through the side port to access the true lumen
 5. The dissections in RCA usually occur on the superior wall of the vessel due to the direction of the tip of JR catheter. Therefore the guide wire tip should be pointed downward in order to better the chances of entering true lumen
 6. Position of guide wire in true lumen can be confirmed by its entry into the branches or by gentle injection of contrast through a microcatheter placed distally. Some large dissections can involve the side branches and entry of guide wire into a side branch doesn't always indicate presence of guide-wire in true lumen.
 7. The ostioproximal segment should be stented first to halt progression of dissection
 8. If the guide wire continues to enter the false channel, a microcatheter may be passed over it and the wire is removed. The false channel can then be emptied of blood by applying negative suction on micro catheter with a syringe. This results in enlargement of the true lumen and increases the chances of entering the true lumen with the guide wire that is passed alongside the micro catheter.
 9. IVUS is can be valuable because it:
 - Identifies true and false lumens.
 - Defines the proximal entry point.
 - Determines the full length of the dissection.
 - Ensures complete coverage with the stent.
 - Confirms good stent expansion.
- OCT provides excellent visualization of the intimal flap but requires contrast injection, which can occasionally worsen an extensive dissection.
10. IV fluids, pressors, Atropine and temporary pacing should be used as needed



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