**USE OF DEEP SEDATION WITH PROPOFOL TO RELIEVE CATHETER ENTRAPMENT DUE TO SEVERE RADIAL ARTERY SPASM DURING CORONARY ANGIOGRAPHY**

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Introduction: Trans Radial Access (TRA) is becoming increasingly favored worldwide as the preferred arterial approach site for coronary angiography. Use of TRA is supported by its advantages over the femoral artery route. Benefits include reduced instances of access site bleeding, trauma, infection, shortened hospitalization, and improvement in clinical outcomes. Potential complications have included radial artery occlusion, catheter kinking, vasospasm, hand ischemia, and even arterial perforation. Severe vasospasm leading to catheter entrapment is a rare complication with few cases reported in the literature, each case with different therapeutic methods attempted. There is no consensus approach to alleviating this complication. To date, case reports have described the use of intravenous fentanyl and midazolam, with both successful and unsuccessful outcomes. This interventional case describes severe vasospasm of the right radial artery leading to catheter entrapment, and novel resolution by deep sedation with intravenous propofol.

*Case Description*: A 48 year-old male with history of smoking and peripheral vascular disease underwent scheduled angiography for a newly diagnosed cardiomyopathy. Modified Allen’s Test was normal with good ulnar collateral flow noted. A 5 French radial sheath was placed into right radial artery, and antispasmodic cocktail of Verapamil, Heparin and Nitroglycerin was given. There was some difficulty upon advancing the wire through the forearm. Angiography revealed an arterial loop just after the bifurcation of brachial artery, successfully negotiated with an angled guide wire. A 5 French Jackey catheter was advanced without any difficulty up to aortic root. At that time, difficulty was noted while manipulating the catheter, as torque was not being transmitted to the catheter tip. The patient developed severe right forearm pain and the catheter was unable to be retracted. Radial artery spasm was clinically suspected. Arterial vasodilators (Verapamil, Nitroglycerin) were unsuccessful. Catheter kink was excluded as the J-wire could still be advanced inside the catheter without any difficulty. Intravenous Midazolam was given and warm compresses were applied, without improvement. Finally, intravenous propofol was administered by the anesthesiologist. Following deep sedation, the catheter was gradually withdrawn. The patient remained hemodynamically stable throughout.

*Discussion*: Radial artery access presents increased risk of spasm owing to increased muscular characteristics and concentration of alpha-1 adrenoreceptors. Once radial artery spasm is suspected, catheter advancement or removal should be ceased. Pain can result in further increasing vasomotor tone and vasoconstriction. Forceful manipulation can lead to radial artery transection or eversion endarterectomy. This case highlights the rare occurrence of severe radial artery spasm and catheter entrapment in the presence of an arterial loop, effectively remitted by deep sedation with intravenous propofol. Use of propofol for spasm during TRA has not been previously described in this setting for coronary angiography.