

# Sheathless transradial intervention highly successful in treating complex lesions

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Cardiologists from the Mayo Clinic performed sheathless transradial percutaneous coronary intervention (PCI) to remedy complex lesions, achieving a 90% success rate with no radial complications. Standard guiding catheters were used during the procedure. Details of this novel approach-overcoming the last hurdle to greater adoption of transradial PCI in the U.S.-are published in the December issue of *Catheterization and Cardiovascular Intervention*, the official journal of The Society for Cardiovascular Angiography and Interventions.

PCI, commonly known as angioplasty, is a procedure used to open narrowed or blocked coronary arteries. According to the National Heart Lung and Blood Institute, angioplasty is performed on more than one million Americans each year. During the procedure, cardiac interventionists make a small incision, threading a catheter into the femoral artery in the groin or through the radial artery in the wrist, to access the blockage in the heart. The latter approach, called transradial angioplasty, is increasing in use due to quick patient recovery and lower complications at the access site. However, a major limitation of transradial PCI is the inability to use large guiding [catheters](#) because of the small size of the radial artery.

To explore this issue, Charanjit Rihal, MD, FSCAI, and colleagues from the Mayo Clinic performed transradial PCI using a sheathless technique with standard guiding catheters. The team identified ten patients who had transradial angioplasty for stable angina (60%) and acute coronary syndrome (40%) between September 2009 and March 2010. Treatment

was attempted on 15 vessels and bifurcation (complex) lesions were present in six patients.

While current medical evidence report use of guiding catheters with hydrophilic coating and long central dilators during sheathless transradial PCI; these devices are currently not available in the U.S. In the current study, all procedures were performed using 7 Fr (six patients) or 8 Fr (four patients) Vista Brite Tip® guiding catheters which are non-hydrophilic coated.

"We showed the safety and feasibility of performing complex PCI through large-bore guiding catheters from the radial artery using a sheathless technique. This affords patients all the benefits of radial access for even the most complex coronary procedures," said Dr. Rihal. The series results showed PCI was successful in all but one patient who had a completely obstructed obtuse marginal artery that could not be crossed. One minor coronary complication was reported—a small vessel dissection within the lesion of interest which was covered with a stent. This patient was asymptomatic and dismissed in good health after one night of observation.

Furthermore, no deaths occurred during the follow-up period (median of 27 days), and researchers reported no episodes of radial artery spasm upon removal of the guide or any post procedure occlusions in the radial artery. Cross-over to the femoral artery was not needed in any of the cases. "Sheathless transradial PCI using standard large-bore guiding catheters is a safe and effective method for treatment of complex [lesions](#)," concluded Dr. Rihal.

**More information:**

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