My Radial-to-Peripheral Evolution: Physician Success Story

How R2P transitioned from a last-resort strategy to a foundational component of modern peripheral intervention.

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My evolution to radial-to-peripheral (R2P) access began not as a planned strategy but as a necessity. The very first complex peripheral intervention I performed via radial access was in 2018, in a patient who had no other viable access options remaining. At the time, R2P was not part of my routine peripheral workflow, but that single case fundamentally reshaped how I approached access selection.

CASE REPORT: R2P AFTER FAILED ANTEGRADE AND UP-AND-OVER APPROACHES

PATIENT PRESENTATION

A woman in her late 60s with an extensive cardiovascular history, including more than eight prior coronary and endovascular procedures, presented with severe rest pain in the right leg. Noninvasive testing revealed a chronic total occlusion of the distal superficial femoral artery (SFA) extending into the P1 segment of the popliteal artery, with distal reconstitution. Her anatomy posed significant challenges: morbid obesity, prior kissing stents in the common iliac artery, and a failed prior antegrade SFA attempt that resulted in a major access site bleed due to the inability to achieve safe closure. She also had single-vessel runoff to the foot, making tibial or pedal access undesirable.

PROCEDURAL OVERVIEW

We initially attempted a traditional contralateral "up-and-over" approach from the left common femoral artery but were unable to generate sufficient support to deliver a long sheath across the aortic bifurcation. With standard options exhausted, radial access became the final remaining strategy. From the wrist, we were able to obtain stable access, deliver the necessary equipment, and successfully treat the lesion without further access site complications. The patient experienced resolution of rest pain and avoided the prolonged bedrest and bleeding risk that had defined her prior procedures.

FROM BAILOUT TO BREAKTHROUGH

What began as a bailout maneuver became a proof of concept. That experience prompted a deliberate reassessment of how peripheral access decisions were being made. Early adoption of R2P focused on carefully selected cases: iliac and femoropopliteal interventions in patients who stood to benefit most from reduced bleeding risk and earlier ambulation. As with coronary radial access years earlier, initial skepticism gave way to growing confidence as procedural efficiency improved and patient experience consistently surpassed expectations.

As case complexity increased, R2P demanded greater intentionality. Preprocedural planning became essential, including careful review of imaging, patient height, vessel tortuosity, and lesion length. Early limitations related to reach and support were real, but iterative advances in sheath technology, catheter design, and radial-compatible peripheral devices steadily expanded what could be accomplished from the wrist. Lesions once considered impractical via radial access became routine in experienced hands.

PATIENT AND SYSTEM IMPACT

Patient impact has been one of the most compelling drivers of sustained adoption. Many peripheral patients are elderly, frail, or on anticoagulation, precisely those at highest risk for femoral access complications. R2P has consistently translated into fewer access site issues, faster mobilization, and improved overall patient satisfaction. From a practical standpoint, nursing demands after procedures have decreased, and recovery flow has become more efficient.

Incorporating R2P at the institutional level required more than individual operator enthusiasm. Nursing education, cath lab workflows, inventory planning, and postprocedure protocols all evolved in parallel. Importantly, R2P was framed as a complementary strategy—not a replacement for femoral access. Certain anatomies and device requirements still favor femoral approaches, but R2P expanded our options and allowed access strategy to be tailored to the patient rather than dictated by habit.

Training and standardization were critical to scalability. Radial-first algorithms, proctoring during early adoption, and consistent case review helped ensure safety and reproducibility. The development of purpose-built R2P platforms—rather than repurposed coronary tools—has been instrumental in making radial access a durable and scalable component of modern peripheral intervention.

FULL CIRCLE: R2P TODAY

Today, R2P is an integral component of my peripheral practice and an increasingly common default for appropriately selected cases. The evolution mirrors the coronary radial journey: initial necessity, followed by selective adoption, and ultimately cultural normalization. What began as a last-resort option has become a foundational approach, reshaping not only how we perform procedures, but how patients experience peripheral care. ■