

Articles written for Catholic Healthcare West's (CHW) Cardiovascular Consultant, a newsletter for physicians

Radial Artery Access for PCI and Stenting Highly Successful

Traditionally, most patients requiring a percutaneous coronary intervention (PCI) or stenting had little choice but to undergo the femoral artery approach, which is often associated with high levels of patient discomfort, risk of bleeding and other complications at the time of procedure.

Today, the vast majority of those procedures can be performed using the radial artery approach, according to Felix Millhouse, MD. "Radial artery access for PCIs and stenting has become widely used and highly successful," he says. He attributes the success to major advancements in stents and the use of IIbIIIa inhibitors. He also cites the increased miniaturization of devices, such as rotational atherectomy, rheolytic thrombectomy and other niche devices, as expanding the use - and improving the success rate - of PCIs.

The difference in the devices used to close the femoral and radial arteries also affects the risk of bleeding. Dr. Millhouse points out that patients with increased risk of bleeding problems - large people and those on platelet aggregation inhibitors - would benefit the most from the procedure.

He explains that the increased risk of bleeding in patients who have undergone femoral artery approach procedures is not seen in patients who have undergone radial artery approach procedures. "With the radial artery approach, the smaller incision and smaller artery make it easier to attain hemostasis," he says. "Significant bleeding can occur before it's appreciated

in the groin area. In the wrist area, even if bleeding occurred, it would be more easily detected because that area is more visible."

Radial artery access should be the treatment of choice because of its many advantages, says Dr. Millhouse. Those include lower risk of increased bleeding at the access site; decreased complications at the time of the procedure, and lower risk of late recurrence of thrombosis.

Patients generally experience less pain, are ambulatory much sooner and have a shorter recovery time with the radial arterial approach than with the femoral artery approach. "We can decrease our length of stay by approximately one-third," he says. The pain level is usually lower both at the time of the procedure and during recovery.

Patients who can't tolerate bed rest are also good candidates for the radial artery approach due to the swifter return to ambulation. With closure devices, ambulation is almost immediate.

Dr. Millhouse recommends that patients considering a radial artery access procedure have an Allen Test to ensure adequate circulation to the hand by the ulnar artery.

For more information, contact Dr. Millhouse at 650-994-4666.

Treating Patients with Pacemakers and AICDs

Treatment of ventricular tachycardia remains a difficult clinical problem requiring multiple drug interventions with significant side effects that still leave the patient at increased risk of a serious cardiac event. Medication side effects can include sluggishness, nausea and GI complaints.

Patients with depressed ventricular function or prior heart attacks are at highest risk for sudden cardiac death and should be screened with a monitor for ventricular arrhythmias and evaluated for a possible automatic implantable cardioverter defibrillator (AICD). AICDs monitor heart rhythm and send an electrical shock to interrupt serious arrhythmia.

Most patients with supraventricular tachycardia can become drug- and arrhythmia-free after treatment with radiofrequency ablation (RFA), says Hardwin Mead, MD, of Sequoia Hospital (where he helped establish the first non-university electrophysiology program in the Bay Area). "An overwhelming number of patients with supraventricular tachycardias, including atrial flutter, can be cured with RFA" says Dr Mead. Dr. Mead and his team perform about 200 ablations a year.

Supraventricular tachycardia occurs when a series of early beats in the atria - rather than the ventricle - cause rapid, irregular heartbeat. Atrial flutter is an irregularity of the heartbeat in which the number of atrial contractions exceeds those of the ventricle. Detection of atrial flutter is achieved through ECG, exercise treadmill or continuous ambulatory cardiac monitoring.

The standard RFA procedure involves identifying the area where the electrical circuit for the arrhythmia exists. Radiofrequency is then applied to cauterize the tissue so that the arrhythmia no longer takes place.

RFA results in positive outcomes with low risk and short recovery time. "The success rate is extremely high, over 95 percent," says Dr. Mead, "and the risk of significant complications is lower than those of a simple angiogram." Typically a patient has a one-day hospital stay and is ambulatory the following day.

There is almost no follow-up required, since the pathway has been eliminated.