

Trial finds benefits to using radial versus femoral access for primary angioplasty in heart attack patients

October 26 2012

OCTOBER 26, 2012 – A study found several benefits in using the radial artery in the arm as the entry point for angioplasty or percutaneous coronary intervention (PCI) compared to the femoral artery in the leg. Results of the STEMI-RADIAL trial were presented today at the 24th annual Transcatheter Cardiovascular Therapeutics (TCT) scientific symposium. Sponsored by the Cardiovascular Research Foundation (CRF), TCT is the world's premier educational meeting specializing in interventional cardiovascular medicine.

Recent data have demonstrated better clinical outcomes in patients undergoing primary PCI by the radial approach compared to the femoral approach. However, the experience of operators with the radial approach in previous trials has been variable. In the STEMI-RADIAL trial, investigators examined the net clinical benefit of using the radial versus femoral approach in patients presenting within 12 hours of [symptom onset](#) of acute ST-elevation [myocardial infarction](#) (STEMI). All investigators were high-volume (>200 PCI/year) operators with significant experience in the radial approach (>80% cases/year).

STEMI-RADIAL was a randomized, national, multicenter, parallel group trial conducted in 707 patients at four high-volume centers. Patients eligible for both access sites without cardiogenic shock were randomized to the radial or femoral access approach. The primary endpoint was the cumulative incidence of major bleeding and vascular

access site complications (requiring intervention) at 30 days. Secondary endpoints included major adverse cardiovascular events (MACE: death, reinfarction and stroke), technical success, access site failure, procedural and fluoroscopy times, contrast volume, intensive care stay and target lesion revascularization.

The primary endpoint of major bleeding or access site complications occurred in 7.2 percent of the femoral access patients and 1.4 percent of the radial access patients ($p=0.0001$). The rate of MACE at 30 days was 4.2 percent in the femoral access group, and 3.5 percent in the radial access group ($p=0.7$).

"In patients with STEMI undergoing PCI within 12 hours, the radial approach was associated with a significantly lower incidence of major bleeding and access site complications, resulting in a significantly better net clinical benefit," said lead investigator Ivo Bernat, MD, PhD. Dr Bernat is an Assistant Professor of Medicine at University Hospital Pilsen in the Czech Republic.

"Moreover, the radial approach reduced significantly ICU stays and contrast volume compared to the femoral approach. Results of this trial support the use of the radial approach in primary PCI in high volume centers as a first choice," Dr. Bernat said.

The results of the STEMI-RADIAL trial will be presented on Friday October 26, 2012 at 11:55 AM in the Main Arena (Hall D) of the Miami Beach Convention Center.

Provided by Cardiovascular Research Foundation

Citation: Trial finds benefits to using radial versus femoral access for primary angioplasty in heart attack patients (2012, October 26) retrieved 25 April 2024 from

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