MedicalXpress

Improving the safety of angioplasty in patients with coronary bypass graft disease

October 22 2012

Researchers at Thomas Jefferson University Hospital have shown that combining distal protection devices with the prophylactic use of the drug nicardipine is more effective at preventing life-threatening complications following a percutaneous coronary intervention (PCI) (angioplasty, stenting) on patients who have undergone previous bypass surgery than distal protection devices alone.

Their findings will be presented on Tuesday, October 23rd, at 8 a.m. at the Transcatheter Cardiovascular Therapeutics (TCT) conference, at the Miami Beach Convention Center by Michael P. Savage, MD, Director of the Cardiac Catheterization Lab at Jefferson.

Angioplasty or stenting on bypass vessels, called saphenous vein grafts, is associated with a high risk of complications due to distal embolization, the dislodging of plaque and clots downstream, impairing blood flow and leaving patients at-risk for a heart attack.

Distal protection devices are commonly used to prevent blockages by catching the dislodged plaque and clot in a basket-like device, allowing blood to filter through the bypassed artery. Still, complications remain in up to 10 percent of patients. Preliminary studies have suggested that prophylactic doses of the drug nicardipine, a common intracoronary vasodilator, can also help in this regard, but never have the two techniques been combined.

Savage and colleagues looked at clinical outcomes at 30 days post-PCI in

163 consecutive patients with prior bypass surgery. Group I consisted of 60 patients who underwent PCI using a distal protection device alone (no pre-treatment with nicardipine); Group II included 103 patients who underwent PCI with a distal protection device and pre-treatment with prophylactic nicardipine.

Both groups had similar baseline demographics including age (early 71 +/– 10 years), diabetes (47 vs. 44 percent) and bypass graft age (13 +/- 6 years). Group II had longer lesion length, requiring a longer stent and placing these patients at higher risk for complications.

At 30-days post-PCI death, heart attack, bypass or repeat PCI occurred in 10 percent of patients in Group I and in only one percent of patients in Group II. Mortality was 3.3 percent in Group I vs. zero in Group II, and incidence of MI was 10 percent in Group I vs. one percent in Group II. There was zero incidence of CABG, repeat PCI or stent thromboses in either group.

"Through the combined power of these two therapies, we have a new approach that is improving outcomes for this high risk subset of patients," says Savage.

Provided by Thomas Jefferson University

Citation: Improving the safety of angioplasty in patients with coronary bypass graft disease (2012, October 22) retrieved 26 June 2024 from https://medicalxpress.com/news/2012-10-safety-angioplasty-patients-coronary-bypass.html