

# Angioplasty with stents may be safe in long-term for low-risk heart patients

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Heart bypass surgery is considered the gold standard for most patients with left main coronary artery disease, one of the most serious types of heart disease and one that affects thousands.

But a new UCLA study reports favorable long-term outcomes for lower-risk patients with this condition who underwent angioplasty with medication-coated stents, rather than bypass surgery.

A more minimally [invasive procedure](#) than surgery, angioplasty is performed by snaking a tiny wire up through an artery in the groin to the blocked area of the heart. The [clogged artery](#) is cleaned out, and a stent — a tiny wire-mesh tube — is placed in the artery to help keep it open, allowing blood to flow freely through the heart again.

Published in the June issue of the journal *Catheterization and Cardiovascular Interventions*, the study found that for patients with left main [coronary artery disease](#) who had normal artery function, the more minimally invasive procedure may be a safe and effective option.

"This is one of the first studies assessing the long-term outcomes of this procedure in lower-risk patients," said Dr. Michael Lee, an assistant professor of cardiology at the David Geffen School of Medicine at UCLA.

According to Lee, current national guidelines recommend angioplasty with stenting only for patients who are poor candidates for surgery. He

said that this may change in the future, if more studies like this one demonstrate the procedure's effectiveness in a wider range of patients.

Researchers reviewed data, taken from an international registry, on 221 patients who had left main coronary artery disease with normal artery function. All patients had undergone

angioplasty with drug-eluted stents between 2002 and 2009 at one of four institutions. The average patient age was 68, and the majority were male.

Patients sought angioplasty with stenting instead of surgery for a number of reasons, including high surgical risk due to health issues like chronic obstructive pulmonary disease or a severely calcified artery, older age, or a preference for the more minimally invasive procedure.

"The study provided a window into "real-world" experience and is reflective of what is seen in everyday clinical practice," Lee said.

In examining 30-day outcomes for patients in the study group, the team found no reports of [cardiac death](#), stroke, re-clogging of the artery or blood clots forming related to the stent. Seven patients (3 percent) experienced a mild heart attack that can occur during the procedure. According to Lee, these are mild events with little long-term clinical impact.

Follow-up angiographs or heart images were available for 136 (62 percent) of the patients, which helped further track their [heart](#) health status.

At one year, the cumulative event-free survival rate for cardiac death was 97.7 percent, and the event-free rate for artery re-clogging was 92.9 percent.

Over the course of the study, 22 patients needed to be retreated due to the artery re-clogging, and this occurred mostly in the first year. Of those patients, 14 underwent a repeat angioplasty and eight had bypass surgery.

One of the most common side effects of angioplasty with stenting in the past has been the re-closing of the artery after treatment. Lee says that with drug-eluting stents, this is occurring less frequently.

"Our analysis found that the short-term outcomes were excellent," he said. "Patients who survived after the first year had very good long-term survival and a low incidence of retreatment."

At nearly four years, the event-free survival rate for cardiac death was 95.5 percent, and the event-free rate for re-clogging of the artery was 88.9 percent. Twenty of the 221 patients had died and nine deaths were cardiac-related.

"We found that this procedure had a low overall risk profile and may prove to be a viable alternative for this patient group," Lee said.

Lee added that the next step would be a clinical trial comparing [angioplasty](#) with drug-eluting [stents](#) to coronary bypass surgery in this lower-risk patient population.

Provided by University of California - Los Angeles

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