

Angioplasties performed at centers without on-site surgery services are safe, study finds

December 13 2011

Contrary to current guidelines, Mayo Clinic researchers have found that angioplasties performed at centers without on-site cardiac surgery capabilities pose no increased risk for patient death or emergency bypass surgery. Results of the study were published in today's *Journal of the American Medical Association* and have implications for how care can be delivered to heart attack victims and for performance of angioplasties at centers without on-site surgery.

For the study, researchers systematically searched papers published between 1990 and 2010 in several [medical databases](#) about angioplasties performed at centers with and without on-site surgery. Fifteen studies met the inclusion criteria and included thousands of patients. For the 124,074 patients who had primary angioplasties performed to unblock their coronary arteries in the setting of heart attack where timely treatment is crucial and lifesaving, the mortality rate was 4.6 percent for sites without on-site surgery and 7.2 percent for sites with on-site surgery.

"More than 900,000 patients had angioplasty done in an elective or urgent setting," says Mandeep Singh, M.D., Mayo Clinic cardiologist and lead author of the study. "Again, we did not find any higher risk of in-hospital death in patients who had their angioplasties performed at centers with on-site surgery compared to centers without. This study demonstrates that any type of angioplasty can be safely performed at centers that do not have on-site surgical capability."

The researchers also found that the incidence of emergency [coronary artery bypass surgery](#) for both classifications of patients was low at centers without on-site surgery capabilities. For primary angioplasty done in patients with heart attacks, the observed rate of emergency [cardiac surgery](#) was 0.22 percent at centers without on-site surgery compared to 1.03 percent at centers with on-site surgery; for all other patients, the rates of emergency heart surgery were 0.17 percent and 0.29 percent, at centers without and with on-site surgery.

Guidelines published by the American College of Cardiology and American Heart Association (ACC/AHA) recommend that elective angioplasties only be performed in centers with on-site surgery capabilities. Dr. Singh says these guidelines were based on smaller studies performed several years ago. "Our study combined the results of a large number of more recent studies with outcomes of angioplasties at centers without on-site surgery and provided a more definitive answer that will help update the ACC/AHA guidelines favorably."

More information: *JAMA*. 2011;306[22]:2487-2494.

Provided by Mayo Clinic

Citation: Angioplasties performed at centers without on-site surgery services are safe, study finds (2011, December 13) retrieved 9 June 2026 from <https://medicalxpress.com/news/2011-12-angioplasties-centers-on-site-surgery-safe.html>

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