

Study shows new drug helps 'bridge' stent patients to cardiac surgery

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New findings from a research study led by physicians at Scripps Health reveal that the drug cangrelor has the unique properties of achieving very fast blood thinning effects when needed to protect from heart attacks, but also dissipates rapidly so patients can undergo surgery without the excessive bleeding often associated with blood thinning medications.

Initial results from the BRIDGE trial will be published Jan. 18, 2012, in an article in the [Journal of the American Medical Association \(JAMA\)](#) and posted on its website. Launched in January 2009, the BRIDGE trial tests the efficacy of cangrelor, an investigational intravenous antiplatelet that allows patients to be "bridged" from the time that their physicians stop their oral [antiplatelet drugs](#) until they undergo [cardiac surgery](#). Study results demonstrated cangrelor maintained target levels of platelet inhibition known to be associated with a low risk of blood clotting events, such as stent [thrombosis](#).

The BRIDGE trial was led by primary investigator Eric Topol, MD, chief academic officer at Scripps Health and director of the Scripps Translational Science Institute (STSI). STSI is an initiative of Scripps Health in collaboration with The Scripps Research Institute.

"This represents an important practical step forward in [cardiovascular care](#)," said Topol. "For the first time we have validated a way to prevent clotting in patients who have had a recent stent but still require medication as they bridge to another [surgery](#). This represents a fairly common clinical situation—the unplanned operation in a patient with a

recent stent."

The BRIDGE trial was a double-blind, randomized study conducted in 210 patients in the United States and Europe. The trial took place between January 2009 and April 2011. Results showed 99 percent of cangrelor-treated patients maintained target levels of platelet inhibition for all time points measured over the bridging period compared to 19 percent of placebo patients with no significant excess in surgical bleeding complications.

Patients who have had heart attacks or who have been treated with stents are commonly treated with [blood thinning](#) medications to help prevent future cardiovascular events. The most commonly used blood thinning medications for these patients are aspirin and clopidogrel (also known as Plavix).

"Many of these patients may require surgery at some point in time making how best to manage their blood thinning medications challenging," said Matthew Price, MD, Scripps interventional cardiologist and co-author. "In fact, if they don't stop their blood thinning medication prior to surgery they have a high risk of bleeding, but if they do stop their blood thinning medications they have a high risk of developing a [heart attack](#), which is often fatal."

Attention was brought to this issue in 2004 when former President Clinton presented with a mild (very small) heart attack that required urgent bypass surgery. He had received aspirin and Plavix, and as a result, had to wait six days before the surgery was performed. According to Topol, these considerations underscore the importance of identifying strategies patients to be safely bridged to their surgical procedure with minimal risk of developing heart attacks or bleeding complications.

According to 2009 data from the Organisation for Economic Co-

operation and Development (OECD), more than 2.5 million stent procedures are performed globally per year. Treatment guidelines in the United States and Europe recommend stent patients receive blood thinning medications for up to 12 months following their stent procedure. It is estimated that up to 25 percent of these patients with stents in place will require a surgical procedure during the first five years after.

Provided by Scripps Health

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