Patients with heart stents have similar increased risk of death from bleeding and heart attacks

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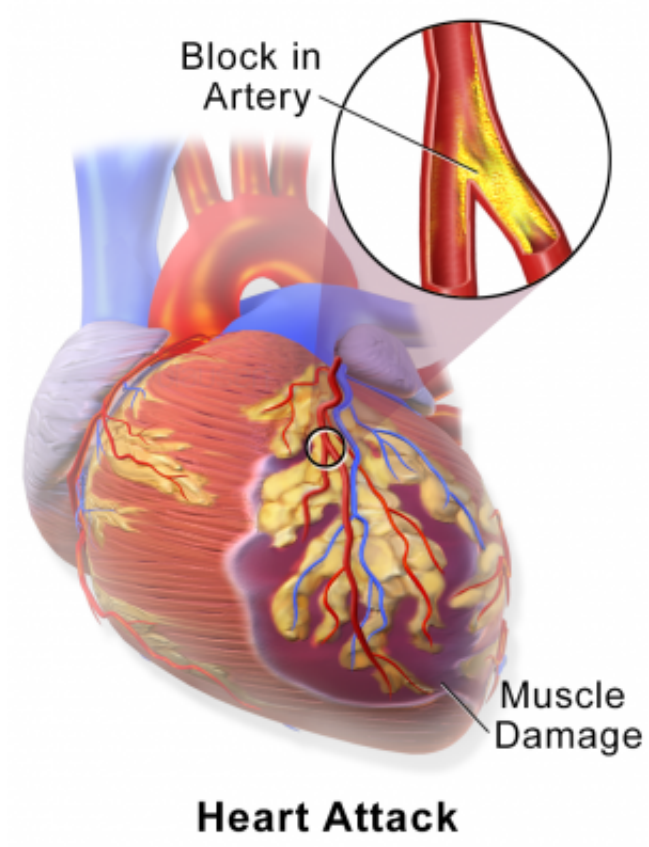

Myocardial Infarction or Heart Attack. Credit: Blausen Medical Communications/Wikipedia/CC-A 3.0

In patients who received a stent to treat coronary artery blockage, those

who experienced bleeding requiring hospitalization in the years after the procedure faced an increased risk of death that was similar to the risk faced by those who subsequently had heart attacks, according to a study of nearly 33,000 patients by UC San Francisco and Kaiser Permanente.

"Every year, 600,000 patients in the United States receive a coronary stent and are given drugs that prevent the formation of clots within the stent. These drugs prevent heart attacks but increase the risk of internal bleeding," said lead author Dhruv Kazi, MD, MSc, MS, an assistant professor of medicine at UCSF. "These bleeds are often written off as a side effect, but it turns out that they may be just as bad for patients as the heart attacks we're trying to avoid."

The study in the April 14 issue of the *Journal of the American College of Cardiology* is the first to show that the two risks are of comparable magnitude.

Kazi said that the results underline the importance of treating cardiac patients based on personalized risk factors, instead of using what he called a "one-size-fits-all" approach based on population statistics. This study points toward the possibility of using other information about patients that may help identify the antiplatelet drug that is most likely to be the most safe and effective for individual patients in the long run.

The study authors analyzed the records of 32,906 patients in the Kaiser Permanente Northern California health care system who received stents between 1996 and 2008 and were followed for four years. They found that both post-procedure heart attack and episodes of bleeding requiring hospitalization were associated with a greater relative risk of death (91 percent and 61 percent, respectively) over the same time span. The risks in the two groups were not different statistically, so the researchers could not say the risk for one was greater than the other.

Senior author Alan S. Go, MD, of the Kaiser Permanente Division of Research, noted that the study results "highlight the need for and value of high-quality outcomes research using data from patients treated in the real world to inform patients and doctors about the consequences of treatments."

Randomized trials, Go observed, "can tell us whether or not a drug, such as an antiplatelet medication, works. But patients enrolled in these trials are highly selected and may not really be like the patients we treat in the clinical practice and are usually followed for a short period of time."

In contrast, Go said, when rigorously evaluated, data collected in everyday clinical practice can yield valuable insights about long-term effectiveness and safety that complement what is learned from randomized clinical trials.

"We've known for some time that bleeds that occur during the stent procedure are bad for the patient, so we increasingly take steps to reduce those bleeds, such as giving drugs with lower bleeding risk and using the radial artery to perform the procedure instead of the femoral artery," Kazi said. "This is the first study to show that bleeds that occur in the months and years after discharge are also bad for the patient, emphasizing the need for long-term strategies that reduce a patient's risk of bleeding."

Provided by University of California, San Francisco