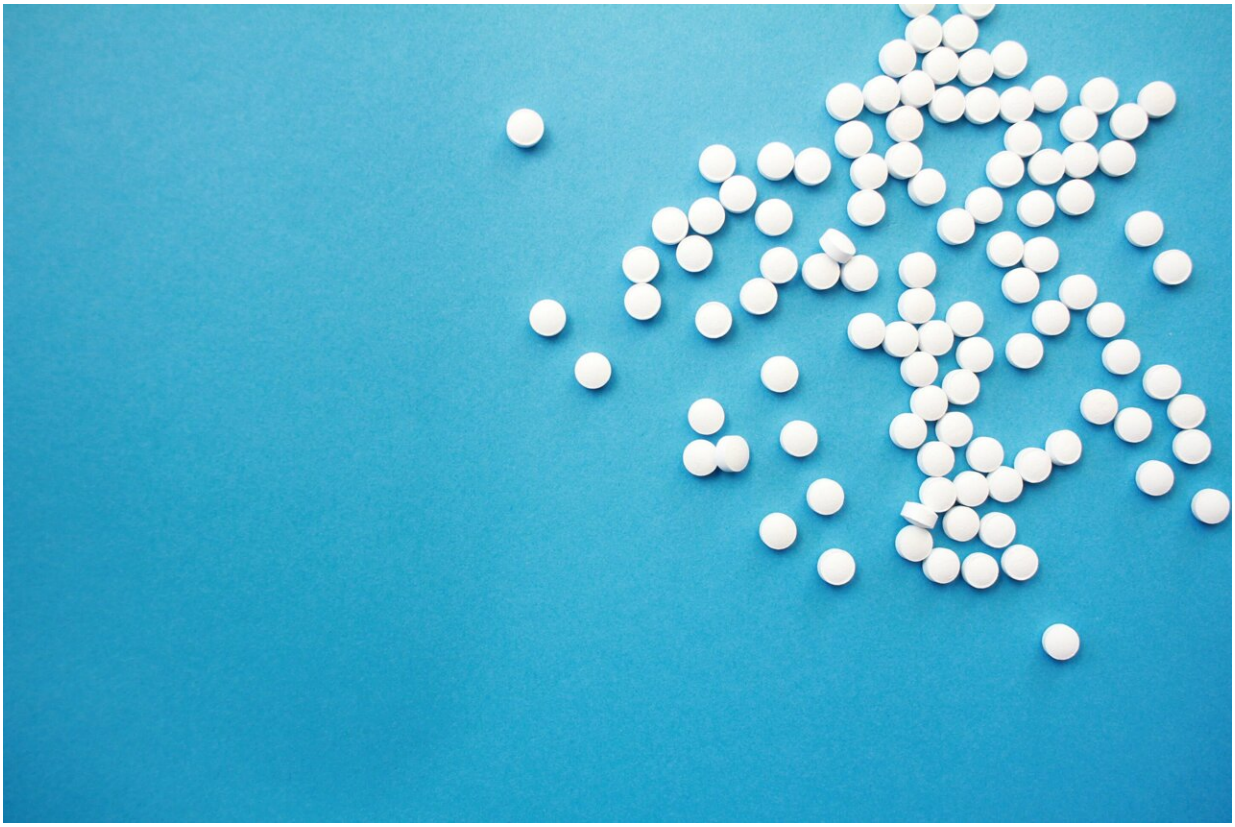
Examining aspirin interruption or continuation in patients with coronary stents undergoing non-cardiac surgery

September 2 2024



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Among patients undergoing non-cardiac surgery more than one year after coronary drug-eluting stent (DES) implantation, there was no

difference with respect to ischemic outcomes or major bleeding between perioperative aspirin monotherapy and receiving no antiplatelet therapy, according to late-breaking research presented in a Hot Line session August 31 at ESC Congress 2024.

"Patients who have DES implantation receive antiplatelet therapy, such as aspirin with a P2Y12 inhibitor, after the procedure to reduce the risk of future atherothrombotic events, including myocardial infarction (MI) and stroke. It is not uncommon for patients with DES to then need unrelated surgery, but we are faced with a challenging clinical scenario related to balancing competing thrombotic and bleeding risks.

"Current guidelines recommend continuing aspirin in patients with DES undergoing non-cardiac surgery; however, supporting evidence is limited. In the ASSURE DES trial, we compared continuing aspirin monotherapy vs. temporarily withholding all antiplatelet therapy around the time of non-cardiac surgery and found no difference in atherothrombotic events, but the low event rate prevents us from making firm conclusions," explained Principal Investigator, Dr. Jung-Min Ahn from the Asan Medical Center, Seoul, South Korea.

ASSURE DES was an investigator-initiated, open-label randomized controlled trial. The study enrolled patients who had undergone percutaneous coronary intervention with DES more than one year earlier and were now undergoing elective non-cardiac surgery.

Patients were randomized in a 1:1 ratio to either continue aspirin or to discontinue all antiplatelet agents five days before the elective non-cardiac surgery. Antiplatelet therapy was recommended to be resumed no later than 48 hours after surgery, unless contraindicated.

The primary outcome was a composite of death from any cause, MI, stent thrombosis or stroke between five days before to 30 days after non-

cardiac surgery. Secondary outcomes included the individual components of the primary outcome and major or minor bleeding according to the Thrombolysis in Myocardial Infarction definition.

In total, 926 patients were analyzed from 30 participating centers in South Korea, India and Turkey. The mean age was 68.5 years and 24% were women. On average, DES was implanted 6.3 years before non-cardiac surgery and 84% of subjects had second-generation or newer stents.

At randomization, 39% of patients were on aspirin monotherapy, 23% on P2Y12 inhibitor monotherapy and 34% were on dual antiplatelet therapy. Most surgeries were classified as low-to-intermediate risk for both cardiovascular (89%) and bleeding (88%) events.

There was no significant difference in the primary outcome of all-cause mortality, MI, stent thrombosis or stroke between the groups at 30 days, which occurred in 0.6% of patients in the aspirin monotherapy group and 0.9% of patients in the no antiplatelet therapy group (absolute difference −0.2 percentage points; 95% confidence interval −1.3 to 0.9; p>0.99).

Rates of the components of the primary outcome were low: Two patients died from cardiac causes and three had an MI in the aspirin monotherapy group, while three patients had an MI and one had a stroke in the no antiplatelet therapy group.

Major bleeding rates were similar between the groups: 6.5% in the aspirin monotherapy group and 5.2% in the no antiplatelet therapy group (p=0.39). Minor bleeding was more frequent in the aspirin monotherapy group (14.9% vs. 10.1%; p=0.027).

"Continuing aspirin monotherapy did not reduce ischemic events,

although it was associated with a modest increase in minor bleeding. Event rates were lower than expected, which may reflect the improved safety profile of contemporary DES. This low event rate led to the trial being underpowered and our overall findings should be interpreted with caution.

"Further research in a large-scale, adequately powered study may now be needed, especially in higher-risk patients and where higher-risk surgeries are involved. In the meantime, it seems that a flexible approach to perioperative antiplatelet management may be considered, without compromising patient safety," concluded Dr. Ahn.

Provided by European Society of Cardiology

Citation: Examining aspirin interruption or continuation in patients with coronary stents undergoing non-cardiac surgery (2024, September 2) retrieved 4 September 2024 from https://medicalxpress.com/news/2024-09-aspirin-patients-coronary-stents-cardiac.html