

SURGERY

Low-dose aspirin and clonidine—no benefit during surgery

The results of meta-analyses and small clinical trials indicate that aspirin or the β -blocker clonidine can reduce the risk of vascular complications in patients undergoing noncardiac surgery. However, the POISE-2 investigators, who presented their findings at the 2014 ACC Scientific



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Sessions and published them in the *New England Journal of Medicine*, showed in a randomized, placebo-controlled trial, that low doses of the drugs have no significant effect on death or nonfatal myocardial infarction at 30 days postsurgery.

The investigators enrolled 10,010 patients and used a 2-by-2 factorial design to assess both drugs in one study population. Patients were stratified according to whether they were already on an aspirin regimen. Those who were already taking aspirin stopped their normal treatment 3 days before surgery. During the trial, 4,998 patients received 200 mg of aspirin just prior to surgery and then 100 mg per day for 30 days; those who were already taking aspirin before the trial received 100 mg per day for only 7 days before returning to their normal dose. The remaining 5,012 patients received a placebo. In the clonidine arm, 5,009 patients received 0.2 mg of clonidine 2–4 h before surgery and further postoperative doses of 0.2 mg per day for 72 h; 5,001 patients received placebo.

The primary end point of death or myocardial infarction occurred in 7.0% of patients who received aspirin, compared with 7.1% on placebo (HR 0.99, 95% CI 0.86–1.15; $P=0.92$). Similarly, the primary outcome was not reduced in those patients receiving clonidine compared with placebo (7.3% vs 6.8% respectively; HR with clonidine 1.08; 95% CI 0.93–1.26; $P=0.29$).

Moreover, both drugs also increased adverse outcomes. Low-dose aspirin was associated with an increased incidence of major bleeding, whereas a low dose of clonidine was associated with hypotension and nonfatal cardiac arrest. Both results highlight the need for new perioperative strategies to reduce vascular complications in patients undergoing surgery.

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Original articles Devereaux, P.J. et al. Aspirin in patients undergoing noncardiac surgery. *N. Engl. J. Med.* doi:10.1056/NEJMoa1401105 | Devereaux, P.J. et al. Clonidine in patients undergoing noncardiac surgery. *N. Engl. J. Med.* doi:10.1056/NEJMoa1401106