ICU
MANAGEMENT & PRACTICE

Aspirin Use In Surgery Does Not Reduce Kidney Infection

According to a new study, neither aspirin nor clonidine reduce the risk of acute kidney injury when used in patients undergoing non-cardiac surgery. The study has been published in *JAMA* and will be presented at the American Society of Nephrology's Annual Kidney Week meeting.

Approximately 10 percent of the 200 million adults undergoing major non-cardiac surgery each year develop acute kidney injury. Perioperative acute kidney injury is associated with poor outcomes, longer hospital stays and higher healthcare costs.

Some previous studies have suggested that the administration of aspirin or clonidine during the perioperative period may help reduce the risk of acute kidney injury. However, the effects of this are uncertain and there is still a risk of bleeding with aspirin and abnormally low blood pressure with clonidine, which could increase the risk of acute kidney injury.

The new study was conducted by Amit X. Garg, MD, PhD, of the London Health Sciences Centre and Western University, London, Ontario, Canada. Dr. Garg and fellow researchers assigned 6,905 patients undergoing non-cardiac surgery from 88 centres in 22 countries to one of two groups. The first took aspirin (200 mg) or placebo two to four hours before surgery, and then aspirin (100 mg) or placebo daily for up to 30 days after surgery. The other group took oral clonidine (0.2 mg) or placebo two to four hours before surgery, and then a transdermal clonidine patch (applied to the skin) or placebo patch that remained until 72 hours after surgery.

The study showed that neither aspirin nor clonidine reduced the risk of acute kidney injury. 13.4 percent of patients on aspirin experienced acute kidney injury as compared to 12.3 percent for placebo. Similarly, 13.0 percent of patients on clonidine experienced acute kidney injury as compared to 12.7 percent on placebo.

Aspirin increased the risk of major bleeding, which was associated with a greater risk of subsequent acute kidney injury. Clonidine increased the risk of clinically important hypotension, which was also associated with a greater risk of subsequent acute kidney injury.

The study team thus concludes that future trials should focus on identifying interventions that could prevent acute kidney injury in the surgical setting without inhibiting platelet aggregative and alpha-2 adrenergic agonism. "Interventions that prevent perioperative bleeding and perioperative hypotension may prove useful."

In an editorial published along with the study, the contribution of Garg and colleagues was considered to be a promising one that proposed ancillary studies of kidney-relevant end points. "Given the disproportionate paucity of randomised trials in nephrology, this is a useful and economical approach, especially in light of the many risk factors that cardiovascular disease and both acute and chronic kidney disease share."

Source: JAMA

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