Treating low blood pressure during surgery may decrease risk of developing postoperative delirium

October 9 2021

Credit: Pixabay/CC0 Public Domain

Patients who experience low blood pressure during surgery are at increased risk for postoperative delirium, according to a large study

being presented at the ANESTHESIOLOGY 2021 annual meeting.

Postoperative delirium, a change in mental function that can cause confusion after surgery and the most common surgical complication for older adults, can be caused by a wide variety of factors, including pain, stress, insomnia and anxiety. While previous small studies have been inconclusive, the new study of 316,000 patients found low blood pressure during surgery to be a factor in the development of postoperative delirium. The researchers note low blood pressure decreases the supply of oxygen and glucose to the brain.

"Postoperative delirium is a major obstacle to a quick recovery from surgery, because patients are more dependent on others for activities of daily living and it can lead to an accelerated cognitive decline," said Matthias Eikermann, M.D., Ph.D., senior author of the study and chair and Francis F. Foldes Professor of the Department of Anesthesiology at Montefiore Medical Center and Albert Einstein College of Medicine, New York. "Our research suggests rapidly addressing low blood pressure during surgery may prevent delirium and help with recovery."

In the study of 316,717 patients who had non-cardiac surgery at one of two hospitals between 2005 and 2017, 2,183 (0.7%) were diagnosed with delirium within 30 days after surgery. Of those patients, 41.7% a had mean arterial pressure (an average of systolic and diastolic blood pressure) below 55 mmHg during surgery for fewer than 15 minutes and 2.6% had it for longer than 15 minutes. The researchers, including lead authors Luca J. Wachtendorf, B.S., and Omid Azimaraghi, M.D., found that patients who experienced low blood pressure were up to 60% more likely to experience postoperative delirium, and the effect was magnified in patients who had longer surgeries.

While postoperative delirium can affect anyone, elderly patients are at highest risk. Postoperative delirium typically lasts one to three days after

surgery, although some patients experience long-term memory loss and difficulty learning, concentrating and thinking.

"Physician anesthesiologists measure patients' blood pressure at least every three minutes during surgery," said Dr. Eikermann. "The study shows they can help decrease the risk of postoperative delirium by immediately providing medication to increase blood pressure when it falls."

More information: www.asahq.org/annualmeeting

Provided by American Society of Anesthesiologists

Citation: Treating low blood pressure during surgery may decrease risk of developing postoperative delirium (2021, October 9) retrieved 27 April 2024 from https://medicalxpress.com/news/2021-10-blood-pressure-surgery-decrease-postoperative.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.