

Atrial fibrillation after surgery increases risk of heart attacks and strokes

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As many as 12 percent of patients undergoing major, non-cardiac surgery experience an irregular heartbeat called atrial fibrillation.

Post-operative [atrial fibrillation](#) (POAF) often is dismissed as a transient phenomenon. But a Loyola University Medical Center study has found that POAF can significantly increase the risk of heart attack or stroke during the first 12 months after surgery.

Among bladder cancer [patients](#) who underwent a cystectomy (bladder removal) and developed POAF, 24.8 percent experienced a heart attack or stroke during the first 12 months after surgery. By comparison, 10.9 percent of patients who did not experience postoperative atrial fibrillation experienced a [heart attack](#) or stroke during the first year.

"Physicians should be vigilant in assessing postoperative atrial fibrillation, even when transient, and establish appropriate follow-up, given the increased risk of cardiovascular morbidity," first author Robert Blackwell, MD, senior author Gopal Gupta, MD, and colleagues report in the *Journal of Urology*.

Atrial fibrillation, also known as A-fib, is an irregular and often rapid heartbeat that can cause poor blood flow to the body. Patients with chronic A-fib are known to be at higher risk for strokes and heart failure.

Previous studies have found that post-operative A-fib occurs in between

3 percent and 12.3 percent of major, non-cardiac surgeries. The Loyola study is unique in that it examines the association of post-operative A-fib on long-term heart attacks and strokes following a procedure performed completely within the abdomen.

Researchers examined the Healthcare Cost and Utilization Project State Inpatient Databases for California and Florida to identify patients who underwent radical cystectomies between 2007 and 2010. Patients with prior histories of A-fib, coronary artery disease or stroke were excluded. Of the 4,345 patients who met the inclusion criteria, 210 (4.8 percent) developed post-operative A-fib.

The study is titled "New Onset Postoperative Atrial Fibrillation Predicts Long-Term Cardiovascular Events Following Radical Cystectomy." In addition to Drs. Blackwell and Gupta, other co-authors, all at Loyola, are Chandy Ellimoottil, MD, Petar Bajic, MD, Anai Kothari, MD, Matthew Zapf, Stephanie Kliethermes, PhD, Robert Flanigan, MD, Marcus Quek, MD, and Paul Kuo, MD.

The study was conducted by Loyola's predictive analytics program, which mines large data sets to predict health outcomes. In addition to postoperative A-fib, researchers are studying, for example, what factors can improve outcomes of surgeries performed on weekends; how many rectal cancer operations a hospital needs to perform for the best results; and whether having a trauma department confers a beneficial "halo effect" on patient outcomes across the board.

Large new databases, electronic medical records and more powerful computers are enabling researchers to conduct such studies. "We're now able to ask and answer a broad range of questions that could significantly help improve patient care and reduce costs," said Paul Kuo, MD, who heads Loyola's analytics group, One to Map Analytics. (One-to-map is a common computer command in analytics research.) Dr. Kuo is chair of

the Department of Surgery of Loyola University Chicago Stritch School of Medicine.

Provided by Loyola University Health System

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