



The Society of Thoracic Surgeons
633 N. St. Clair, Suite 2320
Chicago, IL 60611
www.sts.org

News

STS Press Release

Media Contact:

Jennifer Bagley

312-202-5865

jbagley@sts.org

1 in 7 Lung Surgery Patients at Risk for Opioid Dependence

Research highlights role of surgeons in reversing the rise of the opioid epidemic

FORT LAUDERDALE, FLORIDA (January 30, 2018) — While the use of opioids after surgery is intended as a short-term strategy to relieve pain, many patients who weren't prior opioid users continue to take the medication for several months after their lung operations, becoming dependent and "persistent opioid users," according to research presented today at the 54th Annual Meeting of The Society of Thoracic Surgeons.

"We hope that patients gain awareness that long-term usage of opioids after surgery can be a serious and prevalent problem," said lead author Alexander A. Brescia, MD, of the University of Michigan, Ann Arbor. "Surgeons are at the forefront of the opioid crisis as the main prescribers of these medications following surgery. Our research attaches data to this epidemic and hopefully provides a clear characterization of the issue and highlights ways to combat the crisis, with important roles for both surgeons and patients."

Dr. Brescia and colleagues evaluated data from cancer patients between January 2010 and June 2014, using insurance claims from the Truven Health MarketScan database. The database contains information from more than 100 health plans in the United States. A total of 3,026 patients who received an operation to remove part of the lung (lung resection) and were "opioid naïve" were included in this study.

The researchers found that 1 in 7 patients (14%) became new persistent opioid users after surgery, establishing opioid addiction as a postoperative complication that is as common as others, including atrial fibrillation. According to Dr. Brescia, "new persistent opioid users" describes patients who were not taking opioids before surgery, underwent surgery, took opioid pain medication, and continued to use the opioid prescription after the operation, even after all wounds had healed and physical recovery was complete.

"This research highlights one pathway for long-term opioid use: opioid users who begin taking the pills following a surgical operation," said Dr. Brescia.

KEY POINTS

- Patients who begin taking opioids for the first time after a lung operation are at risk for chronic use.
- Chronic opioid use is as common as other lung surgery postoperative complications.
- Traditional, open lung resection is a risk factor for persistent opioid use.
- Surgeons and patients have to be leaders in changing the trajectory of the opioid epidemic.

According to David T. Cooke, Head of General Thoracic Surgery at the University of California Davis in Sacramento, who was not directly involved with this study, the research presented by Dr. Brescia is a well performed and important investigative analysis. “This study confirms in the US health system what has been observed in international health systems, specifically Canada, that thoracic surgery has a high prevalence for postoperative chronic opioid use in patients who were previously opioid naïve. The research highlights unintended contributions of thoracic surgery to the opioid epidemic and provides an opportunity for thoracic surgeons to be leaders and change makers in ending the national opioid crisis.”

Open Lung Surgery versus VATS

The research also indicated that patients who underwent an open, traditional lung resection with a large incision had nearly double the risk of becoming long-term opioid users in comparison to those who received their operations via a minimally invasive approach such as video-assisted thoracoscopic surgery (VATS). The researchers found that 17% of patients who underwent a traditional lung operation became new persistent opioid users, compared to 9% of the patients who received a minimally invasive lung surgery.

Risk Factors of Opioid Overuse

Open operation was determined to be only one of many risk factors for persistent opioid use. Also associated with a higher risk of developing an opioid dependency were male sex, age of less than 64 years, income of less than \$70,000, past history of substance abuse, hospital stay of more than 5 days after surgery, and postoperative chemotherapy/radiation.

“Our research reveals the need to further examine specific risk factors that lead to persistent opioid usage after surgery, as well as the importance of determining appropriate prescribing guidelines and improving patient education,” said Dr. Brescia.

The researchers suggested that strategies be developed and standardized among all caregivers to educate patients about important issues such as the details of surgical operations, the risks of using opioids, alternatives to opioids for pain management, managing expectations for pain after surgery, and instructions for proper disposal of unused pills.

“It is vitally important to discuss pain management with your surgeon and other health care providers prior to surgery,” said Dr. Brescia. “Taking opioids for pain following an operation could put patients at risk of becoming dependent or addicted to these medications. Together with their surgeons, patients should develop a plan to appropriately manage their pain while also minimizing their risk of taking these medications for longer than intended after surgery.”

According to the US Centers for Disease Control and Prevention (CDC), the amount of opioid prescriptions in the US peaked in 2012 at more than 255 million and a prescribing rate of 81.3 prescriptions per 100 persons. The rates have decreased since, but despite these reductions, the amount of opioids prescribed remains high. The CDC reports that in 2016, the total number of prescriptions dispensed in the US was more than 214 million, with a prescribing rate of 66.5 prescriptions per 100 persons. The generous prescribing habits of

clinicians is particularly important, as CDC data also show that 40% of all US opioid overdose deaths involve a prescription opioid.

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The other authors of the study were CA Harrington, A Mazurek, S Ward, J Lee, H Hu, PA Lagisetty, CM Brummett, JF Waljee, and KH Lagisetty.

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Founded in 1964, The Society of Thoracic Surgeons is a not-for-profit organization representing more than 7,100 cardiothoracic surgeons, researchers, and allied health care professionals worldwide who are dedicated to ensuring the best possible outcomes for surgeries of the heart, lung, and esophagus, as well as other surgical procedures within the chest. The Society's mission is to enhance the ability of cardiothoracic surgeons to provide the highest quality patient care through education, research, and advocacy.