



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

News

STS Press Release

Media Contact:

Cassie McNulty
312-202-5865

cmcnulty@sts.org

Embargoed for Thursday February 27, at 12:01 a.m. CT

Tooth Extraction Prior to Cardiac Surgery May Increase Risk of Adverse Outcomes

Findings depart from 'current thinking' for patient care

Chicago – Removing an infected tooth prior to cardiac surgery may increase the risk of major adverse outcomes, including risk of death prior to surgery, according to a study in the March 2014 issue of *The Annals of Thoracic Surgery*.

Dental extraction of abscessed or infected teeth is often performed to decrease the risk of infection during surgery and endocarditis (an inflammation of the inner layer of the heart) following surgery.

Cardiac surgeon Joseph A. Dearani, MD, along with anesthesiologists Mark M. Smith, MD and Kendra J. Grim, MD, and colleagues from the Mayo Clinic in Rochester, Minn., evaluated the occurrence of major adverse outcomes in 205 patients who underwent at least one dental extraction prior to planned cardiac surgery from 2003 to 2013. The median time from dental extraction to cardiac surgery was 7 days (average 35 days).

“Guidelines from the American College of Cardiology and American Heart Association label dental

extraction as a minor procedure, with the risk of death or non-fatal heart attack estimated to be less than 1%,” explained Dr. Smith. “Our results, however, documented a higher rate of major adverse outcomes, suggesting physicians should evaluate individualized risk of anesthesia and surgery in this patient population.”

In this study, patients who underwent dental extraction prior to cardiac surgery experienced an 8% incidence of major adverse outcomes, including new heart attack, stroke, kidney failure and death.

Key Points

- Patients who underwent dental extraction prior to planned cardiac surgery experienced an 8% risk of major adverse outcomes following dental surgery. Overall, 3% of patients died prior to cardiac surgery.
- Dental extraction of infected teeth has been previously thought to decrease the risk of infection during surgery and endocarditis after surgery.
- The authors recommend an individualized analysis of the expected benefit of dental extraction prior to cardiac surgery.

Overall, 3% of patients died after dental extraction and before the planned cardiac surgery could be performed.

Noting the limitations of their retrospective review, Dr. Dearani said: “With the information from our study we cannot make a definitive recommendation for or against dental extraction prior to cardiac surgery. We recommend an individualized analysis of the expected benefit of dental extraction prior to surgery weighed against the risk of morbidity and mortality as observed in our study.”

Departure from Current Thinking

In an invited commentary in the same issue of *The Annals*, Michael Jonathan Unsworth-White, FRCS, from Derriford Hospital in Plymouth, United Kingdom, discussed the need for surgeons to take note of the study results. “‘Accepted wisdom’ leads surgeons to request dental reviews prior to cardiac surgery in many thousands of patients annually around the world,” said Unsworth-White. “Dr. Smith’s group asks us to question this philosophy. It is a significant departure from current thinking.”

Unsworth-White noted another recent paradigm shift in the relationship between dental surgery and cardiac surgery. Prophylactic antibiotics have routinely been prescribed for patients undergoing dental work who also had existing heart problems because it had been accepted that there is a link between dental bacteremia and endocarditis. Individuals with pre-existing heart problems tend to have a higher incidence of endocarditis. “The American Heart Association and the National Institute for Health and Clinical Excellence in the UK have withdrawn support for this practice of prophylactic antibiotics because the danger from overuse of antibiotics outweighs any other potential risks. Regular tooth brushing, flossing, and even chewing gum are now recognized to dislodge as much, if not more, bacteremia than most dental procedures,” he said.

###

For a copy of the study or commentary, contact Cassie McNulty at 312-202-5865 or cmcnulty@sts.org.

Founded in 1964, The Society of Thoracic Surgeons is a not-for-profit organization representing more than 6,700 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.

The Annals of Thoracic Surgery is the official journal of STS and the Southern Thoracic Surgical Association.